

BERYLLS STUDY

HOW VEHICLE-AS-A-SERVICE IS ACCELERATING BEV SALES IN EUROPE

September, 2022

REASONS FOR THIS STUDY



Christopher Ley
Associate Partner
Berylls Strategy Advisors

- › In Europe, there is a significant trend away **from vehicle ownership towards usage-based Vehicle-as-a-Service** products such as flexible leasing and subscription
- › At the same time, **mass adoption of battery electric vehicles (BEVs) is already underway**, led by demand from retail and corporate customers, supportive regulatory frameworks and successful EV product strategies from OEMs
- › In order to understand the link between these two trends from the driver's perspective, we published a **detailed customer survey in early 2022** (see details on the right)
- › To complete our **360-degree market overview**, this study is focused on the **experiences of providers of VaaS services** – both incumbents and startups
- › Our interviews have produced one common theme: **VaaS products will accelerate the mass adoption of battery electric vehicles across both retail and corporate customer groups**
- › **Thanks to all participants** for the inspiring conversations and detailed insights



Background of the January 2022 customer survey:

- » **2,040 retail customers** in Germany (urban and rural) surveyed
- » Focus on **Gen X-Z** (16-56 years old) to understand views of younger drivers
- » **New car, used car and no car owners**
- » Asked about their **next mobility choice** to analyze changes in vehicle usage and ownership needs

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TO LEARN MORE:
Please have a look at our previous [Vehicle-as-a-Service customer survey](#)

KEY FINDINGS ...

1 Customer demand

Customer demand for flexibility and convenience drives European vehicle market from ownership (cash/financing) toward usage-based Vehicle-as-a-Service products (vehicle leasing/subscription)

2 Electrification

Due to the shorter-term and low-risk nature of VaaS contracts, customers are more willing to make the switch to electric vehicles via such products, further accelerating BEV demand in Europe

3 Sales channels

VaaS products will increasingly be bought via digital channels – but the option to have physical touchpoints will remain important

4 Business model

Incumbents (OEMs, captives, leasing companies) should see VaaS contracts not as stand-alone products but as an integral part of a new customer and vehicle-centric multi-cycle sales model



- » Based on our proprietary research and project experience, we have built a detailed overview of the **European VaaS market out to 2030**
- » To date, **private customers have preferred ownership**, whereas **corporate customers chose long-term VaaS offers**, with average contract lengths of 3 to 4 years
- » However, our discussions with fleet managers and customers this summer show that **SMEs in particular, but also large fleet customers, are moving toward flexible VaaS contracts** to respond to a fast-changing market – including demand for EVs
- » Overall, **we expect VaaS offerings to catch up** with the previously dominant credit finance products in Europe **by the end of this decade**.

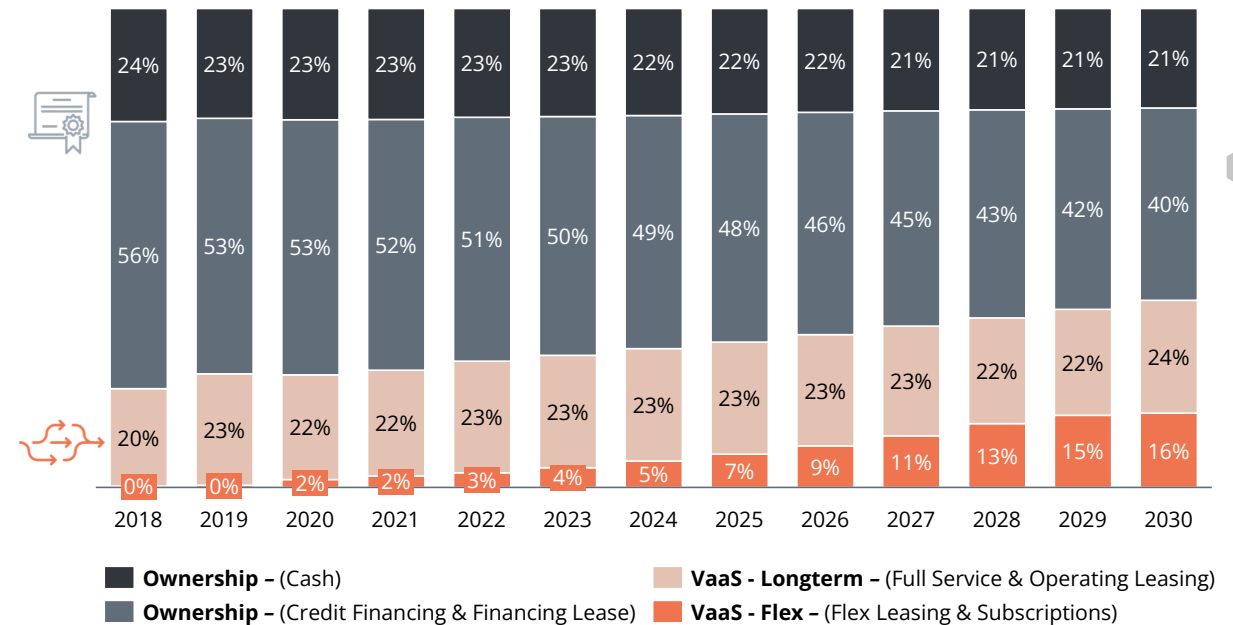
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Florian Tauschek
Associate Partner
Berylls Strategy Advisors

