NETSOL

Navigating the New Era of Technological Evolution in Finance and Leasing

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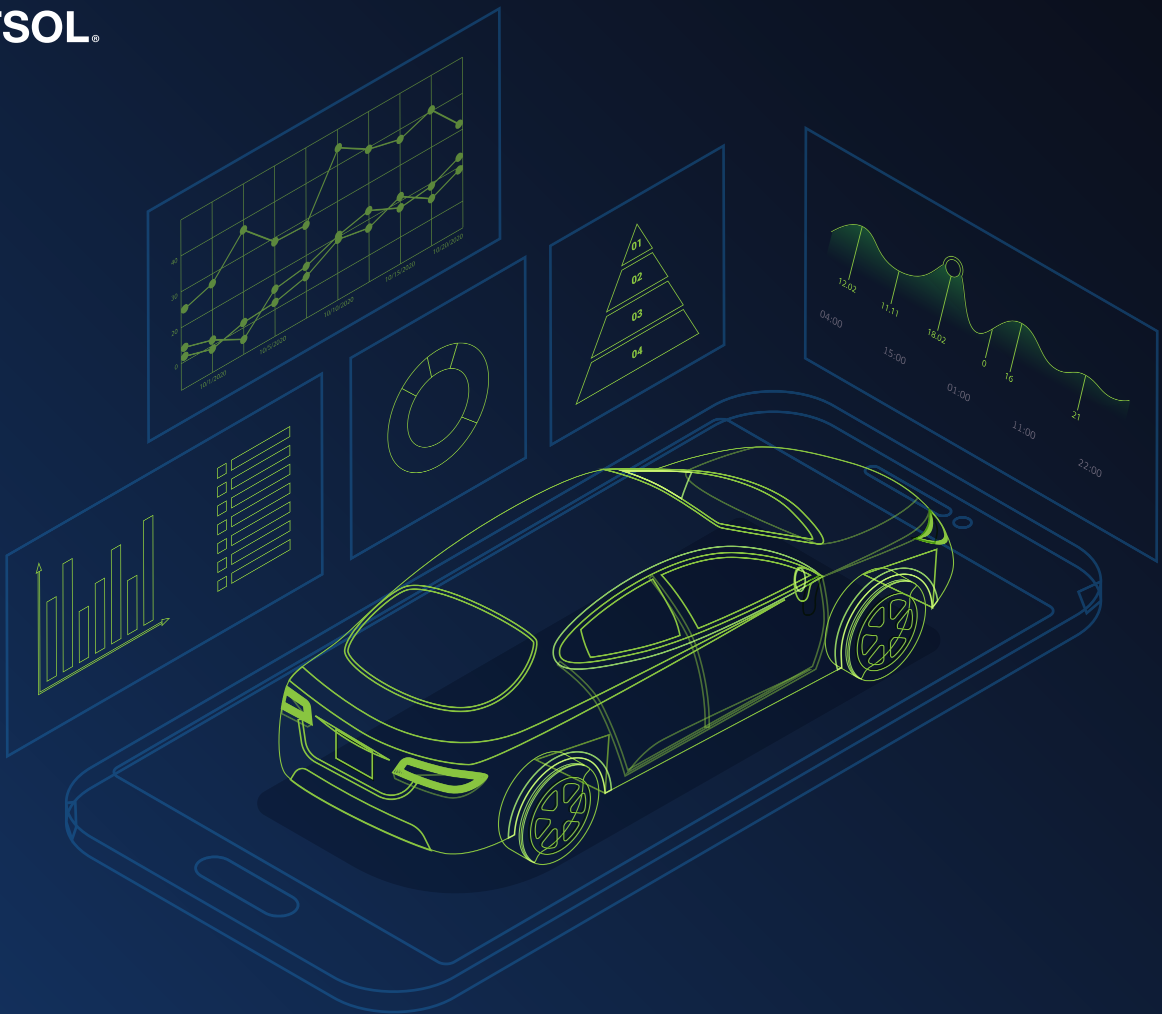

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IN THIS WHITEPAPER ⟶

Executive Summary

In the records of technological progress, change has always been a constant. However, recent years have witnessed an acceleration, marked by the confluence of three transformative phenomena: the rise of Generation Z, the electrification of vehicles, and the emergent concept of usage-based charging. Each, in its own right, is redefining the way we think about technology (Fin-Tech), but together, they are creating a tidal wave of demand for innovation in their spheres. This demand is not merely about keeping pace – it is about anticipating and shaping the future.

Generation Z, with its digital DNA, is not just another demographic; they are the harbingers of a new digital epoch. Their expectations, molded by a lifetime of instant access and on-demand services, have reframed the traditional customer experience paradigm.

Parallelly, the shift towards Electric Vehicles (EVs) is multi-dimensional. Beyond the obvious pivot toward sustainable and eco-friendly transportation, EVs embody a convergence of hardware and software like never before. Their ability to be controlled, monitored, and optimized via software heralds a new age of integrated transport solutions.

Furthermore, the distinct valuation and lifecycle of EV components, especially the chassis and battery, challenge traditional automotive conventions. Unlike traditional vehicles where the vehicle is seen as a singular entity, in EVs, the battery and chassis are considered separate entities with unique values and lifecycles, necessitating innovation in valuation, financing, and leasing models.

