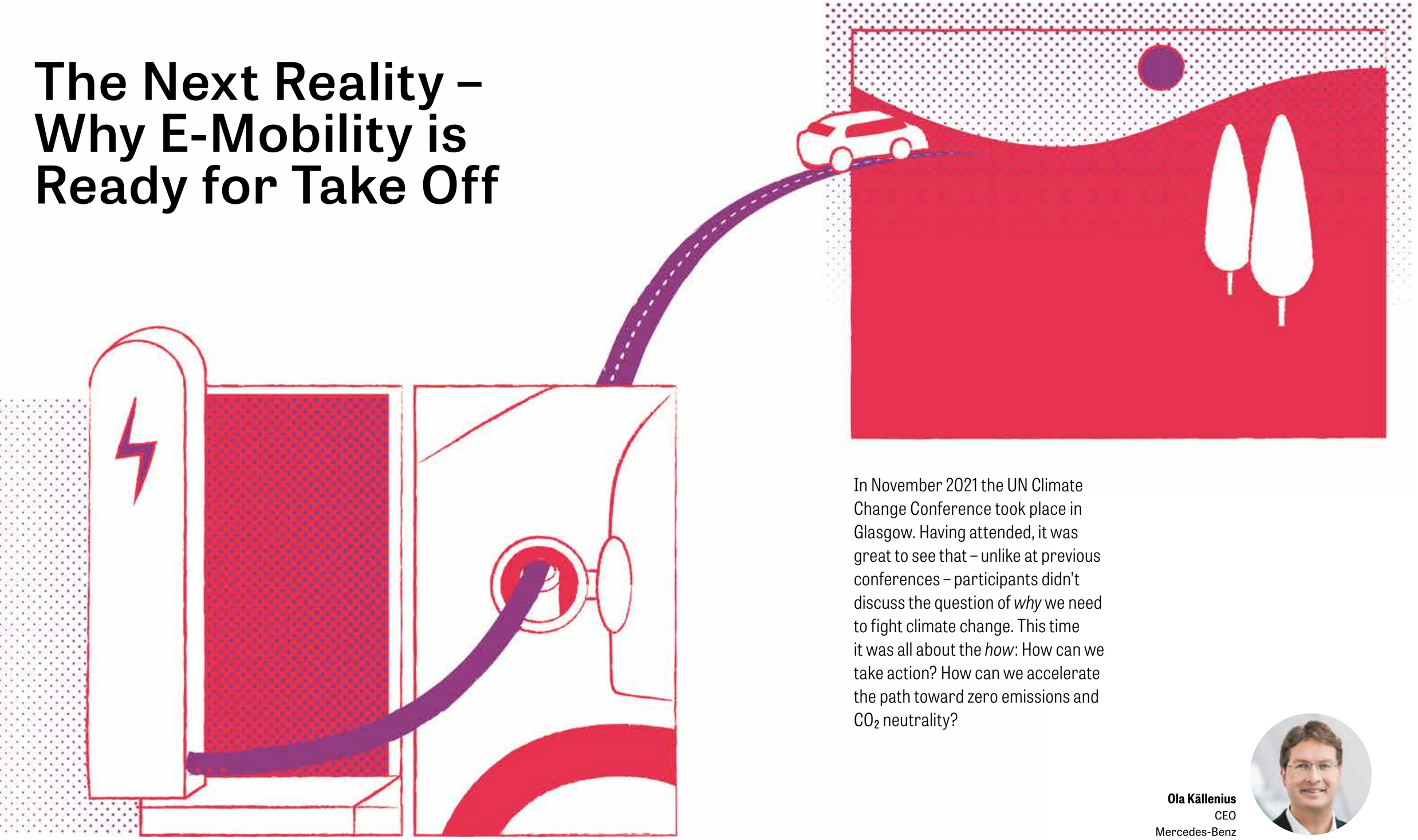
The Next Reality – Why E-Mobility is Ready for Take Off



In November 2021 the UN Climate Change Conference took place in Glasgow. Having attended, it was great to see that – unlike at previous conferences – participants didn't discuss the question of *why* we need to fight climate change. This time it was all about the *how*: How can we take action? How can we accelerate the path toward zero emissions and CO_2 neutrality?

Ola Källenius
CEO
Mercedes-Benz

The right thing to do – switching to carbon neutral mobility

My short answer to these questions is this: We need international collaboration, acceleration and a strong can-do-attitude. That's why Mercedes-Benz – together with 33 countries, 40 regions, cities and regional governments and 38 companies from around the globe – signed the "Declaration on accelerating the transition to 100 percent zero emission cars and vans". It's a firm and clear commitment to making individual mobility emission-free by 2040; no later than 2035 in leading markets.

I'm confident this is the right thing to do – for our planet and for our company. And despite all of the challenges linked to phasing out the internal combustion engine there is ample reason for confidence and optimism. Especially if we're assuming the ramp up of e-mobility follows the concept of the S-Curve we know from nature, medicine, and business. It describes how a product, market, or technology goes through a cycle of growth and maturity: In the beginning, growth is slow as the wheels are just starting to turn. As more progress is made growth accelerates rapidly, creating the upward slope that forms the middle part of the "S." Eventually, growth begins to plateau, which is the top part of the "S."

