



**THE CIRCULAR OPPORTUNITY
HARNESSING THE POWER OF
PRODUCT-AS-A-SERVICE IN
HEAVY VEHICLES**



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:

Fabien Delolme, Commercial Director for France, Dell Financial Services

Michael Mansard, Chair of the Subscribed Institute EMEA & Principal Director, Zuora

Stéphane Dierick, Director of Cloud Projects, Zuora

Jesus Blasco, Senior Vice President Capital Markets EMEA, GE Healthcare

Florian André, Founder and CEO, P2S Management Consulting

Olivier Bussenot, Vice President for Sales Operations and Enablement, DigitalRoute

Nicolas Diacono, Founder, Nincotech

Yann Toutant, Co-Founder and CEO, Black Winch

Benjamin Lehiany, Professor and Researcher, Institut Polytechnique de Paris

Jürgen Sieber, Chief Commercial Officer, Maschio Gaspardo Group

Yohann Desalle, Fleet Management Consultant, Thluki Conseils

Peter Lukassen, Director of Sustainability, Bosch

Ivo Ivanovski, Head of Medical Imaging and Foundry, OSRAM

Pierre-Emmanuel Saint Esprit, Circular Economy Director, Manutan Group, and Founder and Executive Director, ESSEC Global Circular Economy Chair

Geoffrey Richard, Circular Economy Director, Schneider Electric

Gwenaëlle Helle, Director of Financing Solutions, Schneider Electric

Jean Philippe Hermine, Director of the Mobility in Transition Institute and Associate Researcher, Institute of Sustainable Development and International Relations

Our thanks and appreciation also go to **Yağmur Damla Dokur**, as well as leading industry experts from **TellCo Europe** and **3stepIT**.



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: HEAVY VEHICLES

The Truck-as-a-Service (TaaS) market was valued at US\$23.1 billion in 2022, and is estimated to reach US\$172.4 billion by the end of 2031,^{lviii} as heavy duty vehicle (HDV) operators seek to simplify operations with a single contract that encompasses the acquisition, operation, and maintenance of their fleet. In addition to the lease of a HDV, these contracts include vehicle servicing, repair, insurance, and data-led insights to optimize performance.

TaaS trends

Online shopping sales have risen significantly, with global e-commerce sales reaching an estimated US\$5.8 trillion in 2023.^{liv} This has driven demand for delivery and logistics, serviced by HDVs.

Urban regions are expanding and growing in density, while limits on HDV use in residential areas increase.^{lv} Operators must optimize performance, meet compliance requirements, and improve sustainability metrics.



Air pollution is a growing concern for regulators. With HDVs responsible for more than a quarter of GHG emissions from road transport, the EU has set HDVs a 15% emission reduction target by 2025, growing to 90% by 2040.^{lvi}

Electrification is beginning to increase in popularity, as manufacturers and HDV operators seek to meet growing ESG requirements and tackle market challenges, including volatile oil and gas prices.

Innovation in the TaaS market

Innovation is exploding in the HDV sector, with new technology that can optimize vehicle capacity, mitigate collisions, remotely control temperature and infotainment, and conserve fuel, just to name a few. Machine-learning and Artificial Intelligence are changing the way operators mitigate risks, like road safety and traffic control, while automatic optimization means that pre-programmed routes can take weather, traffic, and other real-time obstacles into account.^{lviii}

Telematics technology is a dominant force in the TaaS market, enhancing fleet management by enabling real-time tracking, monitoring, and data collection from trucks. These systems also offer predictive maintenance services, which can identify and address vehicle issues before they cause significant downtime.

Fleet Management Consultant, Yohann Desalle, says: "The rise of telematics has opened new avenues for fleet services, transforming how we manage routes, driving times, and maintenance costs."

The TaaS opportunity

Access to technology:

Innovation is driving the adoption of TaaS models, as operators seek to benefit from the efficiency, sustainability, and safety gains that new technology can provide, without facing significant upfront costs for adoption, training, and use.

Industry-specific gains:

The Fast Moving Consumer Goods (FMCG) sector has led the adoption of TaaS models, benefiting from new data-led services like remote temperature control for trucks that deliver perishable goods.

Supporting the energy transition:

PaaS models are helping HDV operators transition their fleets to electric, with contracts that cover charging infrastructure and maintenance. Some manufacturers are extending their TaaS services to install hydrogen or electric motors in existing vehicles.

Optimizing mileage:

Pay-per-use contracts are priced on mileage travelled. When combined with data insights into driver behavior, vehicle performance, route optimization, and fuel conservation operators can ensure trucks are fully utilized.

Top 3 challenges to TaaS adoption



Infrastructure for electric and hydrogen-powered vehicles is patchy, creating problems for HDV operators, who travel long distances. Local network considerations, such as sufficient power supply for fast-charging stations, can also limit adoption progress. Investment is needed to establish a comprehensive network of charging and refueling stations.^{lix}



Regulatory provisions are still being developed. For example, strict safety standards apply to hydrogen refueling, which may limit some operators to consider PaaS contracts.



While PaaS is gaining traction, some organizations still favor traditional cash ownership. Greater awareness is needed to change behavior. Yohann Desalle says SMEs and family-run operators often prefer owning equipment due to historical norms and accounting practices.

PAAS IN ACTION

Volta: supporting the transition to electric trucks

The company

Volta provides an end-to-end solution that simplifies, accelerates and de-risks commercial fleet electrification^{ix}.

PaaS features

A 3-month deposit secures each Volta Zero with no further upfront costs, and Volta Trucks absorbs all residual value risk. This TaaS offer delivers a frictionless way to migrate fleets of all sizes to electric, maximizing their up-time and operational efficiency. For a predictable monthly fee, customers have access to the full-electric Volta Zero, its charging infrastructure, all servicing and maintenance needs, insurance, as well as training for drivers, fleet operators and technicians.

Benefits to customers

Each truck benefits from routine servicing, maintenance, inspections and extended vehicle cover over the holding period of the truck. This includes a guarantee on battery performance for the duration of the TaaS agreement. In the event of an unplanned stop, customers and drivers have access to 24/7 roadside assistance. This includes a 2-hour commitment for roadside support and a 24-hour commitment to getting a truck moving again, either through repair or an optional replacement vehicle.

Circular impact

Volta's all-inclusive service contract allows customers to access an electric fleet, which in turn supports customers to make a sustainable transition. According to the company, one Volta Zero prevents 194.5 metric tonnes of GHG (or CO₂e) from entering our atmosphere, which is equivalent to the CO₂e from 98,842 kg of coal burned. Through end-to-end support throughout the lifecycle of the electric truck, Volta's services also aim to increase product utilization and extend the life of the EVs^{ix}.

WHAT OUR EXPERTS TOLD US:

Yohann Desalle is a fleet management expert at Thluki Conseils, specializing in the transition to energy-efficient heavy trucks and the integration of associated services in the transportation sector.

"Retrofitting diesel trucks to electric has significant potential, but economic and psychological barriers need to be addressed. Full-service leasing is also still niche, but it's growing, driven by the demand for integrated solutions like fuel cards and tire management."



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](#)



BNP PARIBAS
LEASING SOLUTIONS

Equipment finance for a changing world