BERYLLS MAD MEDIA

THE BEV „DILEMMA“

THE BATTERY ELECTRIC VEHICLE „DILEMMA“

How OEMs successfully navigate an insecure environment with volatile incentives and reluctant customers as well as retailers

AGENDA

BERYLLS MAD MEDIA

INSIGHT

MANAGEMENT SUMMARY

In 2024, the automotive industry is supposed to be at the tipping point of the transformation to the battery electric vehicle (BEV). This paradigm shift is exemplified by the imminent launch of over **50 new battery electric vehicle models** in Germany alone, coupled with **more than 15 Chinese brands** operating in the fiercely competitive European market. **But will the shift happen, or will it be dismissed?** The dramatic drop of BEV sales in December 2023 (compared with 2022), shows clear signals of a weakening commitment and volatile demand. So how do you navigate through this difficult time **without wasting effort and budget?**

The transition from internal combustion engines (ICEs) to BEVs depends on the collective commitment of various stakeholders, including **customers, governments, retailers, and original equipment manufacturers (OEMs).** For this shift to transpire, all parties need to synchronize their efforts and embrace the paradigm of electric mobility.

The **pressure on OEMs** to propel BEV sales is steadily intensifying as production capacities are built up and the wheels of transition are set in motion. However, a significant challenge lies in the yet-to-materialize organic demand of customers. BEV **reluctance has been increasing recently** rather than decreasing and not all OEMs have the flexibility of several drivetrain alternatives in their portfolio. To further complicate matters, several governments have abruptly **terminated subsidies**, thus introducing an additional layer of complexity for the industry. In addition, the marketing spend to create a BEV lead is 2 to 3 times higher than for an ICE. At the same time, conversion rates, e.g. from a “website visit” to a BEV sale, differ dramatically between OEMs – there is significant potential for OEMs to become more efficient in this respect.

Navigating this dynamic landscape necessitates a **comprehensive sales and marketing strategy.** In response to this challenge, Berylls Mad Media has crafted an innovative toolset. It addresses various facets of the automotive ecosystem, ranging from **brand positioning, product and service development to customer experience, intelligent sales, and marketing activation.**

Survival in the **short to medium term for OEMs** hinges on two crucial factors within the control of OEMs:

1 **Creation of compelling customer engagement**
= THE BERYLLS BEV CUSTOMER EXPERIENCE ACCELERATOR

2 **Setup of sales funnel and marketing budget management**
= THE BERYLLS INTELLIGENT FUNNEL MANAGEMENT

By leveraging these two factors, OEMs can increase their **BEV order intake** and improve their marketing budget efficiency with **10–15% less cost per lead.**

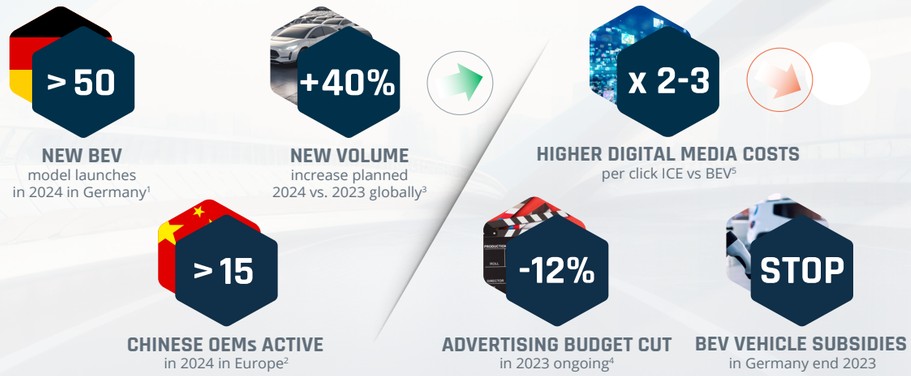
1

THE NEED FOR ACTION -
„The train has left the station“

In 2024, the automotive industry is on the brink of a major transformation towards battery electric vehicles (BEVs). Several indicators show clear signals of a shift, but **major headwinds and oppositional signals** are ahead as well that make it tough for all participants.