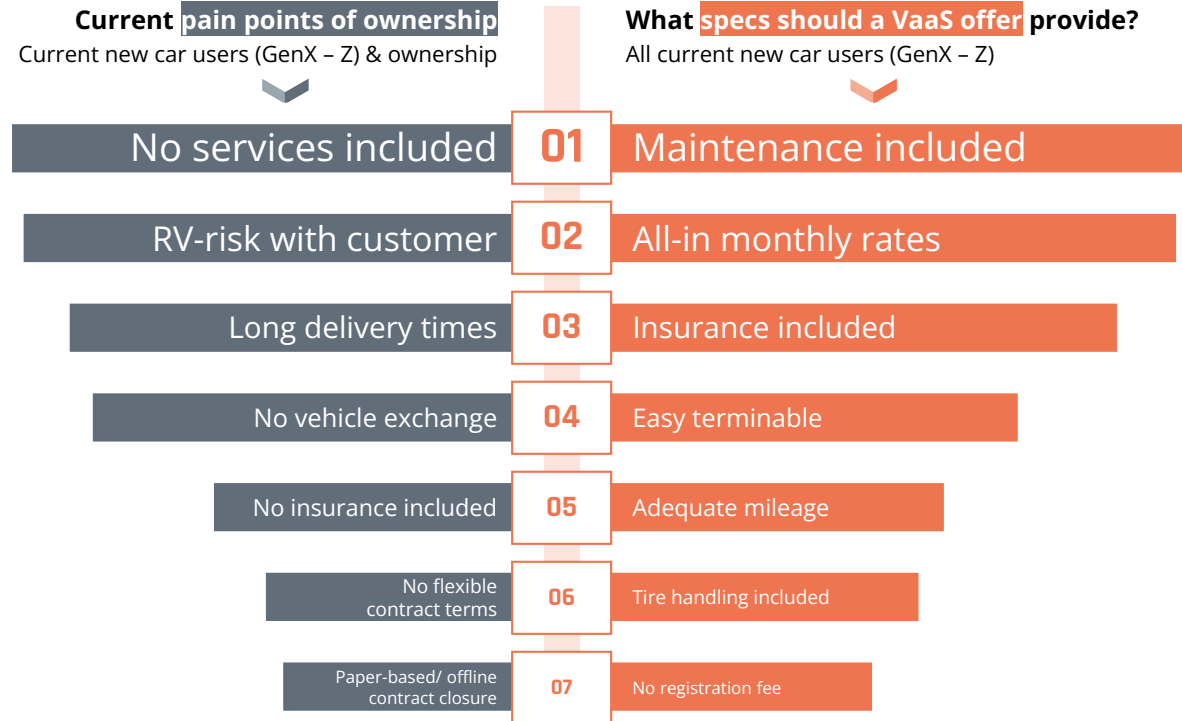
ACROSS BOTH PRIVATE AND FLEET OWNERS IN EUROPE, VAAS WILL MAKE UP 40% OF THE MARKET BY 2030

DEMAND DEVELOPMENT FOR VAAS*



Source: Berylls Vehicle-as-a-Service Market Model *for private & corporate customers in EU10 markets

MAJOR REASONS CUSTOMERS CHOOSE FLEXIBLE PRODUCTS



Source: Berylls – Vehicle-as-a-Service customer survey

CUSTOMERS APPRECIATE HASSLE-FREE ALL-INCLUSIVE OFFERS WITHOUT THE BURDENS OF LEGAL OWNERSHIP

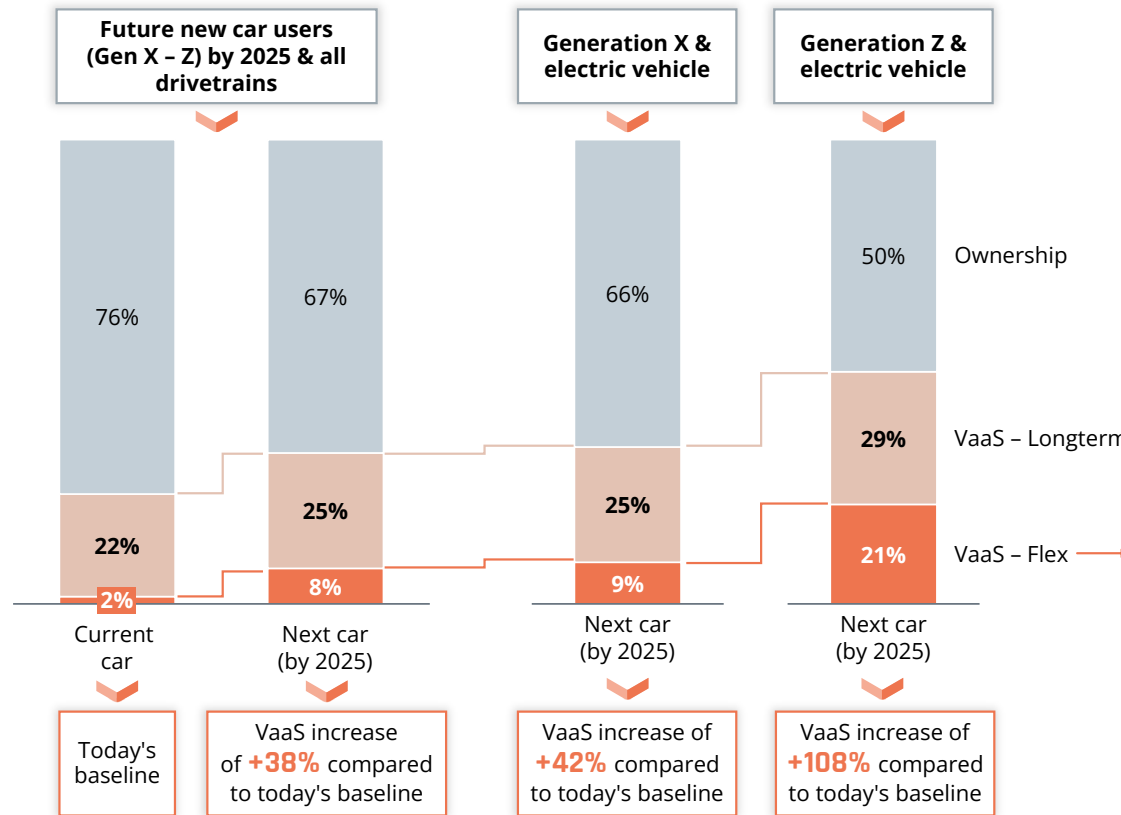
Tobias Detzler
Senior Consultant
Berylls Strategy Advisors