The concept of usage-based charging – paying for what you use rather than flat-rate ownership – reflects a broader societal shift towards valuing flexibility and efficiency. It signifies a departure from the 'one size fits all' model, recognizing diverse needs and preferences.

These intertwined developments mark a seismic shift, underscoring the imperative for businesses, especially in the leasing and finance sector, to innovate proactively. The new wave of consumers and companies are not just seeking services; they are looking for strategic partners who understand and cater to their evolving needs.

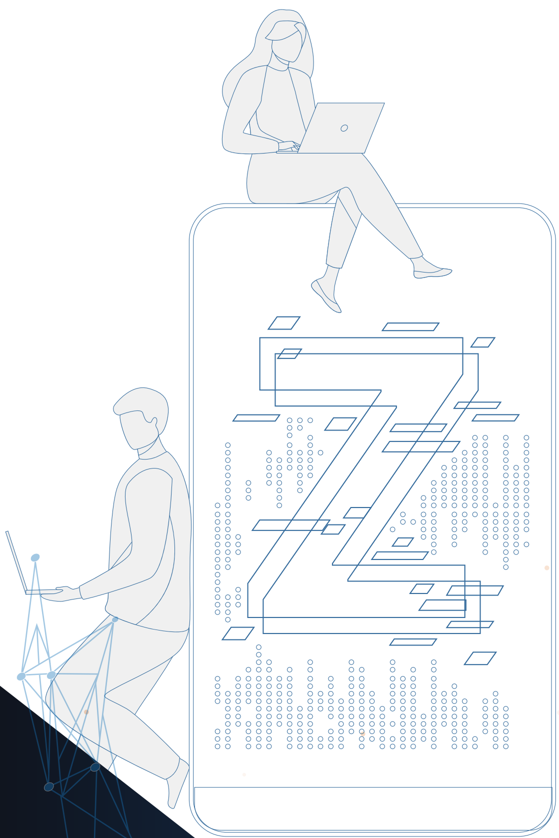
In this white paper, we will delve into the heart of these transformative trends, examining their implications, and mapping the way forward for the leasing and finance industry.

Understanding the Trends

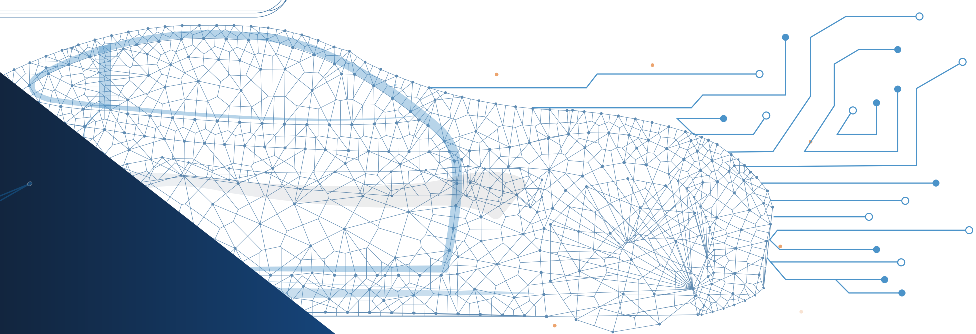
Is your business in danger of becoming the "boiling frog?" It might be if it is in the Asset Leasing and Finance domain and not planning around the key trends. There is an extensive list of such trends. However, for the sake of simplicity, we will focus on the following:

1. The Gen Z Paradigm Shift

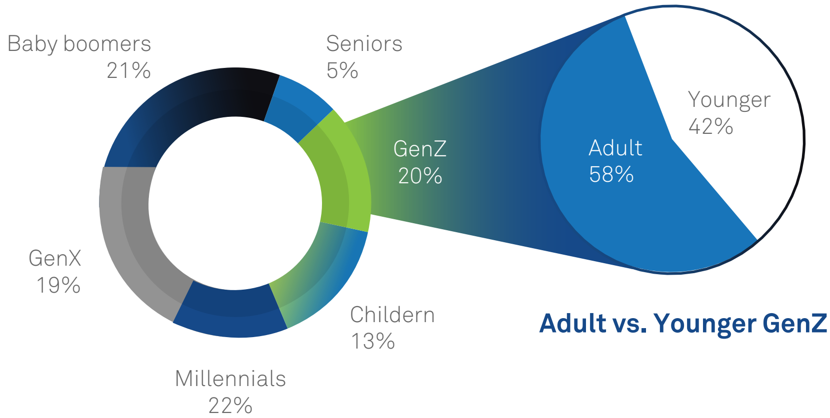
As we venture further into the digital era, Generation Z stands as not just a demographic, but a harbinger of transformation. By 2025, they are projected to make up one-third of the global workforce. Raised amidst rapid technological advancements, Gen Z possesses an intrinsic digital-first mindset. Their entry into the economic spheres is compelling businesses to delve deeper into digital modernization. With each passing year, the intersection of finance and technology becomes more pronounced, and Gen Z, with their predilection for digital solutions, will undoubtedly be at the forefront of this fusion. As financial providers craft and roll out innovative products, the overarching question remains:



How well are these products aligning with the unique demands and digital fluency of this generation?