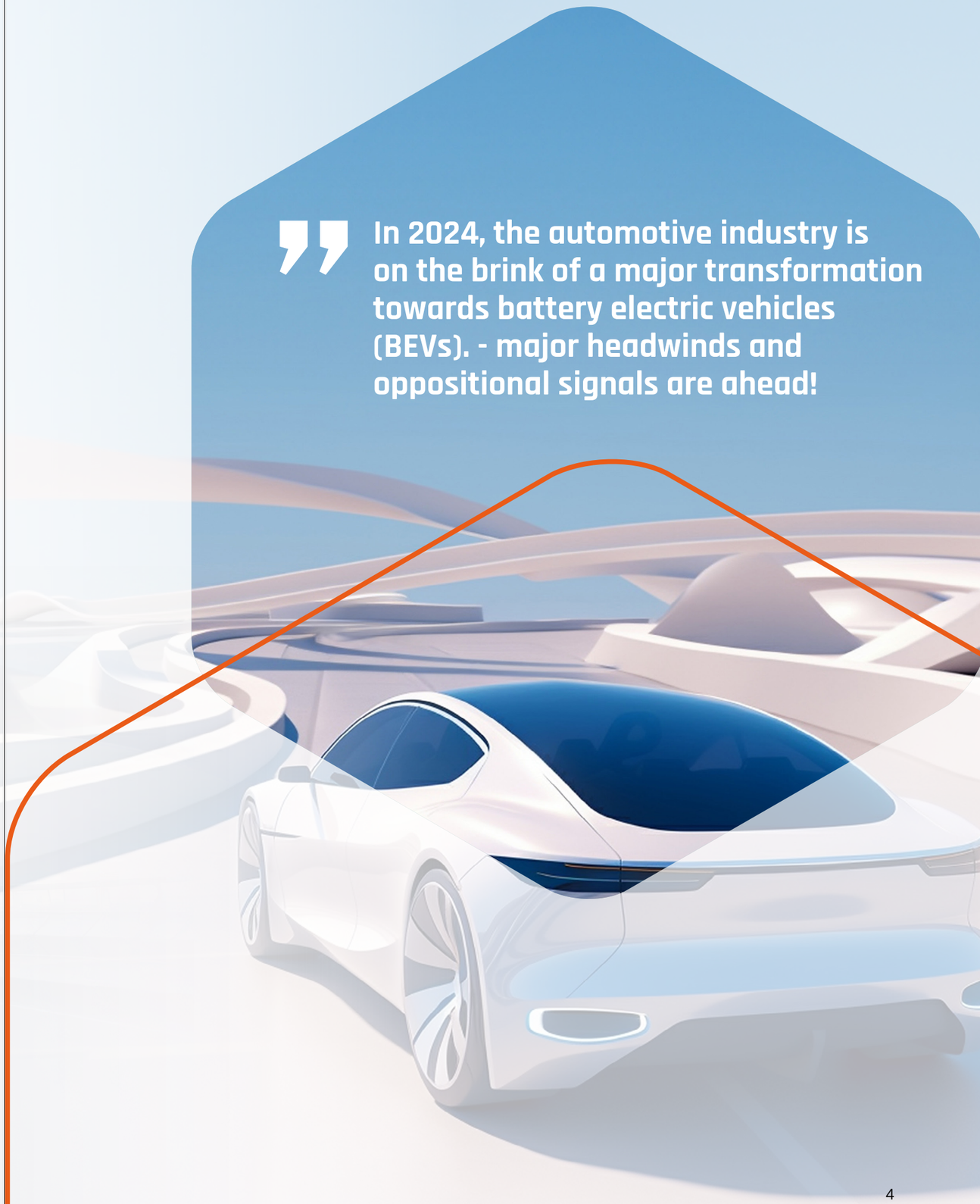
- Upcoming release of **over 50 new BEV models in Germany** alone
- **Over 15 Chinese brands** have already entered the highly competitive European automotive market and more are expected to follow soon
- The global **volume of battery electric vehicles (BEVs)** is expected to **increase by 40%** in 2024 compared to 2023
- In addition, **advertising budgets are declining**, with a **12% decrease** recorded in 2023; further reductions are expected
- At the same time, **acquisition costs for BEV** leads are **2 to 3 times higher** for automotive OEMs (automotive paid media costs)
- In addition, **BEV subsidies are volatile or even likely to be stopped at short notice,** making it difficult for customers to plan their purchases, leading to uncertainty in the market