- » Today's customers want convenience and are attracted to VaaS offerings because all **the services they need are included**
- » **All-inclusive monthly rates are transparent** and give customers a good feeling about their purchase
- » The **flexibility** that VaaS provides, in terms of **quick and easy-to-terminate vehicle access**, matches with the unpredictability of modern life
- » Eventually, VaaS also **carries less** risk for the customer – at the end of the term, the vehicle **does not have to be sold** for a previously unknown price, but is simply returned to the provider

”

CHANGING DEMAND IN FUTURE CAR PURCHASES



Source: Berylls – Vehicle-as-a-Service customer survey

13% of today's non car-owners would consider getting their own vehicle using a VaaS offering

50% of GenZ with an interest in a BEV would prefer a VaaS offer

VAAS FLEX CUSTOMERS compared to vehicle ownership customers ...

... ARE **3X MORE** INTERESTED IN NEW DRIVETRAINS

SUBSCRIPTION AND FLEXIBLE VAAS MODELS WILL DRIVE ELECTRIC VEHICLE ADOPTION - PARTICULARLY FOR YOUNGER CUSTOMERS

Mercedes-Benz Bank

- » Customers want to experience mobility by having their own vehicle – but they don't necessarily want to own it.
- » In line with our „Electric only“ strategy, we launched a subscription program for all our electric models.
- » With our flexible rental and subscription models, we offer various possibilities to experience electric vehicles in everyday life without a long-term commitment.
- » Around a third of our electric vehicle customers opted for a subscription model when we introduced this new option.
- » With the growing familiarity of many customers with electric mobility and the increasing development of the charging infrastructure, the demand for long-term products such as finance and leasing is rising.
- » Our „Captive 4.0“ ambition is to closely follow customer demand and provide a comprehensive product portfolio.



Benedikt Schell
Chief Executive Officer
Mercedes-Benz Bank

GERMAN PREMIUM CUSTOMER STUDY PROVES THE TREND TOWARDS EVS & VAAS

GLOBAL TRENDS IN AUTOMOTIVE & FINANCIAL SERVICES 2022

80% of
customers intend
to switch to an
electric vehicle
within the next
five years.

55% of
customers state
that digital
touchpoints across
the journey are as
important
as physical
ones.

66% of
customers would
choose a financing
option (credit or VaaS)
for their next electric
vehicle instead of
outright purchase.

52% of
financing customers
would primarily
choose a VaaS offer
(leasing or subscrip-
tion) for their next
electric vehicle.

Source: Data from Kantar market survey (2022); N=2,605 surveyed drivers of premium cars across all brands from Germany, China and USA

Niels Reimann
Chief Product Officer
Fleetpool



- » Customers choose our products because they are flexible, but not for the reasons many people think
- » For example, they do not want to switch vehicles all the time; on the contrary, they tell us such hyper-flexibility seems stressful as they would constantly have to order and adapt to new cars
- » Instead, the key reasons for choosing subscriptions over ownership are:
 - Convenience: Digital-first purchasing journeys and a simplified range of products
 - Vehicles are available within weeks
 - It's a risk-free way to test brands & electric vehicles
- » The majority of our customers who have tried a BEV via a subscription model do not want to switch back neither to an ICE nor to an ownership product
- » However, subscription products are highly price sensitive – sometimes a few euros difference can drive conversion rates up or down

”

WITHIN THE VAAS MARKET, SUBSCRIPTION IS THE HOTTEST PRODUCT BECAUSE IT BEST MEETS DEMAND FOR CONVENIENCE AND AVAILABILITY

