THE CIRCULAR OPPORTUNITY

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

EXECUTIVE SUMMARY

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

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UNLOCKING A CIRCULAR ECONOMY THROUGH PRODUCT-AS-A-SERVICE

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 Product-as-a-Service equation. Crucially, leasing allows 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.

However, the industry experts who contributed to this report, were unanimous in their hope for the future. They have highlighted the great potential for these solutions to support the transition to a circular economy and drive value for businesses, society, and the environment, while building resilience in a world of ever-scarcer resources.

They each highlighted several considerations to progress this transition, which together form the beginning of discussions about the future of PaaS models and their role in our society, which we invite all stakeholders in the ecosystem to take part in.

TOP 6 INSIGHTS ABOUT THE FUTURE OF PAAS FROM INDUSTRY EXPERTS

1

Collaboration is a top priority

Working across the global value chain to create and contribute to the circular ecosystem is an important challenge we face as a society. Success is dependent on all stakeholders coming to the table to find a fair and just pathway to achieving a circular economy that works for all. This will include a wide range of actors, from regulators to private sector organizations, the scientific community, social enterprises, and consumer groups, among many, many more. Today, this level of cooperation remains lacking in most sectors, and as seen throughout this report can present a barrier to progressing PaaS models.

2

ESG legislation is both an operational challenge and a business opportunity

Global ESG legislation has increased rapidly over the last decade, with the EU leading the world in its regulatory approach. New EU requirements for reporting, labelling, product design, and producer responsibility are placing challenging demands on organizations to understand, be transparent about, and mitigate their ESG impact. But this regulatory pressure also presents an opportunity for organizations to meet consumer demand for more sustainable products and services, find alternative pathways to profitability that decouple growth from consumption, and forge new connections and partnerships as part of the circular eco-system.

3

Education will be key to shifting attitudes from ownership to access

Despite the clear benefits of circularity, the linear economy is still the foundation of most major industries today, and shifting producer and consumer behaviour towards a service-based approach will take time. Education is crucial and governments will play a vital role in promoting the case for change, alongside the scientific community, the media, leading private enterprises in this space, and other early adopters. Making this shift away from traditional ownership will have a long-lasting and compounding impact, particularly because PaaS models enable investment in new sustainable technology that can help organizations to further reduce their environmental impact.

4

Manufacturers could benefit from incentives that prioritize eco-design

ESG regulations are encouraging producers to prioritize eco-design principles in the manufacturing process. However, further incentivizing this innovation could also have a positive effect on progress, especially given the investment required for new sustainable product development. While most manufacturers are already investing heavily in R&D, they could benefit from more certainty of strong returns from the products they develop. PaaS models can provide greater revenue predictability for manufacturers, strengthen dealer partnerships, and ultimately create a more stable and reliable sales channel. By freeing up cash flow, manufacturers can more confidently invest in innovation. The hope is that this helps to achieve much-needed breakthroughs in green technology, such as improvements to the recyclability of solar panels and EV batteries.

5

Capacity building needed to support circular value recovery

End-of-life management processes, like repair, refurbishing, remanufacturing, and recycling, are clearly an indispensable part of a circular economy. They are the mechanisms that extend product lifespan, maximize utilization, and recover value from used materials. As manufacturers continue to grow their sustainable commitments and include greater shares of recycled material in their new products, new infrastructure will be needed to close the loop on material use. Today, most industries lack the scale of refurbishing and recycling capacity needed to fully enable PaaS models. Building strong refurbishing and recycling ecosystems will be instrumental in recovering resource value, and ultimately reducing the strain on raw material supply.

6

Measuring the PaaS impact will require greater data sharing across the ecosystem

The new EU Taxonomy, which sets out clear KPIs to define circular and PaaS services, has been a hugely important and much needed step forward. Before this, organizations lacked a standard definition by which to measure the validity and success of their PaaS offerings. As these new business models emerge and mature, there is still work to do to understand, accurately measure, and communicate their wider impact in terms of CO2 emission reduction, resource efficiency, and waste reduction. Getting this right will create momentum behind the circular transition by demonstrating positive use cases that other organizations can follow. Data sharing will be crucial, but collecting, interpreting, validating, reporting, and sharing information across the value chain will require new legal, technical, and operational capabilities. Much of this is still under development, with new industries still emerging to support these requirements.

THE CIRCULAR OPPORTUNITY

Over the last five years the circular economy has gained momentum, with the volume of discussions on this topic almost tripling, according to the Circular Economy Foundation.[iv]

Governments worldwide are insisting on a swift, circular transition. Consumers are demanding change, and businesses are following suit. Organizations big and small are committing to transforming their operations in line with circular economy principles, including hundreds of leading brands from Ikea[v] to Adidas[vi] and the world's largest brewer, AB InBev[vii].

The transition to a circular economy has the potential to spark new innovations, supercharge the economy, create jobs, address some of the key causes of climate change, and re-energize local communities. But despite the opportunity it presents, today, the global economy is only 7.2% circular, with the share of secondary materials we consume dropping 21% since 2018.[viii]

It's clear that to make the circular economy a reality and turn hype into action, governments and businesses need practical ways to implement circularity across their value chain.