CHALLENGES IN THE AUTOMOTIVE SALES & MARKETING.



Sources: Berylls Mad Media; 1 ADAC; 2 Automobilwoche; 3 S&P Global Mobility; 4 WARC; 5 Berylls Research

In 2024, the automotive industry is on the brink of a major transformation towards battery electric vehicles (BEVs). - major headwinds and oppositional signals are ahead!



2

THE SITUATION -
“A crucial teamplay necessary”

In the transition from internal combustion engines (ICEs) to BEVs, a dynamic interplay is unfolding among four key stakeholders, each with distinct roles and perspectives.

In navigating this transformative journey, especially the collaboration of OEMs and retailers is essential to successfully master the complexities of the shift from ICEs to BEVs.

BEV TRANSFORMATION INTERPLAY.

Balancing the power of compliance with regulations sales and production steering and evolving customer expectations.

Overcoming current reluctance by testing in real life conditions and embracing the advantages.

Serving as a crucial link, convincing customers about the benefits of BEVs and building confidence.

Stimulating lasting demand through incentives and regulations for sustainable practices.

CUSTOMERS

Customers are still **reluctant** and **not (yet) convinced** to switch to BEVs, even though the environmental benefits and technological advancements are becoming reality.

Customers are concerned about initially higher vehicle prices combined with uncertainty regarding the technology (i.e., battery range and safety). The total cost of ownership (TCO) is also uncertain due to rising energy costs, combined with **uncertainty regarding residual value** due to volatility in pricing. Summed up, customers are hesitant to buy a BEV instead of an ICE.

Example:

Charging infrastructure needs to keep up with the growth of the vehicle fleet, alongside complex processes to get a home charging solution. Range anxiety and concerns regarding charging times still dominate the purchasing decision.

In a nutshell:

Customer perception is reality – they are not yet ready. Both emotionally and rationally convincing arguments are desperately needed.

GOVERNMENTS

Governments globally are setting **ambitious targets to transition** away from traditional combustion engines towards battery electric vehicles. As a response, numerous countries are implementing **stringent regulations and policies** that mandate OEMs to sell a certain percentage of electric vehicles. **Subsidies and tax advantages** can stimulate BEV demand for a certain period of time, but are not a long-term solution.

Example:

The Federal Constitutional Court in Germany has recently cut subsidies for environmentally friendly cars. While the environmental bonus for commercial vehicles was abolished in September 2023, a sudden end to electric car subsidies for private vehicles was decided in December 2023. Some automakers have temporarily absorbed the governmental funding share in order to sustain electric vehicle demand, but this is seen as a short-term solution with potential long-term challenges.