US Gen Z and Total Population, 2023 - % of total



Population, by Generation

Note: Ages 0-100; childern=born after2012; Gen Z=1997-2012; younger Gen z are ages 11-17, adult Gen Z are ages 18-26; millenials=1981-1996; Gen X = 1965-1980; baby boomers=1946-1928; seniors=1928-1945; numbers may not add up to 100% due to rounding Source:US Census Bureau , "US Projectors: 2017-2060"; Insider Intelligence calculation, January 12 ,2023

2. The Unstoppable Rise of Electric Vehicles (EVs)

The EV movement encapsulates more than just an environmental cause; it represents a seismic shift in the automotive industry. Current projections indicate that EVs will account for 65% of new car sales by 2030. Giants in the automotive world, from Tesla to traditional stalwarts like Ford and Volkswagen, are heavily investing in electric mobility, signaling a robust commitment to the EV future. Not only confined to personal vehicles, But the EV revolution is also permeating commercial sectors. Electric commercial fleets and equipment are becoming increasingly prevalent as businesses recognize the dual benefits of environmental responsibility and long-term cost savings.

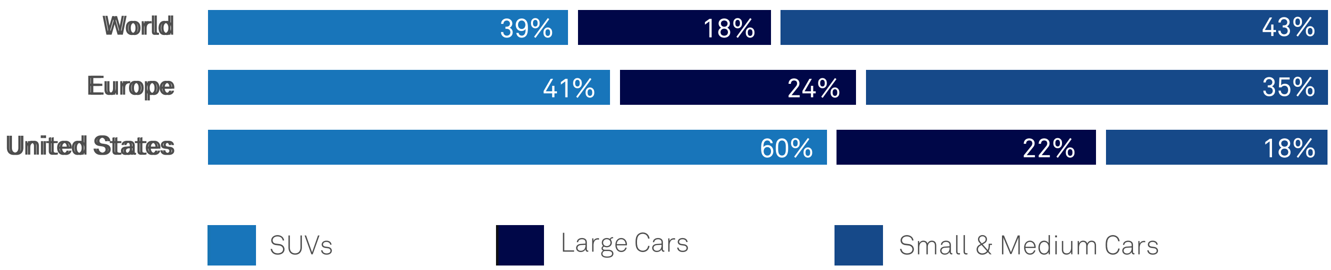
EVs will account for **65%** of new car sales by 2030

Adult **58%** Gen Z

Furthermore, the very essence of EVs disrupts traditional automotive paradigms. Unlike conventional vehicles where the engine is central, EVs operate on a dual core of battery and chassis, each with distinct lifecycles and value propositions. This divergence necessitates innovative financial models to accommodate the unique nature of EV assets.