COMPARISON OF AVERAGE CONTRACT DURATIONS

ViveLaCar 10 months

FINN 11 months

fleetpool group 12 months

FAAREN 13 months

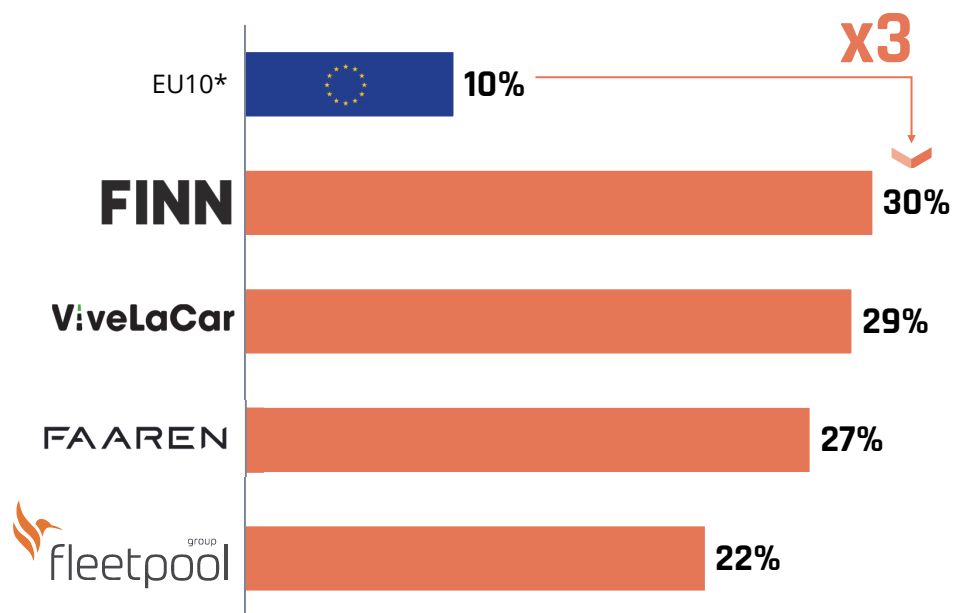
bipi 24 months

Source: Interviews

“Today's subscription lengths are closer to leasing than to short-term rental offers - there is no trend toward hyper flexibility”

VAAS OVERCOMES THE BIGGEST CUSTOMER OBJECTIONS TO EV ADOPTION: TECHNOLOGY UNCERTAINTY AND RESIDUAL VALUE RISK

PENETRATION OF BEV IN RESPECTIVE PORTFOLIO



Source: Interviews, company information, ACEA

*Share of BEV on new car registrations in 2021 – not of total car parc

ViveLaCar

- » While there is a broad consensus that the car industry needs to become more sustainable via electrification, there is still technology anxiety among customers – both for premium and volume brands
- » Their concerns include charging availability and range, and how far the value of the battery will depreciate over time
- » If we as a society want a fast, large-scale transition toward BEVs then we need to take the risk away from consumers
- » We believe flexible products such as subscriptions will be the key to mass adoption of BEVs
- » This especially applies for corporate fleet customers: changing regulatory requirements and highly dynamic business environments complicate long-term fleet planning – flexible VaaS products enable them to react accordingly
- » For new OEMs entering the European markets – and there are a lot of them coming – offering subscriptions is also a massive chance to gain market share quickly
- » The winning business model will be a combination of a digital journey with physical touchpoints and a multi-cycle view



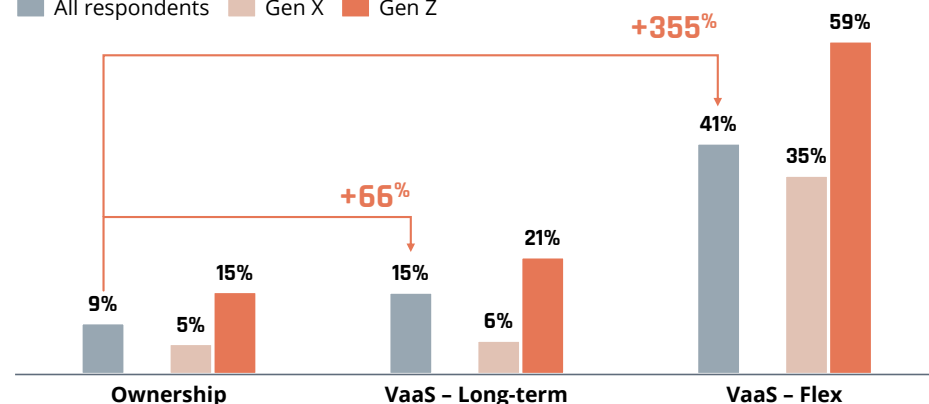
Matthias Albert

Chief Executive Officer
ViveLaCar

COMPARISON OF RELEVANT SALES CHANNELS

Willingness for **binding purchase agreement** online
for the next vehicle (by 2025); share for online/ via App

■ All respondents ■ Gen X ■ Gen Z



Source: Berylls – Vehicle-as-a-Service customer survey

**“Vehicle-as-a-Service offers will be a
key part of any successful omni-channel
sales concept”**

CUSTOMERS ARE MUCH MORE WILLING TO ORDER VEHICLES ONLINE WHEN BUYING VAAS PRODUCTS



Dirk Adelman
Chief Executive Officer
smart Europe

René Müller
Head of B2B sales
smart Europe



- » Across Europe there is a trend toward usage-based VaaS products, in particular for the small car segment
- » Our ambition is to keep our offer simple and we have launched a very lean and conscientious online direct sales model: it takes six clicks to order the car, another one for finance
- » Simplicity in the product also requires simplicity in the purchasing journey, so we provide a fully online service for the rising share of customers (both retail and corporate)
- » Yet we value our retail partner network as a great asset for all these customers who still prefer physical touchpoints for topics such as test-drives and handovers
- » Going forward the behavior of corporate and retail customers will look similar. Our direct sales model enables us to stay in touch with customers at all phases of the vehicle lifecycle, by storing the data the customers and their vehicles generate. We will be able to identify the customer at any touch point – physical and digital
- » Subscription models will be an integral part of future mobility and therefore also part of smart's solution