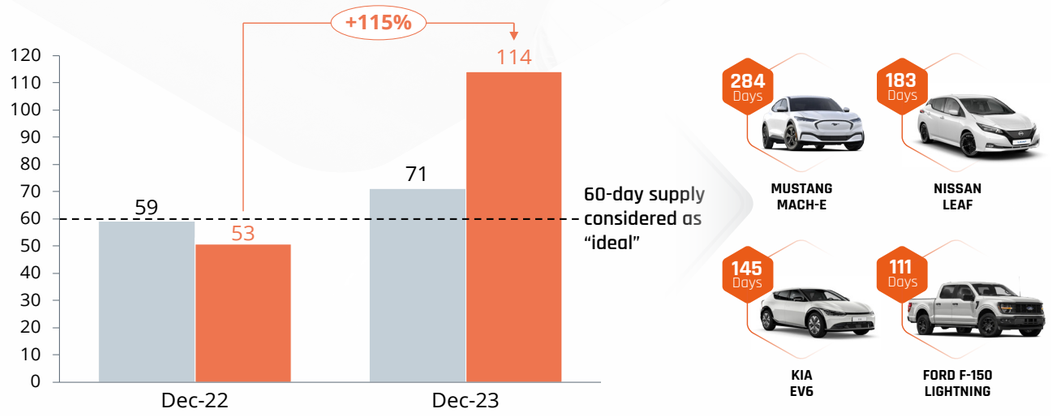
In a nutshell:

Subsidies, tax advantages, and regulations are very heterogeneous and volatile. Uncertain conditions lead to limited reliability and trust.

> **Customer perception is reality – they are not yet ready. Both emotionally and rationally convincing arguments are desperately needed.**

OVERVIEW OF DAYS' SUPPLY IN U.S. INVENTORY [1]

days' supply



[1] EV inventory estimates from Cox Automotive do not include Tesla, Rivian or other companies that sell directly to consumers and therefore do not have a dealer body holding inventory.
Source: Cox Automotive, Press releases, Berylls

RETAILERS

Retailers continue to be the **primary sales channel** for most BEV customers. It is important to remember that they are also human beings who require **incentives to stay motivated** to sell BEVs. Currently, many **lack the motivation** to sell due to a variety of reasons. Profit margins for BEVs are generally lower and combined with lower vehicle lifetime value, i.e., after sales profit per vehicle is dramatically lower with BEVs.

Additionally, dealers face educational challenges on the sales and aftersales team side combined with reluctance on the part of customers. There is an increasing need to upskill retail staff and make upfront investments.

Example:

In the USA, the current surge of battery electric vehicles (BEVs) flooding dealerships due to prevailing regulations is surpassing the present demand for these vehicles. As a result, BEVs are accumulating on sales showroom floors, even though enormous discounts are being offered.

In a nutshell:

Retailers are facing major hurdles, limited incentives and enablement measures, as well as the current lack of a viable business model for selling BEVs. Winning the hearts of the retailers is as important as upskilling them.

OEMs

OEMs are challenged by developing competitive products and services, scaling output, and balancing volatile customer demand. **Government regulations** and **fast-growing competition** are causing additional pressure. Transition roadmaps have been defined and **production capacity ramp-up** is on its way, but **organic demand is still lacking. Different sales channel strategies** (i.e., online only) have been tested, but did not prevail. In addition, **marketing spends per BEV are far higher, i.e., the cost is 2 to 3 times higher** per click on paid media.

Example:

OEM production capacities are increasing while customer demand is declining.Between 2022 and 2023, BEV production capacities rose by approximately 50%. In April 2023, an increase of approx. 40% for 2024 was forecasted. In October 2023, the **forecast** was **revised downwards** to approx. 30%. These figures suggest that although capacities are generally being increased, OEMs have become more hesitant to ramp up *(source: S&P Mobility)*.

In a nutshell:

OEMs need to balance the power of compliance with regulations, sales and production steering, and evolving customer expectations.

3

THE LEVERS OF OEMs -
From short- to long-term

OEMs in the dynamic phase of transition to electrification are facing wait-and-see customers, lurking Chinese OEMs, unmotivated dealers, and unpredictable government decision-making. This mix makes it difficult to stimulate demand and survive in the current situation.

Berylls has identified the most important levers in order to proactively manage BEV marketing and sales strategies and maneuver through the BEV dilemma – from short- to long-term.

BERYLLS „BEV TRANSFORMATION FRAMEWORK“.