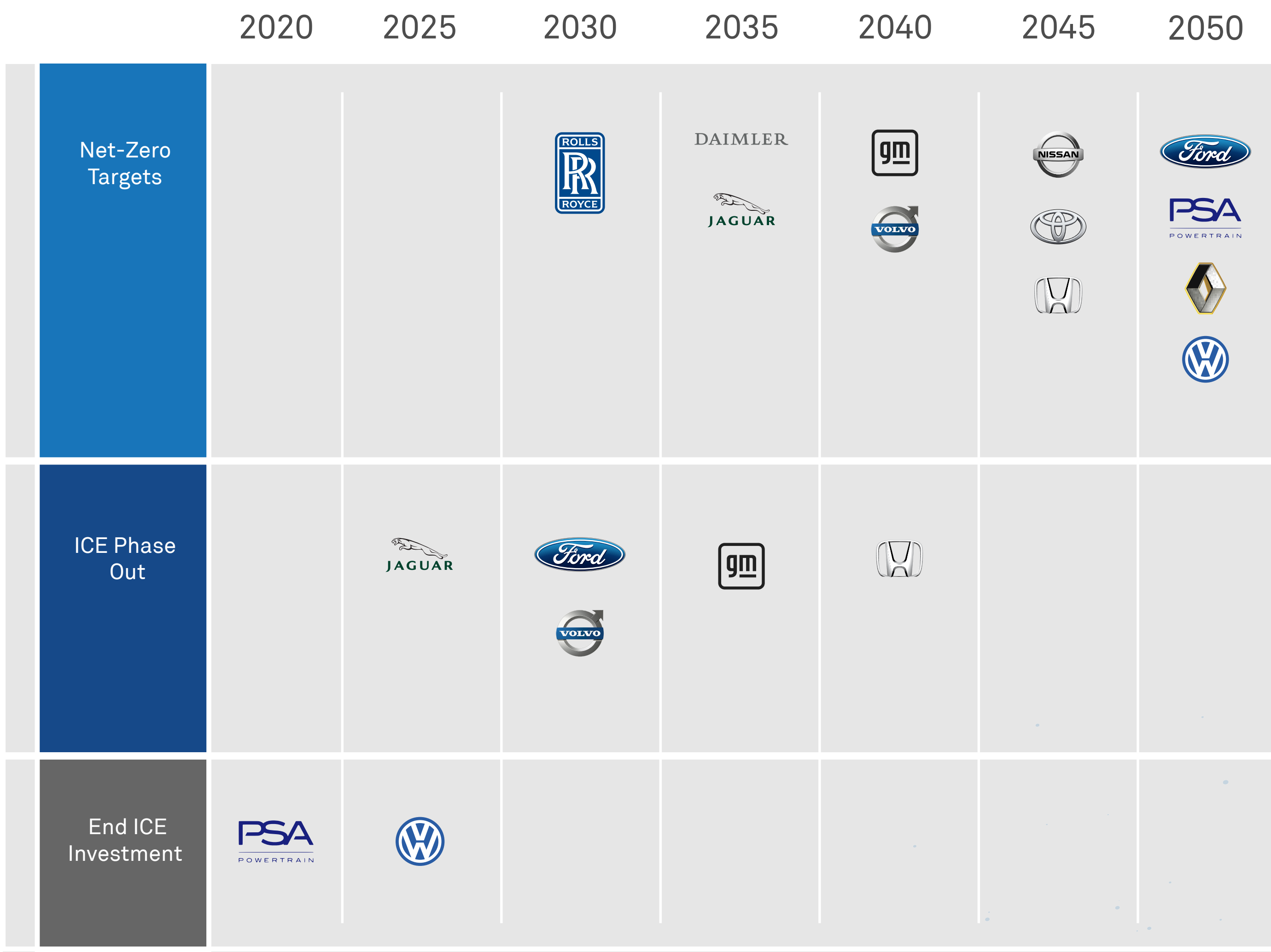
Electric Vehicles Go Big

Electric vehicles sales by model and location in 2022



The Auto Industry's Race to "Going Electric"

As the call for the electrification of transport fleets grow; an increasing number of automakers have pledged some form of electric vehicles in fear of being left behind.



Source: BNEF. Note: ICE phase out target is for Europe only. Excludes interim targets.

Note: Companies are shown for illustrative purposes only, and do not necessarily represent specific holdings and should not be considered recommendations to purchase or a sell particular security.

“The future of Bentley will be fully electric. By 2030, no more combustion engines. We are not only on one electric car, but a full family of electric cars.” -Adrian Hellmark

General Motors annouced an investment of $35B in EV and autonomous vehicles product development until 2025 and looks to phase out gas/diesel vehicles by 2035.

Volkswagen wants 50% of its vehicle sales to be electric by 2030 and nearly fully electric by 2040. 2026 will be the last year it launches combustion as a platform.

Audi will launch new fully electric models from 2026 onwards and aims for all car sales to be electric in 2030.

Under a plan called “Reimagine”, the brand will be all electric, with battery versions of whole lineups by 2030, with an investment of $3.4B annually in new technology.

The electric vehicle market's growth trajectory is fueled by:

Technological Advancements
Improvements in battery technology and charging infrastructure are making EVs more accessible and appealing.

Government Policies
Financial incentives, tax breaks, and stringent emission standards are propelling the transition.

Increasing Consumer Demand
A growing awareness of sustainability, coupled with the practical benefits of EVs, is driving consumer adoption.

According to Gartner, the global transport future is electrified, underscored by the fact that EVs produce 50% fewer CO2 emissions across their lifecycle. The expanding charging infrastructure, with 2.8 million public charging points as of 2021, further facilitates this transition.

3. Demand for Usage-Based Charging

The transition to usage-based models, particularly in the SaaS domain, underscores a broader shift in business-consumer dynamics. By 2022, 61% of SaaS enterprises have integrated usage-based pricing. But beyond mere numbers, the ramifications of this model are profound. The burgeoning preference for usage-based models is not a fleeting trend but, a reflection of evolving consumer expectations and business strategies. Companies that leverage this model report growth rates that outstrip their traditional counterparts. This preference for "pay-as-you-use" systems extends beyond SaaS, finding resonance in sectors like shipping and equipment rental. The appeal is clear: businesses can align expenses more closely with actual usage, optimizing operational efficiency.

However, this transition is not without challenges. As companies pivot to these models, they must grapple with technological demands, particularly in asset monitoring and usage auditing. Advanced IoT solutions and digital tracking mechanisms are no longer optional but, integral to the successful implementation of these models.

Navigating the Consumer Evolution

The convergence of technology, business, finance, and accounting spheres is driving the market's evolution. To stay ahead, providers must understand and address the sophisticated needs of consumers by innovating tailored financial product offerings. Many financial service providers have recognized this and are now at the forefront of crafting new-age financial solutions.

The Rise of Subscription Models (Evolving from Ownership to Access)