But first, what is the circular economy?

The circular economy is an alternative way of thinking about production and consumption that reduces both the consumption of raw material and the production of waste by extending the utilization and lifespan of products and materials. It's the opposite to a linear economy, which is characterized by a take-make-dispose approach to resource consumption.

In a circular economy, products are designed to stay in circulation, with resources being used again and again to extract their maximum value, before becoming waste and being recycled for their component parts. More concretely, as long as the solution reduces negative environmental impact, mechanisms that can achieve circularity can include:

Circular inputs: When virgin material is substituted with secondary or recycled materials in the production process, or single-lifecycle materials are replaced by fully recyclable components.

Circular design: Designing products to reduce material consumption through increased durability, increased modularity for ease of repair and recycling, and methods to avoid premature obsolescence.

Product lifetime extension: Processes that increase product utilization, including reuse, remanufacturing, repairing, refurbishing, repurposing, and the re-sale of second-hand goods.

Sharing business models: Services that optimise utilisation of products to reduce the production of new goods.

Product-as-a-Service: Selling products through use-orientated or result-orientated services such as leasing or pay per service contracts, where ownership of the asset remains with the manufacturer or lessor.

Material / resource recycling: Operations by which waste materials are reprocessed into products, materials, or substances.

Why circular, why now?

90%
of land-based biodiversity loss and water stress are caused by raw material extraction and processing.[ix]

90%
of the resources consumed worldwide end up in waste.[x]

US$62 billion
worth of recoverable natural resources used in electronics alone is lost every year as waste.

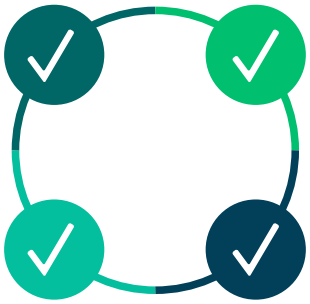
US$80–120 billion
of plastic packaging material value is lost to the economy after a short first use, equal to about 95% of its total value.[xi]

US$4.5 trillion
in additional economic output could be generated by a circular economy by 2030.[xii]

3.9 million
people in Europe are estimated to be employed in jobs directly associated with the circular economy in 2018.[xiii]

What are the benefits of circularity?

The circular economy is key to the fight against climate change and resource depletion. By reducing the need for new products, increasing product utilization and efficiency, and encouraging reuse, circularity can deliver huge environmental benefits, including:



Shifting away from traditional production and consumption also improves economic stability, relieving pressure on overstretched supply chains, mitigating price fluctuations, and reducing import dependence.[xiv]

WHAT OUR EXPERTS TOLD US:
Jean Philippe Hermine is Director of the Mobility in Transition Institute and Associate Researcher at the Institute of Sustainable Development and International Relations.

"The circular economy requires us to rethink the product as a set of components, some of which are extremely strategic and do not necessarily have the same life cycle."

WHAT IS PRODUCT-AS-A-SERVICE?

Circularity is a powerful guiding principle for sustainable growth, but organizations also need practical tools to help them implement this new way of doing things. This is where service models, like Product-as-a-Service (PaaS) come in.

In a PaaS model customers pay for the services and outcomes a product can provide, rather than for ownership of the asset itself. Payment is made on a regular basis over the contract term, instead of purchasing a product outright. Additional services such as maintenance, insurance and asset tracking can also be included.

A clear definition for Product-as-a-Service

Until recently, there were no standardized definitions or criteria for assessing circular business models. However, in June 2023 the EU released a new taxonomy to evaluate economic activities for their environmental sustainability, emphasizing circular economy practices such as repair, refurbishment, and new models like PaaS.[xxiv]

Key requirements of the new taxonomy include:

- Retention of product ownership by service provider.
- Access to products via service models available to customers.
- Service models categorized as either use-oriented or result-oriented.
- Return of the product by the customer upon completion of the contractual agreement.
- Service results in either extended product lifespan or enhanced product utilization.

Trends driving the shift to Product-as-a-Service

Complex global economic environment

Rising inflation, supply chain disruption, fluctuating energy prices, and climate change are playing a part in driving PaaS adoption as organizations look to adopt more sustainable and resilient alternatives to traditional asset ownership.

New regulations

Alongside the EU's new taxonomy, many of the policies set out as part the EU Green Deal and the Circular Economy Action Plan, are designed to encourage and support organizations to transition to circular, service-based models.

Subscription economy

The technology sector has been at the forefront of developing subscription models, with a growing number of software and hardware as-a-service options proving popular with organizations.

Sustainability

Organizations face mounting pressure to transition toward sustainable operations, driven by environmental regulations. However, the capital expenditure required for green technologies often presents a barrier to adoption. PaaS can enable organizations to access sustainable technologies and equipment without the burden of substantial upfront investments.

Which financial contracts are considered Product-as-a-Service contracts?