Long-term levers begin by **establishing a differentiating BEV brand positioning**, in order to stand out in the crowd of current market participants as well as newly entered BEV-only players. It also includes a competitive **portfolio of BEV vehicles** as well as **services and infrastructure** around the car. Evolving battery technology will improve range, but **convenient charging solutions at home** as well as **sufficient long-distance charging** networks are also necessary preconditions to make electric mobility viable in the long term.

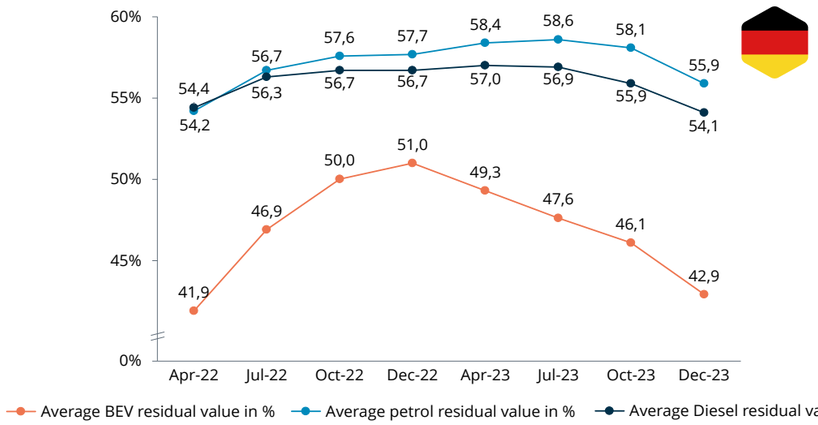
In the medium term, OEMs need to jointly **educate their customers** in order to reduce reluctance and overcome bias. **Retailer enablement** will play a crucial role in educating customers. Especially for first-time buyers of BEVs, retailers are vital in communicating the benefits of BEVs and reassuring their customers' decisions (which is currently not the case).

BEV discounts and incentives, whether offered by the government or the OEM itself, can only drive a short- to mid-term rise in BEV sales until the tipping point of sufficient BEV penetration in the market is reached.

These factors go hand in hand with the enhancement of the BEV product substance, such as range or charging speed, which currently make them fall short of the experience that customers who drive ICEs are used to. BEVs also create the opportunity to **refine and simplify the offering** (i.e., a package including vehicle, wall-mounted charging unit, and service) while introducing an **intelligent pricing** structure with a reduced total cost of ownership (i.e., lower service requirement).

BEV discounts and incentives to customers, whether offered by the government or the OEM itself, can only drive a short- to mid-term rise in BEV sales until the tipping point of sufficient BEV penetration in the market is reached. However, these are not sustainable measures that will support the transformation to BEVs and can only help to achieve regulatory requirements and give an initial push. The risk of decreasing residual value and viable ways of remarketing used BEVs will play an important role.

Instead we recommend focusing on short-term measures that will drive BEV sales in the medium to long term.



4

THE BERYLLS SOLUTION -
Combine engagement and conversion

In order to prevail in this challenging environment, we recommend acting on two specific levers to **“stimulate customer demand” as well as “manage the BEV business”** in a proactive and predictive manner: the BEV customer experience accelerator and intelligent BEV funnel management.

BERYLLS SOLUTIONS FOR SUCCESSFUL NAVIGATION.

Customer experience
BEV ACCELERATOR

Focus **touchpoints** with biggest impact **to maximize conversion**

Address **brand specific BEV customers’ needs**

Conduct **data-driven readiness check** of BEV customer journey

Intelligent
BEV FUNNEL

Connect Marketing & Sales Planning via joint target-setting

KPI-based steering across all touchpoints (omnichannel)