VOLVO

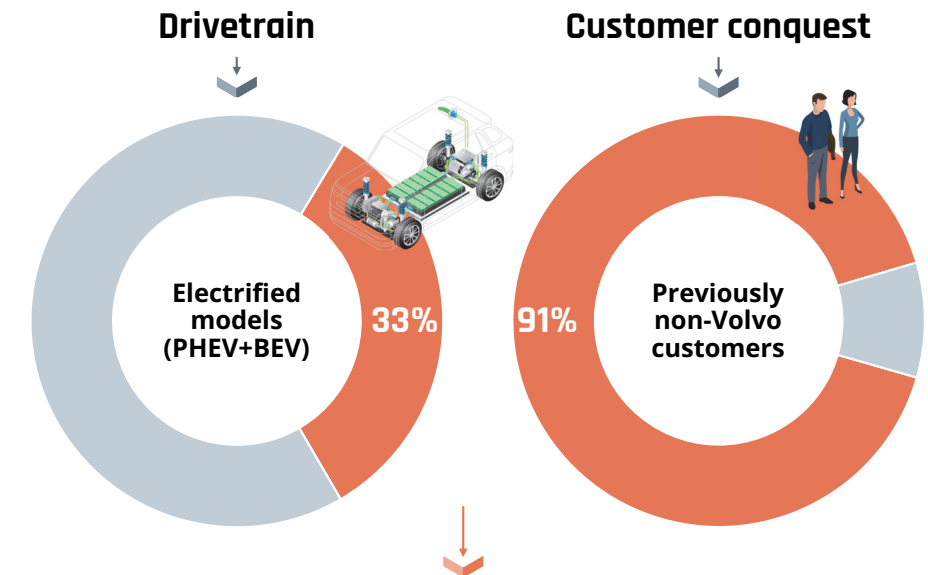
- » With CareByVolvo, we were one of the first subscription providers to offer all-inclusive deals and a convenient online sales journey
- » The relatively low level of online sales in the car industry today are not due to a lack of customer demand, but because providers have not offered the high-quality online sales experiences available in other sectors
- » Still, from our experience trust is the most important factor for our customers, defined by three dimensions: transparency on price and total cost of ownership (TCO)*, actual vehicle delivery date and desired vehicle configuration
- » The popularity of these elements is underscored by the high share of customers we have won from other brands – across all five active European markets its >75%
- » Omni-channel sales strategies will be key to improving customer experiences, and our dealers play a critical role in guiding customers through the process. We are doing this together with our retailers.



Magnus Fredin
Senior Vice President Global
Online Business
Volvo Cars

THE TRANSPARENCY OF ALL-INCLUSIVE OFFERS WILL SUPPORT THE CAR INDUSTRY'S TRANSITION TO ONLINE SALES

CAREBYVOLVO KEY FIGURES (GERMAN MARKET 2021)



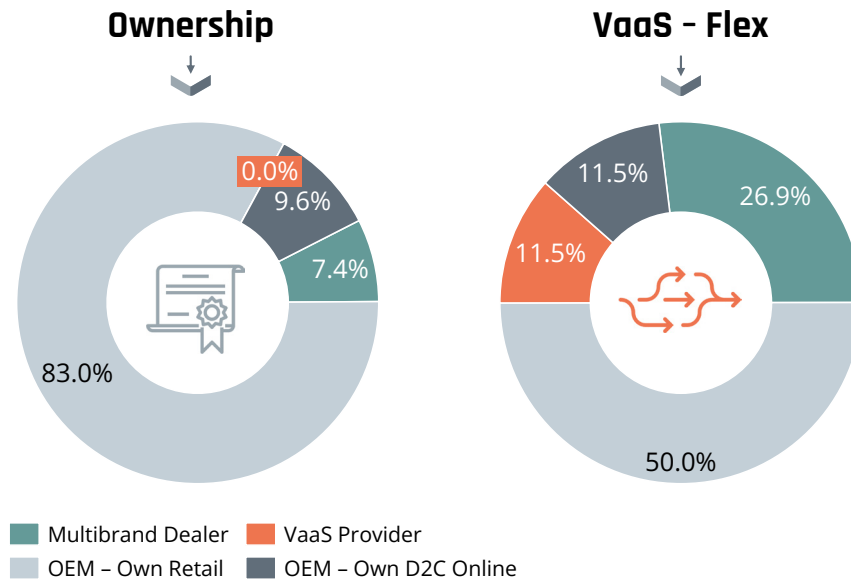
“Subscriptions accounted for 13% of our sales in Germany in 2021 and will be an important tool to reach our EV & online sales targets.”