Consumer Shift towards Access over Ownership

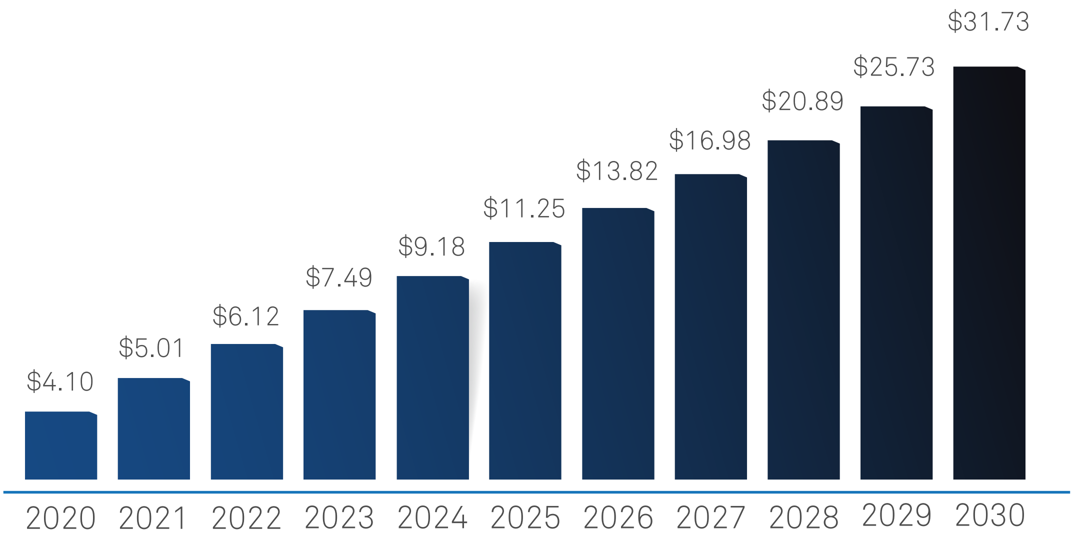
A generational transition is unfolding, where access is prized over possession. By 2030, it is estimated that over 50% of the U.S. workforce will engage in the gig economy, emphasizing flexibility over ownership. A Cox Automotive study found that 39% of consumers are considering car subscription services, signaling a substantial shift from traditional car ownership to flexible access models.

Car Subscription: The Upgraded Leasing

Car subscription, colloquially dubbed as "leasing 2.0," offers a dynamic shift from the traditional concept of car ownership and leasing. Drawing inspiration from renowned subscription services like Netflix, car subscription services allow users the adaptability to alter, prolong, or switch their vehicle choices based on their evolving preferences.

The global vehicle subscription market size was valued at USD 4.1 billion in 2020 and is expected to reach over USD 31.73 billion by 2030, expanding growth at a CAGR of 22.8% from 2021 to 2030.

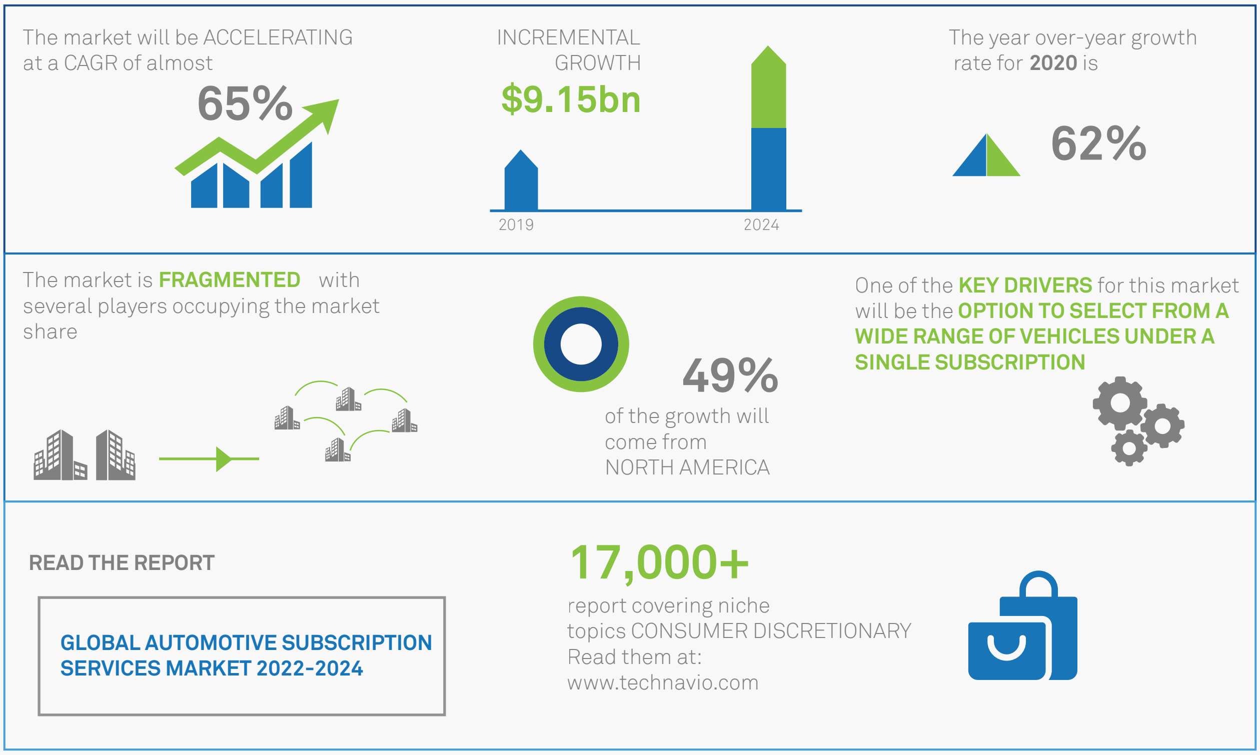
Vehicle subscription market size, 2020 to 2030 (USD Billion)



https://www.precedenceresearch.com/vehicle-subscription-market

Leasing Vs. Subscription: Understanding the Nuances

Leasing has surged in popularity in recent decades. It typically necessitates a down payment, but in return, monthly payments are often lower than if the car was bought through standard financing. This system is alluring for those looking to frequently update their vehicles without the burden of selling or trading their existing ones. However, a significant drawback of leasing is that the lessee is responsible for insurance, maintenance, and repairs throughout the term.