Optimized allocation of **marketing spends** and activity steering

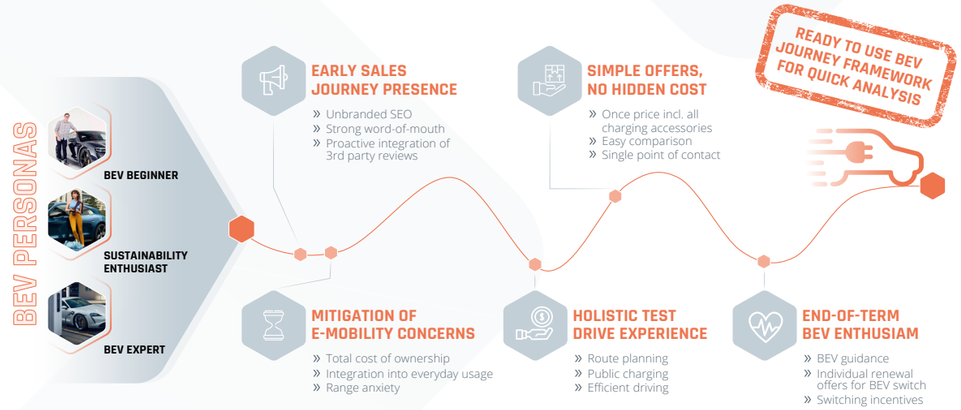
4.1 BEV customer experience accelerator

Given the skyrocketing numbers of upcoming BEV models, differentiation from competitors will be key. **Customer experience** (CX) along the BEV customer journey will be a major differentiator and is as important as the vehicles themselves.

Some journey touchpoints are particularly important in order to **drive conversion**. We have conducted several BEV CX projects and identified the **most crucial touchpoints in the BEV purchasing process.**

BEV customers are very heterogeneous. Most are buying an EV for the first time and have basic questions about range, charging infrastructure, or economic payoff. Others are strongly driven by sustainability and willing to make some compromises to fulfill their desire to lower their carbon footprint. Some have been BEV customers for years and are now enjoying the abundance of models in various vehicle segments. While these BEV experts are a minority group and have other levels of informational need, their role and influence among friends and families should not be underestimated. At the same time, today’s statistics show that the majority are fleet customers who are motivated by financial advantages such as tax reductions.

KEY MOMENTS TO ACCELERATE THE BEV PURCHASING JOURNEY.



When following a customer journey-based approach, OEMs can identify their most **important conversion drivers** based on their customer groups’ needs. While these drivers differ between brands, we have identified several touchpoints that are particularly relevant for BEV customers across all brands and vehicle segments. Here are five examples:

1. Early sales journey presence

BEV customers are less loyal. BEV beginners are particularly open to a broader set of brands. Positioning during early awareness and search phases maximizes the customer reach. Proven methods are SEO optimized for unbranded search and Google’s new GenAI features, or the active integration of third-party reviews, a key opinion builder for BEV customers.

2. Mitigating of e-mobility concerns

Most BEV purchasing decisions are determined by a mix of price, performance, design, value and convenience. In addition to the widely known concerns about range and charging, BEV beginners want to understand whether e-mobility pays off. Proactively addressing customers’ individual mobility needs and their total cost of ownership provides highly valued transparency. To most customers this will demonstrate that e-mobility fits in well with their lives.

3. Holistic BEV test drive experience

BEV cars themselves can do the selling – often better than any salesperson could. BEV beginners are blown away by the performance, quietness, and interior space of electric cars. For OEMs this translates to putting as many prospects as possible behind the steering wheel. Test drives come at a cost, but are well worth the investment and can additionally be used to proactively mitigate charging anxiety or other concerns.

4. Simple offers, no hidden costs

Purchasing a BEV should be easy – not stressful and troublesome. For BEV beginners and also many experts, purchasing a new BEV comes with the need for additional products such as a wall-mounted charging unit, charging cables, and public charging services. Putting all of these into a single shopping cart and under one price reduces skepticism about potentially hidden costs and helps BEV customers make their decision with confidence. Additional services such as convenient home charging installations are key to convincing customers.