Source: Company press release *TCO = Total cost of ownership

ONLINE SALES ALSO OPEN UP THE MARKET FOR THIRD PARTY PROVIDERS – BUT CUSTOMERS STILL VALUE DEALERSHIPS

COMPARISON OF RELEVANT SALES CHANNELS

Where are you going to order **YOUR NEXT VEHICLE?**



Source: Berylls – Vehicle-as-a-Service customer survey

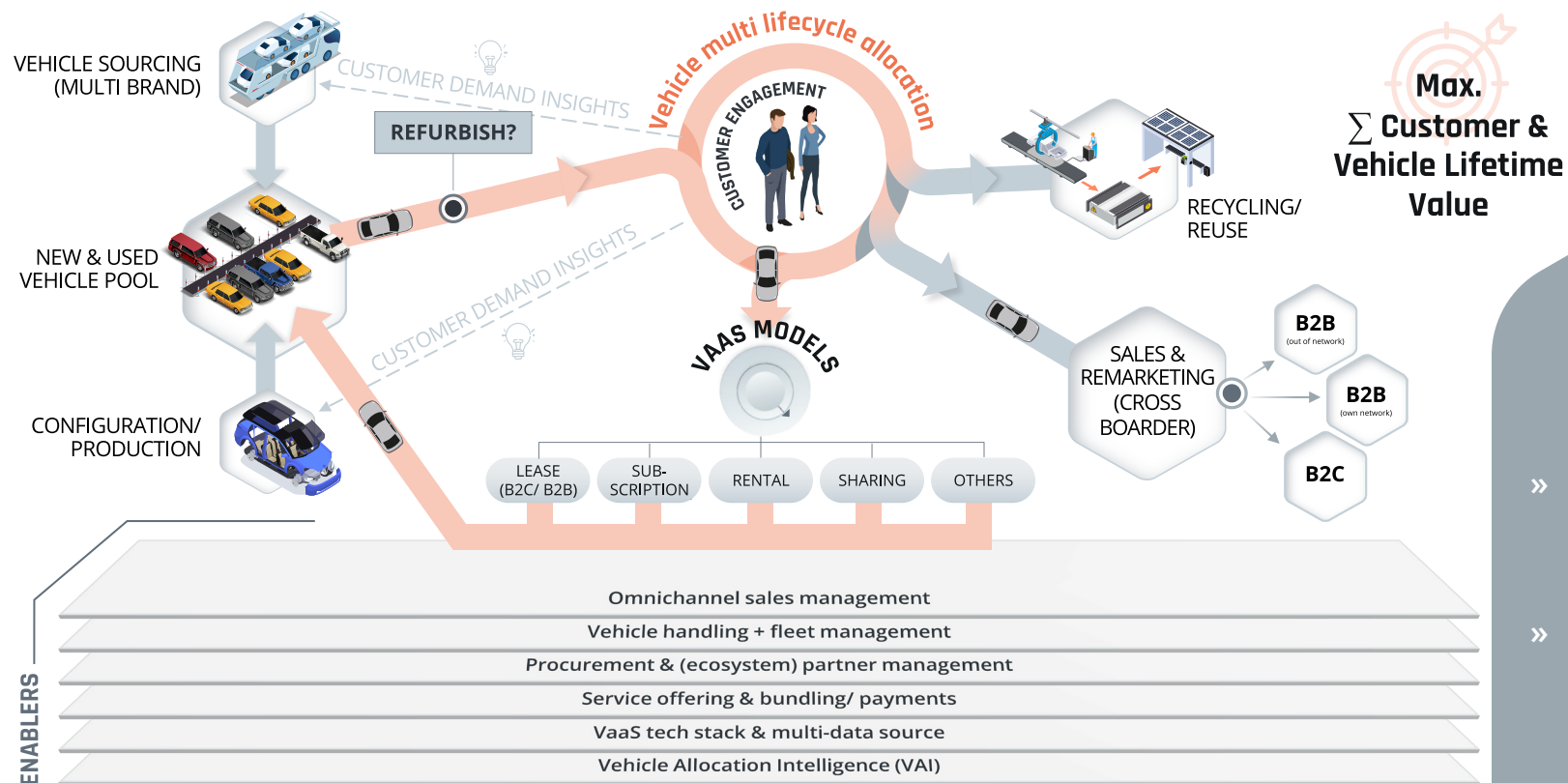
FAAREN GROUP

- » Subscription offers eliminate a lot of complexity for customers as they include all relevant building blocks of mobility allowing customers to focus on the essential part of the journey
- » As they are less regulated than financial services products and require less complex applications and paper work customers are willing to conclude contracts online more easily
- » Dealers and OEM groups therefore need to leverage new technology solutions to offer subscription products via simplified and convenient digital journeys, and as an additional offering for customers who still want to engage with dealers in person
- » Incumbents who don't take this market evolution seriously risk losing out to new players, as it's easy for customers to compare offers from different providers online



Daniel Garnitz
Chief Executive Officer
FAAREN

VEHICLE-AS-A-SERVICE TARGET PICTURE



Source: Berylls Strategy Advisors

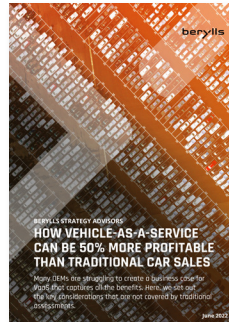
SHORTER FIRST LIFECYCLE OF VAAS PRODUCTS REQUIRES PROVIDERS TO THINK IN MULTI-CYCLE SALES STRATEGY

Christopher Ley
Associate Partner
Berylls Strategy Advisors



- » The overarching goal of the future VaaS sales model will be to maximize customer and vehicle lifetime value, by building up customer loyalty and owning each vehicle for a longer period
- » Because vehicles will be handed back to the OEM or VaaS provider at the end of the contract, two actions will be essential. Firstly, to retain the existing customer by finding them the right new offer, and secondly, to find another customer for the vehicle.
- » This multi-cycle model requires new capabilities, including:
- An end-to-end product portfolio for new and used vehicles
 - Refurbishment capabilities to optimize the condition of returning vehicles
 - Vehicle allocation intelligence (VAI) to identify the ideal next owner or user

FOR MORE INFORMATION:
Please have a look at
our [“The secret of making VaaS pay” study](#)

