



THE CIRCULAR OPPORTUNITY
HARNESSING THE POWER OF
PRODUCT-AS-A-SERVICE IN
AGRICULTURE



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.

PRODUCT-AS-A-SERVICE IN THE AGRICULTURE SECTOR

The agricultural sector is the lifeblood of our communities and the custodians of our environment. For centuries, farmers have fed the population and protected our food security. Today, rapid developments are impacting agricultural practices and the way we produce, distribute, and consume food. A sustainable agricultural revolution is underway, with farmers developing new ways to reduce water consumption, regenerate soils, and capture carbon. Electrification of machinery is an emerging trend that may grow in the future, as is the implementation of cleaner energy solutions, like wind and solar. Artificial intelligence and big data are helping farmers monitor their environmental footprint and implement new, low impact farming practices. As the agricultural industry transforms, Product-as-a-Service solutions can help farmers access the tools they need to adapt and succeed, with some experts predicting PaaS solutions could reach 20-25% of financing contracts in the future.^{xxvi}

Trends in agriculture

Emerging technologies are transforming the sector, including ground-based sensors, autonomous tractors, drones, AI, robotics, GPS technology, and more.

Climate change is creating challenges for farmers due to unpredictable weather patterns and natural disasters. The sector is facing pressure to mitigate its impact while meeting the food security needs of a growing population.

High equipment prices and long lifespans mean farmers can face high upfront investment costs to modernize and access new sustainable equipment. This makes PaaS models ideal for manufacturers, who can lower the cost of investment for their customers, while offering services across the equipment lifecycle.

Tightening regulations, new policy developments, and green subsidies have driven significant transformation in the agriculture sector, with a particular focus on regenerative farming and lowering the impact of modern industrial farming practices.



The PaaS opportunity

Access to modern, digital farming tools:

Smart, modern equipment can increase environmental protection of farming areas, improve working conditions, and sustain farmers' economic activities. Today, many labor-intensive farming practices can be automated. Costly, time-consuming jobs like harvesting, fertilizing, and crop management are benefiting from digital tools that improve precision and accuracy, and lower operating costs. PaaS contracts allow farmers to invest in high-cost equipment, such as combine harvesters, sprayers, and tractors, by spreading the cost of equipment over the life of the contract. This frees up cash flow and offers financial certainty and predictability for business operators.

Mitigating risks and uncertainty:

PaaS models are helping agricultural operators mitigate some of the risks and uncertainty the sector faces, including changing climate and weather patterns, fluctuating market prices, variations in crops, labor shortages, pest management, and more. PaaS contracts provide affordable access to new technology to manage these challenges and, importantly, support better planning and budget control through predictable monthly payments. Additional value-add services are included in the price of the contract, supporting farmers to manage business risks and costs, while keeping budgets stable.

Data-driven performance:

PaaS models rely heavily on digital asset management to track asset usage and performance. These data insights are changing the way primary producers use machinery and manage their resources. New software can support farmers to gather real-time information on soil moisture, temperature changes, livestock behavior, and more, taking out all the guess work. With this vital information at their fingertips farmers can make better decisions, improve productivity, and limit waste.

Value-add services:

PaaS solutions allow farmers to access new digital tools, while benefiting from a range of add-on services, like training, customer support, and maintenance as part of a simple monthly payment plan. Warranties and repair services can also be included in PaaS contracts, mitigating the impact of unplanned costs, as well as high prices for maintenance and spare parts. Remote monitoring capabilities further reduce hassle for agricultural operators, as repair service providers can be automatically notified of equipment failures.

Benefits for Manufacturers

Manufacturers offering PaaS contracts can benefit from predictable revenue streams by offering services across the asset lifecycle. This shift away from one-time sales is particularly important because agricultural machinery can have a lifespan of more 30 years. Bundling services, like sensors with data management software, creates additional customer touchpoints after the initial sale and diversifies revenue opportunities. These agreements also allow manufacturers to reclaim valuable materials at the end of the equipment's life, mitigating raw material price fluctuations and supply chain disruptions.

Prime assets for PaaS



Combine harvesters

Operating leases for combine harvesters allow farmers to optimize performance and cost predictability per hectare. Embedded services that are included in PaaS contracts help keep assets in better condition, which may yield better asset quality and increase lifetime utilization.



Seeders and sprayers

Precision agriculture is an emerging trend in the sector, fueled by advances in technology, new EU regulations, and rising fertilizer costs. Acquiring seeders and sprayers through PaaS contracts can reduce upfront costs and aid the transition to data-informed practices.



Tractors

Traditionally, old tractors were dedicated to lesser farming tasks and maintained at low-cost. However, developing electronics and software means maintenance of older equipment become more expensive and complex. In a PaaS contract, assets are leased, while ownership is maintained by a single party, often the manufacturer or financier. The leasing mechanism is designed to maximize the use and value of assets by encouraging maintenance of the asset to retain its future value. Additional services embedded in the PaaS contract, such as software upgrades, repairs, and end-of-life handling may also play a role in increasing product utilization over its lifespan.



New and emerging technologies

including ground-based sensors, autonomous tractors, electric harvesters, and robots.



WHAT OUR EXPERTS TOLD US:

Jürgen Sieber is Chief Commercial Officer at Maschio Gaspardo, a global leader in sustainable agricultural solutions.

“In the agricultural machinery industry, strong dealer networks are vital, as they manage not only sales but also the essential services that keep our customers operational, such as maintenance and repair. Manufacturers generally avoid holding assets because it negatively impacts financial performance metrics, which is why we often outsource asset ownership to financial institutions.”

Value-add services for agricultural businesses

Hardware Options:

Maintenance, spare parts, and consumables, like fuel and fertilizer, and other agrochemicals.

Software Options:

Autonomous driving, fleet management, crop data interpretation.

Function Optimisation:

Performance enhancement through data analysis, such as crop analysis and drone surveillance reports.

Support Services:

Customer support, training, consultancy, legal compliance assistance, carbon credit schemes.

Performance guarantees:

Ensuring equipment reaches specified performance metrics or depreciates less than a specified threshold.

What's next? Addressing the challenges to PaaS adoption

The agricultural sector can set a positive example for how PaaS models can work in other sectors that operate complex, heavy machinery. To fully embrace the potential of a circular economy, the sector will need to consider how to:

- Design agricultural equipment with maximum utilization with easy repair and reuse in mind.
- Adopt and streamline new digital practices that allow for transparent and consistent residual value pricing.
- Reform current funding and subsidy structures that often incentivize outright purchases. For example, the EU's Common Agricultural Policy aims to modernize agricultural operations through subsidies. Can these policies be adapted to support servitization?
- Develop and grow a thriving second-hand market.



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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