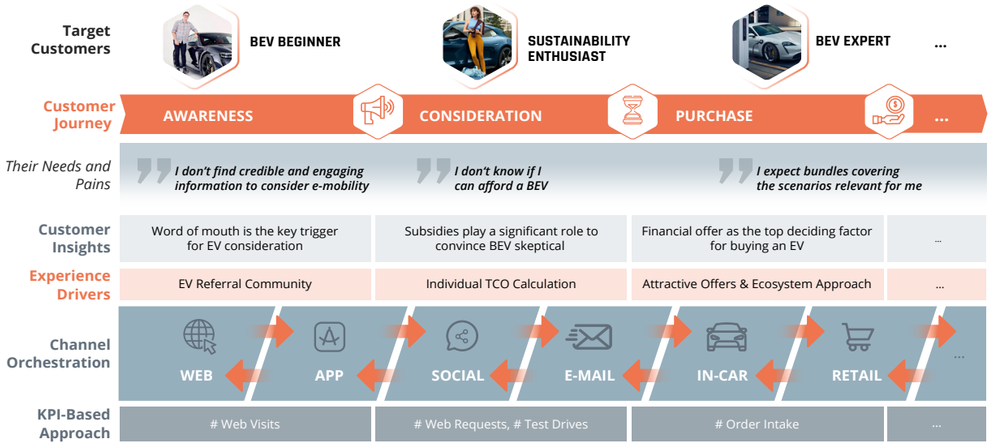
5. End-of-term BEV enthusiasm

Customer retention is cheaper than acquisition. That is nothing new, yet most OEMs are doing little to turn their existing customer base into BEV customers, which should be a priority. Offering a BEV for a leasing renewal, comparing the total cost of ownership, and introducing attractive incentives are all ways to start a conversation with current ICE customers.

Our **BEV customer accelerator framework** is based on years of experience in advising and supporting OEM clients on their path towards scaled e-mobility. In our ready-to-use framework, we are pursuing a structured approach to analyze the entire customer journey for prioritized customer types across all online and offline channels. The framework serves as a **readiness check to consider all relevant levers** that may have an impact on BEV sales. These levers range from media activities, e-mobility branding and positioning, to online and offline customer interactions from initial awareness to vehicle handover and beyond.

To navigate the sea of BEV sales accelerator levers and prioritize the most important conversion points, we are following a **highly insight-driven approach**, considering sales funnel conversion data, CX metrics, customer sentiment, and more. We then assess the performance of these conversion points to identify those with the biggest uplift potential.

BERYLLS CUSTOMER-JOURNEY-BASED CONVERSION ACCELERATOR.



Source: Berylls Mad Media

4.2 Intelligent BEV sales funnel management

In addition to the CX aspect, OEMs need to **manage their BEV sales funnel efficiently** with the right **marketing measures and budget allocation** to increase their conversion rate to order intakes.

Based on our research, **paid media spending for BEV vehicles is 2 to 3 times higher** than for comparable ICE .. models, as all brands are competing on a very small BEV customer segment. For example, the VW ID 4 cost per click on google is approximately 1 euro, while the cost for a VW Golf is around 44 cents. The Volvo XC 40 costs 46 cents compared to 1.14 euros for the electric version, which puts even more pressure on the marketing budget allocation.

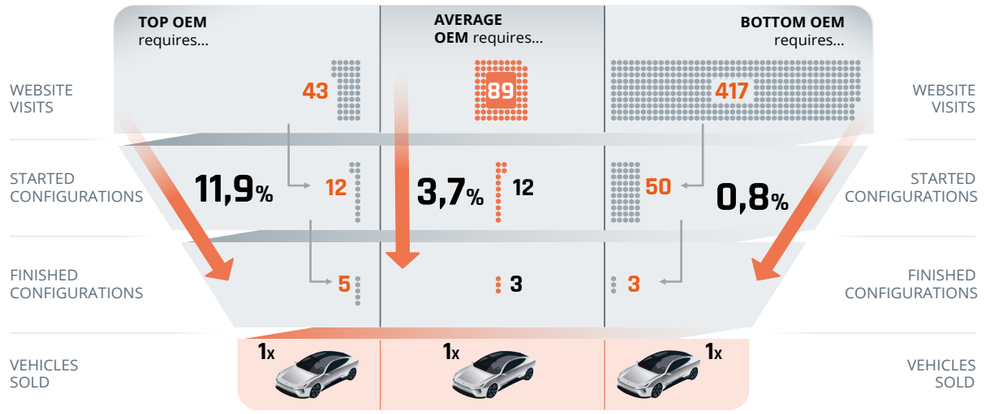
As BEV sales volume targets drastically ramp up for OEMs, the previous spend per vehicle is out of the question. The BEV funnel needs to run as efficiently as its ICE equivalents. This means **shifting marketing budget from models that do not require as much support to models which do**, or the integration of convenient financial offers with after sales and e-mobility services (e.g. wallbox) to name only two examples of potential measures for optimizing contribution margins and volume target achievements.