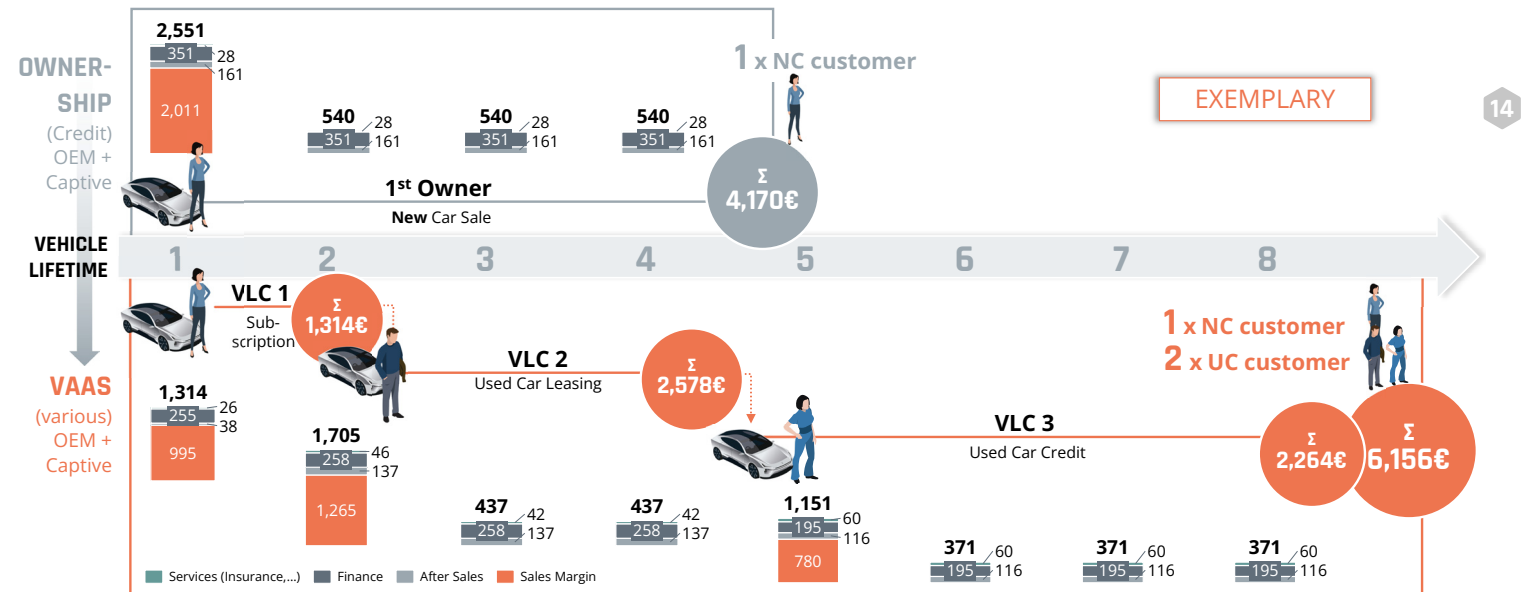


The good news is that providers who set up a multi-cycle sales model successfully will be able to **generate up to 50% more profit** compared with the traditional one-off sales model.

The key levers are to extend the period of ownership during the vehicle's lifetime by **holding on to the assets for multiple use cycles**, and to create a **longer-lasting customer relationship** during which the VaaS provider can sell more convenience-adding services over a longer period of time.

IF DONE THE RIGHT WAY, THIS MULTI-CYCLE SALES MODEL IS UP TO 50% MORE PROFITABLE THAN THE TRADITIONAL ONE-OFF SALES MODEL

PROFIT COMPARISON OF DIFFERENT SALES MODELS

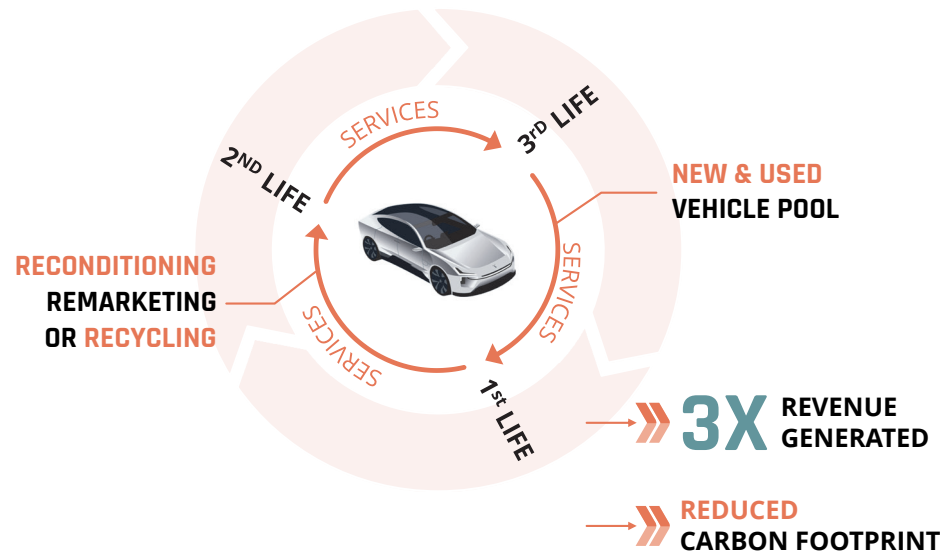


Source: Berylls Strategy Advisors, NC = new car; UC = used car; VLC = vehicle lifecycle

FIRST-MOVER OEMS AND CAPTIVES ARE ALREADY ADOPTING A CUSTOMER AND VEHICLE-CENTRIC MULTI-CYCLE SALES MODEL

MOBILIZE'S VEHICLE-AS-A-SERVICE VISION

VEHICLE IS A PLATFORM FOR SERVICES AND RECURRING REVENUES



Source: Mobilize (the Renault Group brand dedicated to new mobilities)

MOBILIZE FINANCIAL SERVICES

- » We believe that the multi-cycle model – especially with EVs – has up to three times more revenue potential for our group than the traditional sales model
- » Products that encourage customer loyalty, including flexible leasing, long-term rental agreements and subscriptions – all offered multibrand – are key for our growth
- » Firstly, these products enable us to win new customers with different needs
- » Secondly, the all-inclusive pricing model massively increases the success rate for recurring revenue services (such as after-sales and insurance), especially after the first cycle, which currently is heavily underserved
- » Moreover, for our dealer network, this means the potential for more business (e.g. repair services, maintenance and delivery)