Increasing Consumer Demand

Predictable expenses with no hidden costs. The monthly fee usually covers insurance, maintenance, and even roadside assistance.

Tech-Savvy Convenience

The entire journey, from car selection to managing subscriptions, is orchestrated via user-friendly apps or online platforms.

No Long-Term Commitments

It is an attractive proposition, especially for the younger demographics and those with a transient lifestyle.

Integration with Modern Tech

Features like app-based bookings and digital keys resonate with tech-savvy consumers.

Factors to Ponder Before Subscribing

Cost Implications
It is vital to dissect all the financial aspects - monthly fees, excess mileage costs, damage penalties, or early cancellation charges.

Mileage Cap
Ensure the limit is congruent with your driving patterns.

Subscription Tenure
Familiarize yourself with the duration – whether it is a fixed period or month-to-month.

Insurance Specifics
Grasp the scope of the coverage and ascertain its compatibility with your requirements.

Vehicle Diversity
If variety is your priority, ensure the service's fleet matches your desires.

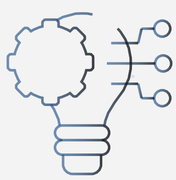
Termination Norms
Understanding the cancellation repercussions is pivotal.

Delivery and Swapping
Recognize the logistics of car delivery and potential fees for swapping.

Challenges Confronting Subscription Providers

Depreciation
Cars undergo approximately a 20% depreciation the moment they exit a dealership. This stems from the inherent risks associated with purchasing almost-new vehicles where sellers often have more information about the car's condition than the buyer.

Residual Value Volatility
A steep decline in a car's residual value can induce losses for subscription providers.