Contract type	Definition	Meets PaaS criteria?
Operating lease	The customer uses an asset for a defined period, paying for its use without assuming ownership.	✓
Pay-per-use	Customers pay based on actual use or consumption of a product. The provider retains ownership and responsibility for maintenance and updates.	✓
Pay-per-performance	Customers pay based on the achievement of specific performance metrics or outcomes, rather than a fixed fee. The provider retains ownership and ensures performance criteria are met.	✓
Subscription	Customers pay a recurring fee at regular intervals to access a product or service for a defined period. The provider retains ownership and responsibility for maintenance and upgrades.	✓

Value-add services that can be bundled into PaaS contracts

- Customer support
- Consultancy
- Maintenance
- Reverse logistics
- Equipment installation
- Training
- Warranty
- Asset management
- Equipment upgrades
- Data insight

WHAT OUR EXPERTS TOLD US:

Stéphane Dierick is Director of Cloud Projects at Zuora, an industry leading provider of subscription and monetization solutions.

"PaaS is a pillar of the circular economy, but its potential remains largely untapped in many industries. As regulatory pressures increase, more businesses will turn to circular and PaaS models to stay competitive and compliant."

UNLOCKING THE BENEFITS OF PRODUCT-AS-A-SERVICE

PaaS models support a shift away from purchasing products outright to buying the services, value, and benefits products provide. Beyond their clear sustainability impact, PaaS models also offer important operational, financial, and environmental benefits for stakeholders across the entire value chain.

Manufacturers: a new route to sustainable profitability

Recurring revenue and profitability	PaaS enables manufacturers to shift from one-time sales to recurring revenue across the product lifecycle through contracts that include services such as software updates, maintenance, and reverse logistics.
Customer insights	Retaining ownership of a product throughout its lifecycle provides access to valuable data on usage and performance. Manufacturers can identify common issues, develop targeted improvements, and offer tailored solutions that enhance customer satisfaction.
Circular value creation through material reuse	PaaS contracts give manufacturers the mechanism to recover products and reuse their precious metals and rare earth elements instead of extracting more raw materials. This reduces supply costs and reliance on external suppliers, which is especially important for materials that are expensive or geopolitically sensitive.
Regulatory & ESG compliance	PaaS facilitates better lifecycle management and embeds circular economy practices into manufacturing businesses. As new legislation emerges, this may help producers to align business practices with regulatory requirements and fulfill ESG commitments.
Market differentiation and brand loyalty	Offering products as a service differentiates manufacturers from competitors due to its integrated service offerings. Manufacturers can build stronger customer loyalty by offering services over the lifetime of the asset, instead of focusing on single sales opportunities.

WHAT OUR EXPERTS TOLD US:

Olivier Bussenot is Vice President for Sales Operations and Enablement at DigitalRoute, a leading international provider of revenue and usage data management software.

"Manufacturers need to shift from a unit price mindset to measuring the lifetime value of equipment. Unlike one-off sales, transitioning to a model with outcome-based pricing offers the potential for predictable revenue streams and in parallel, a more attractive business model."

Financial institutions: supporting the transition

New revenue streams	Financial institutions could diversify revenue streams and benefit from the predictable, recurring payments PaaS contracts offer, including from leasing fees, services charges etc.
Risk mitigation	In the future, PaaS contracts may have lower risk exposures compared to traditional loans. Ongoing asset ownership by the manufacturer can lower the likelihood of default, and the residual value of assets can be used as collateral, potentially minimizing the risk of financial loss.
Market growth	Increased demand for sustainable assets and circular financing solutions could create new market opportunities for financial institutions.
Enhanced customer relationships	Financial institutions could deepen their relationships with customers and cross-sell additional services (for example insurance and business consultation).
Supporting sustainability goals	Financing PaaS models could align with the growing emphasis on sustainability and ESG investment criteria. Financial institutions may be able to enhance their ESG performance by supporting circular economy initiatives and green financing projects.

End users: embedding efficient and sustainable circular practices

Improved cash flow	End-users could benefit from lower upfront costs for investment in modern, sustainable equipment, as well as improved cash flow, budget predictability, and reduced exposure to unplanned costs.
Operational efficiency and flexibility	PaaS contracts could help to reduce technical failure risks by offering guaranteed lifecycle services, such as maintenance, training, data optimization, and software updates.
Simplified processes	PaaS simplifies processes for clients by bundling services like maintenance and support into a single contract, reducing the need for multiple service providers. This can save time and resources that could be spent focusing on core business activities.
Scalability	PaaS contracts allow organizations to scale equipment volume and tailor their procurement to their business needs. This potentially allows organizations to be more adaptable, resilient, and responsive to their external environment.
ESG commitment	Adopting PaaS models can, in some cases, help to reduce resource consumption, extend product lifespans, and maximize usage. This may allow organizations to align with ESG and circular economy principles. PaaS models also relieve clients from the responsibilities and costs of end-of-life handling, like reselling or recycling equipment.

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 brings 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 Product-as-a-Service 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 and services, 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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