Enrico Rossini

Head of Fleet and New Mobilities
Mobilize Financial Services

» Though, the multi-cycle approach is more complex and requires new capabilities such as finding and acquiring the right customer for the next cycle in anticipation to maintain a high utilization

Dr. Christian Dahlheim
Chief Executive Officer
Volkswagen Financial Services

VOLKSWAGEN FINANCIAL SERVICES

THE KEY TO MOBILITY

- » There is a sustainable trend from ownership to usage-based leasing and subscription products – across all drivetrains and in particular for BEVs
- » In the short-term perspective this is driven by the current limited supply, where some BEVs are only available via usage-based offers
- » In the long-term we see this as a continuous development as customers will not be willing to give up the flexibility and convenience levels experienced with these products
- » From a provider perspective we see leasing and subscription models equally attractive from a financial perspective, if managed in the right way
- » When subscribers buy all-inclusive packages, providers can address a larger “share of wallet,” offering services such as wear and tear coverage and insurance, and have a better chance to build up customer loyalty
- » The more flexible contract durations become, the more important it will be to keep vehicles utilized and win new customers for the next use cycle
- » In the future, we expect the VaaS model will mean holding vehicles for a period of eight to nine years, redeploying them to different leasing and subscription customers during that time, until finally selling the vehicle or re-using the parts and battery in other vehicles
- » To increase utilization & profitability of the individual Vehicle on Demand offers (subscription, rental, sharing) we believe it to be beneficial to serve all these offers based on a common underlying vehicle fleet (“OneFleet”)



VAAS OFFERS ARE TREATED AS AN INTEGRAL PART OF A NEW BUSINESS MODEL FOCUSED ON ASSET UTILIZATION RATHER THAN SALES

„WE SEE THE TREND TOWARD USAGE-BASED OFFERS ACROSS ALL DRIVETRAINS“

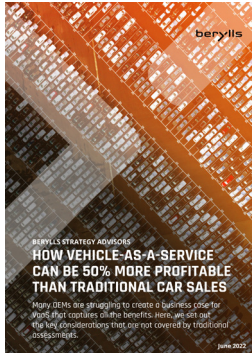
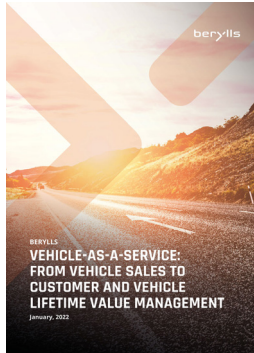
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Private leasing
was irrelevant 5 years ago, and today it is **very important and a growing sales channel**

Subscriptions and leasing are equally profitable
if both are managed well

The goal must be to own the car for longer
in order to maximize the vehicle's lifetime value

RECENT PUBLICATIONS



If you want to learn more about Vehicle-as-a-Service, feel free to visit our VaaS website, read on in our cutting-edge publications or just contact us directly to discuss the impact of VaaS on your business!

BERYLLS INSIGHTS: VEHICLE-AS-A-SERVICE

The background of the page is a photograph of a winding asphalt road that curves through a hilly, wooded landscape. The road is bordered by a concrete wall on the left and a metal guardrail on the right. A road sign with the number '18' is visible on the guardrail. The scene is captured in a warm, golden-hour light, with the sun low on the horizon, creating a soft glow and long shadows. The hills are covered in dense green and brown vegetation. The overall mood is serene and scenic.

THE BERYLLS GROUP'S SERVICES are fully dedicated to the automotive industry. Our experts in Germany, China, Great Britain, South Korea, North America and Switzerland understand the industry's key challenges and are developing ways to achieve sustainable success in the automobility eco system. They use advanced digital strategies and other innovative approaches. Our professionals are networking across our four specialised units to offer our clients end-to-end support, from strategy development to the implementation. We call this network our Berylls Quartet:

Berylls Strategy Advisors - The expertise of our top management consultants extends across the complete value chain of automobility - from long-term strategic planning to operational performance improvements. Based on our automobility thought leadership Berylls Strategy Advisors stand out with their broad experience, their profound industry knowledge, their innovative problem-solving competence and, last but not least, their entrepreneurial thinking.

Berylls Digital Ventures - The development and operation of digital products or the implementation of new business models are increasingly required to drive the realization of our clients' strategic concepts. The Berylls Digital Ventures team takes up this challenge - working together with our clients end-to-end. Furthermore we invest in promising startups and bring digital solutions to market, turn-key ready for our clients. Always with a keen focus on automobility.

Berylls Mad Media - The radical digitalisation of the customer interface undermines the boundaries in the automotive sales model. Our Berylls Mad Media experts develop and operate tailored solutions, including data-driven marketing, integrated service designs, and including the agile realisation of integrated process and IT architectures. We strengthen customer loyalty, market exploitation, and profitability - taking vehicles and services to market digitally.

Berylls Equity Partners - is a private investment company, supported by strong anchor investors and pursuing an entrepreneurial approach. We carefully select, acquire, and improve operationally, companies with value potential in the mobility industry - with a long-term strategic direction.

The automotive industry is currently facing fundamental challenges. We have made it our mission to support industry players in accomplishing an effective and future-proof change process. The unique value we bring to the table is based on digitisation, technological innovation, market insights and renowned partnerships.

The Berylls Quartet is your high-performance engine to succeed on this exciting road.

The future will be, but different.

BERYLLS STRATEGY ADVISORS

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