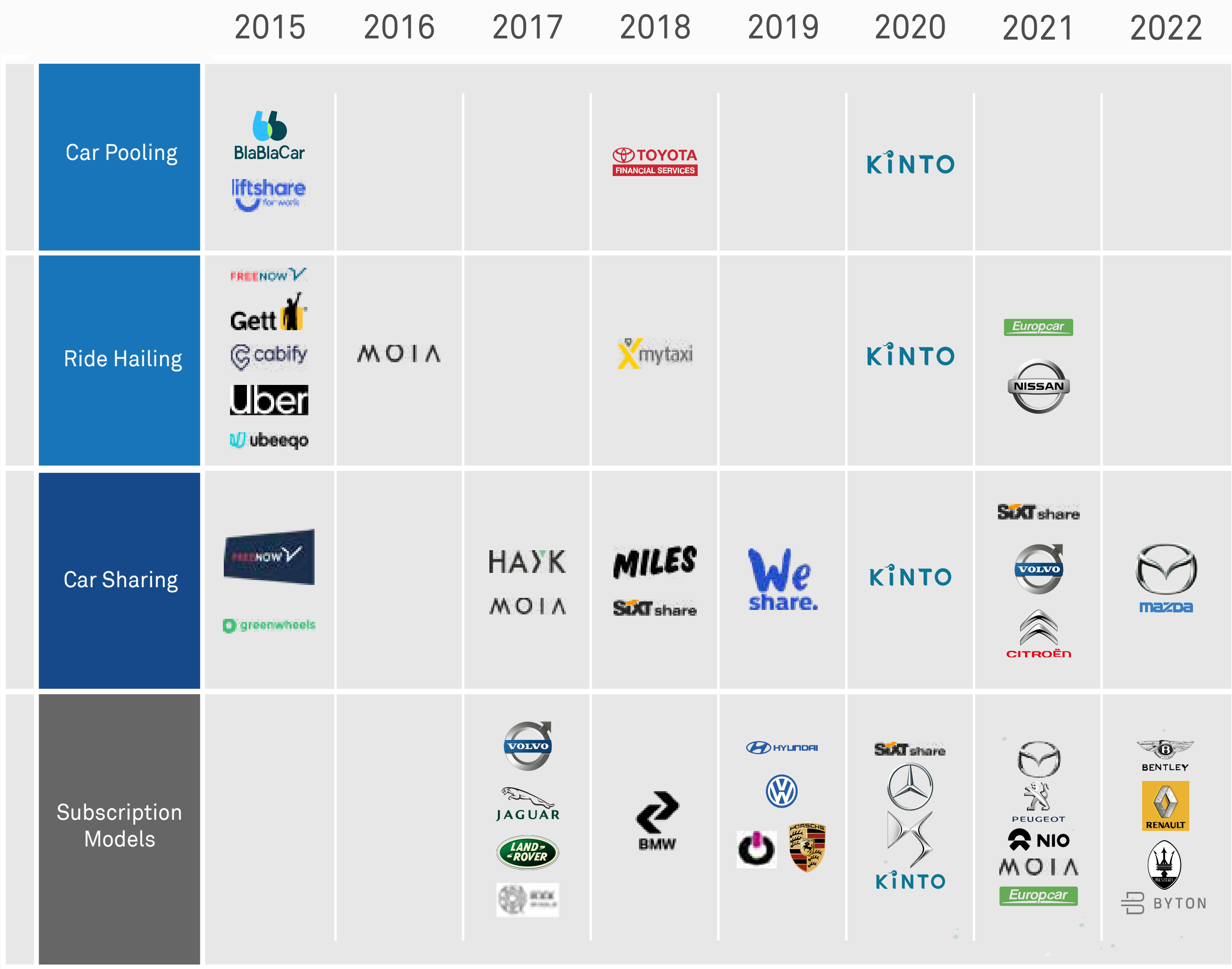


Residual Value Forecasting
Predicting residual values, especially for cars under a year old, is a formidable challenge. For car subscription enterprises to thrive, they must master the art of balancing residual values with utilization, ensuring the subscription pricing remains attractive yet profitable.

Who's Joining the Trend ?

From traditional OEMs like Volvo, Porsche, and BMW, to digital startups like Fair and Cluno, various players are entering the car subscription space.

Types and the Emergence of Mobility Offerings in Europe



Source: Arthur D. little analysis and research

Digital platforms such as Appex Now and Otoz are leading the way for subscriptions, forming strategic partnerships and acquiring their way into dominance.

Car Subscription in the Age of EVs

With rapid EV advancements, locking into a long-term lease may result in outdated technology. Subscriptions provide flexibility, allowing consumers to stay current with technological progress. As the landscape continues to change, driven by a craving for flexibility, sustainability, and convenience, the automotive industry must innovate. In essence, as technological advancements and changing consumer preferences propel the world of personal mobility into the future, car subscriptions seem poised to occupy a significant spot. But like every innovation, its success hinges on understanding its nuances, potentials, and challenges.

The Emergence of Usage-Based Charging: A Wake-Up Call for Businesses

One longstanding area in this domain that now demands significant innovation is usage-based charging or **"Pay-per-use."** Historically associated with heavy machinery or stationary equipment, technological advancements and real-time data availability are now transforming this payment model. Today, thanks to enhanced IoT, sensors, and remote asset connectivity, the demand for usage-based charging is escalating across a variety of assets.

Consumer habits evolve rapidly, but the financial systems that businesses use to manage, sell, and bill their products lag behind. Economic challenges have tightened the noose, compelling businesses to optimize spending. To align revenue streams with changing consumer behaviors, companies must reinvent their go-to-market strategies, pricing models, and core business structures. Given the rapid ascent of the Pay-per-Use model, asset leasing and finance companies can no longer afford to overlook its potential. The message is clear: adapt or risk obsolescence.

Car Subscription in the Age of EVs

The technological era offers solutions to traditional challenges faced by usage-based models, such as:

- Tracking and recording real-time multidimensional information for precise billing.
- Interfacing with numerous third-party entities and assets seamlessly, aided by common internet availability and APIs.
- Crafting complex pricing matrices adjustable through simple configurations.
- Leveraging analytics and machine learning for profitability monitoring and pricing optimization.
- Utilizing third-party tools and integrations for accurate asset depreciation assessments.

- Employing IoT and built-in sensors for maintenance scheduling.
- Omni-channel platforms enabling constant asset monitoring.
- Reducing delinquencies by remotely controlling assets.
- Progressing towards linking fixed costs like insurance to asset usage.
- This model is versatile, suitable for EVs, large fleets, office printers, airplanes, and even sectors like healthcare, manufacturing, and agriculture.

Key Drivers of the Usage-Based Model

Three main factors underpin this model, although it can accommodate additional parameters:

- **Fixed Fee:** Calculated from base factors such as depreciation, historical usage, and asset value.
- **Variable Charge:** Adjusts based on usage.
- **Optional Charges:** Covers adjustments like servicing costs, inflation impacts, and monitoring costs.

The leasing and finance landscape is rapidly evolving, with the Usage-Based Charging or Pay-per-Use model at the forefront. This approach, no longer limited to specific asset types, offers flexibility that both complements and enhances traditional leases and subscriptions.

Picture a Netflix subscription with a lowered fixed fee and charges for extra screen time. It gives lessees cost control and incentivizes efficient asset utilization. For lessors, it means improved resource conservation. As we navigate the digital age, embracing such innovations is not just beneficial-it is essential.

Electric Vehicles Revolution: Impact on Traditional Leasing and Financing

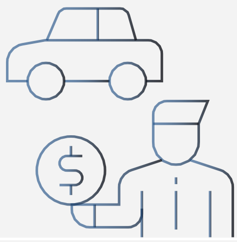
The transportation sector is undergoing a monumental shift with the rise of electric vehicles (EVs). While they represent a promising step towards a more sustainable future, their ascent is also reshaping the asset financing landscape.

How EVs are Transforming Leasing and Financing

The traditional leasing and financing sectors face new dynamics introduced by EVs:

Battery Life Considerations:
EV battery life, which typically spans 8 to 15 years (as noted by Forresters), directly influences leasing terms. While lessees often avoid battery replacement costs during their lease term, owners could incur these hefty expenses post-warranty.