Within our **Berylls Mad Media** funnel we have identified several steps along the (digital) journey, from website visit to started and finished configurations down to vehicles sold. Our proprietary benchmarking across more than 15 OEM brands shows that **conversion rates between OEMs and models vary greatly.**

For example: conversion rates from website visit to finished configuration range from 0.8% (bottom OEM) to 11.9% (top OEM). Or in other words, the bottom OEM needed 417 website visits while the top OEM only needed 43 to sell one car. On average, the OEMs have a conversion rate of 3.7% and 89 website visits needed for one sale.

BERYLLS INTELLIGENT SALES FUNNEL LOGIC AND BENCHMARK.

FOR EACH NEW VEHICLE SOLD IN 2023 ...



Source: Berylls Mad Media analysis, Web metrics via Similarweb; new vehicle registrations via Kraftfahrtbundesamt

Based on an established funnel logic, which can be very individual per OEM, three steps are important to make it tangible, actionable and impactful.

1. Target-based reverse sales funnel PLANNING

In the first step, it is absolutely crucial to conceptualize and implement an **early warning system for potential sales target over- and underachievement** on a granular level. This target-based planning along the entire BEV funnel provides a frame of reference and direct comparability across the entire portfolio.

2. Proactive marketing and sales funnel STEERING

In a second step, a steering methodology must be built around this performance-driven KPI framework. Which measures are executed by which role in the organization, at which geographical market level, and for which threshold of model/portfolio performance achievement? These questions need an operating model which consists of **clear structures, target setting and steering, Marketing Communication & Technology and processes as well as a shift in mindset.**

3. Advanced analytics and PREDICTION modeling

Lastly, management should be enabled by a set of business use case-centric advanced analytics initiatives, which can go as far as **predicting or simulating future sales funnel performance.** This also includes the simulation of media activities or pricing measures that are taken by OEMs – in a direct or a wholesale model.

Berylls has developed an **intelligent funnel management tool** that is ready to use to plan, steer, and predict the sales funnel while optimizing the marketing spend where it matters most – driving business gaps.

BERYLLS INTELLIGENT FUNNEL FOR OPTIMAL MARKETING BUDGET ALLOCATION.

Source: Berylls Mad Media analysis

IN A NUTSHELL:

Based on our experience OEMs can...

... increase their **BEV funnel conversion by >10%** by critically reviewing touchpoints and orchestrating the implementation.

... improve their marketing budget efficiency with decreased **cost per lead by 10-15%** via reallocation of budgets.

... **increase customer loyalty** by enhancing the crucial points of the EV customer journey, simplifying the offers and matching customer needs in joint alignment integration with their dealers.

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MAD MEDIA

Are you curious about how to optimize your customer journey and funnel management with our data-driven and customer-centric approach?

Let‘s Connect!

MEET BERYLLS

Berylls Mad Media – The radical digitization of the customer interface is blurring boundaries in the automotive sales model. Mad Media's experts develop and implement solutions ranging from data-driven marketing and integrated portfolio and service design to the agile implementation of holistic process and IT architecture. All to increase customer loyalty, market exploitation and profitability for our customers - for the digital sales of vehicles and services of tomorrow.

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