Cost-Efficiency:
EVs prove 23% more cost-effective than petrol or diesel cars over time, thanks to reduced maintenance needs.



According to PwC, leasing could represent 30% of new EV sales by 2030. This preference is driven by the ability to access the latest EV technology without long-term ownership commitments. Moreover, leasing sidesteps potential future costs tied to battery replacements, a significant consideration given rapid tech advancements.

Challenges in the EV Financing Arena

Despite EVs' positive trajectory, the financing market encounters several hurdles:

Higher Interest Rates	Non-premium EV categories often attract steeper rates.
Misunderstandings	Many still grapple with understanding EVs, leading to apprehensions about their longevity and battery life. Also rapid technology upgrades in EVs scare customers from longer term commitment.
Depreciation Dynamics	While all vehicles experience depreciation, EVs face added challenges due to battery degradation and the rapid evolution of technology.

Emerging Business Models

The EV wave brings with it innovative business models:

Vehicle Subscription Services	Provide easy options for consumers, while helping manufacturers manage production uncertainties. At Finn, EVs comprise 26% of subscription sales, outpacing the 13% of overall new-car sales in Germany in the first half of 2022.
Car-Sharing Platforms & Autonomous Fleets	These models cater to changing urban mobility needs and preferences.

Strategies for Success in the Evolving Asset Finance Landscape

To navigate the changing dynamics, traditional financiers should:

Embrace Data Analytics	Leveraging data from charging patterns to battery performance can provide valuable insights.

Collaborate with FinTechs	Joining forces with fintech startups can yield innovative financing solutions tailored for EVs.
Prepare for Scalability	Ensuring operational adaptability is crucial to catering to the growing EV market demand.

As these industries continue to evolve, they must remain attuned to technological advancements and changing consumer preferences to drive forward successfully.

Key Takeaway

The leasing and finance landscape stands at a pivotal crossroads, shaped by the convergence of technological innovations, generational shifts, and evolving consumer expectations. As Generation Z champions a digital-first ethos, businesses find themselves tasked with addressing their nuanced needs. This is not simply about acknowledging their digital preferences, but about offering financial products that mirror their values and lifestyles. The rising popularity of subscription models and usage-based charging highlights this shift, offering flexible solutions that prioritize access over outright ownership.

The electrification of transportation, through the emergence of EVs, presents yet another dimension of change. It necessitates not only a rethinking of traditional financing models, but also the introduction of innovative products tailored to the unique aspects of EV ownership, like battery life and rapid technological evolutions.

In this transformative period, businesses in the leasing and finance sector cannot afford a static approach. To remain relevant and competitive, they must be proactive in crafting financial models and products that resonate with the changing times. This means harnessing the power of technological advancements, understanding the pulse of the new-age consumer, and introducing offerings like subscriptions and usage-based models.

In essence, the future of the industry hinges on adaptability and innovation. Those businesses that can envision, design, and implement forward-thinking financial solutions will not only meet the demands of today but will also shape the trajectory of the leasing and finance sector for the generations to come.

Appendix Source

- https://www.insiderintelligence.com/charts/united-states-population-by-generation/
- https://www.statista.com/chart/29978/electric-vehicle-models-sizes/
- https://mms.businesswire.com/media/20200311005309/en/778967/5/IRTNTR41296.jpg?download=1
- https://www.adlittle.com/sites/default/files/viewpoints/ADL_Car_subscription.pdf

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NETSOL Technologies is proud to announce the appointment of Aysha Ellis-Aziz as the Deputy Chairwoman of AFPA Trust.

Aysha Ellis-Aziz, a seasoned marketing professional, currently serves as the Deputy Chairwoman of the Asset Finance Professionals Association (AFPA) Trust. With over five years of dedicated service as a Board Trustee, Aysha showcases a deep understanding of the organization's principles and goals. Her journey with AFPA Trust began in 2018 as a Member of the Board of Trustees, where she demonstrated proven dedication and commitment to the values of the organization. Aysha's recent appointment as Deputy Chairwoman is a testament to her leadership qualities and her ability to contribute significantly to the mission of AFPA Trust. In collaboration with the recently appointed Chairman, Robert Taylor, Aysha will play a crucial role in steering strategic initiatives, strengthening outreach programs, and providing impactful leadership.

In addition to her role with AFPA Trust, Aysha Ellis-Aziz has a robust professional background, currently holding the position of Head of Marketing & Events, Client Partner - Europe at NETSOL Technologies Inc. With over seven years of experience in this dynamic industry, Aysha has honed her skills in communication, brand strategy, team management, and various aspects of marketing, both online and offline.

As a natural go-getter known for her enthusiasm, energy, and commitment to achieving the highest standards in everything she does, Aysha's versatile skill set ranges from lead generation to strategic planning, making her a valuable asset in any marketing project.

Aysha Ellis-Aziz holds an MSc in Strategic Marketing from Cranfield University, School of Management, and a BSc Hons in Psychology from Royal Holloway University, London. This unique combination of academic knowledge and real-world experience provides her with a distinctive perspective on the intersection of marketing and human behavior. If you're seeking a marketing professional who is adaptable and passionate about achieving marketing goals, Aysha Ellis-Aziz is the ideal candidate to connect with.

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