Why e-mobility is about to take off

I'm convinced: With regard to e-mobility we're coming to the steep upward slope in this decade and will witness exponential growth. Here are my seven reasons why it will really take off:

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1 **First:** eDrive technology is rapidly improving and about to unseat the incumbent. Consider our EQS: Its WLTP range is now up to 780 kilometers and up to 300 kilometers of range can be added in just 15 minutes. Just a few years ago that was unheard of.

2 **Second:** The recharging infrastructure is still inadequate but will be significantly built up during the next ten years. The German automotive industry alone will set up 15,000 new public charge points by the end of 2023. We're doing our part because the expansion of the charging infrastructure remains the crucial factor for the electrification of mobility and transport and is thereby equally decisive in achieving climate goals.

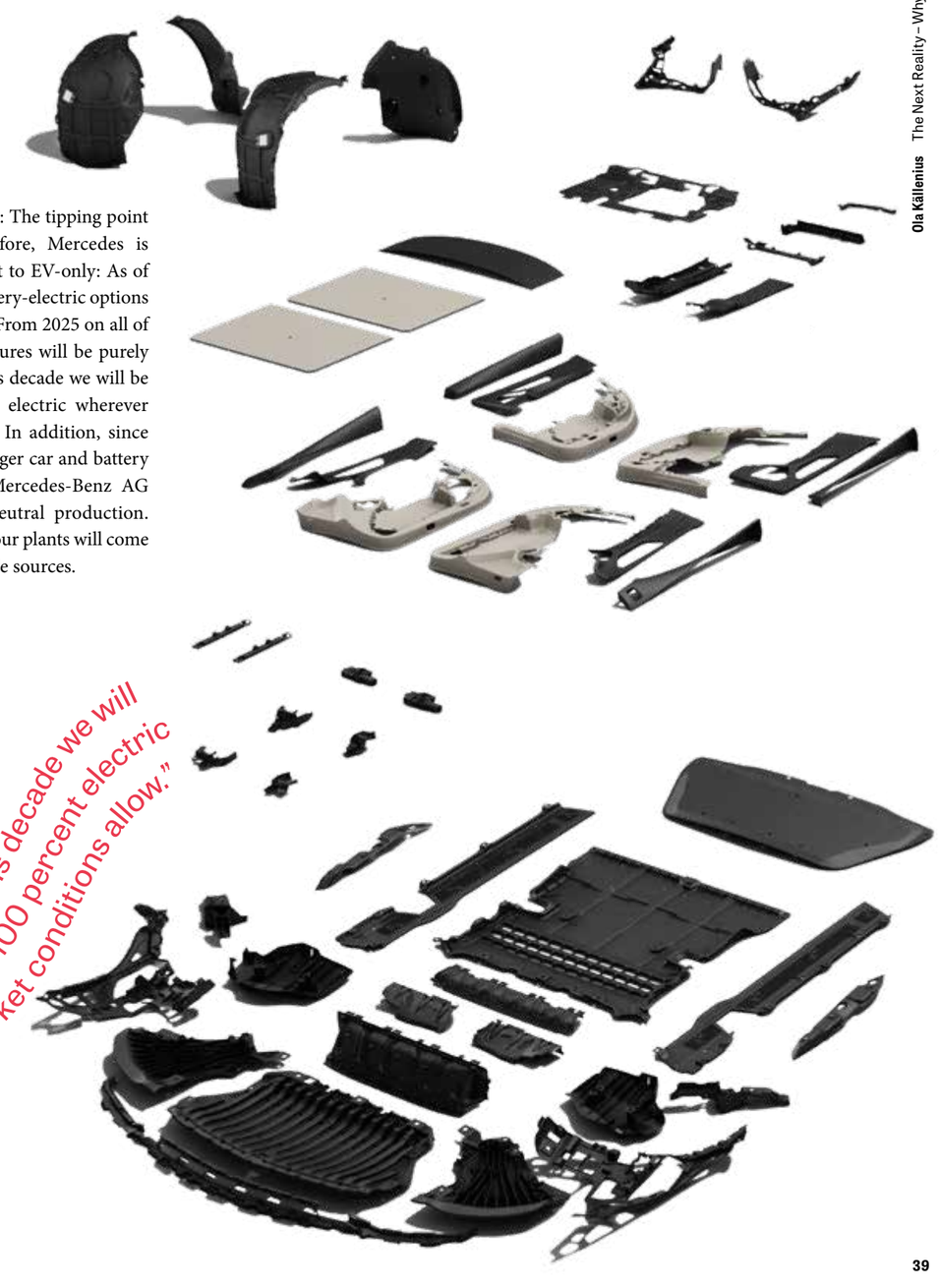
3 **Third:** More and more customers are switching – and not just early adopters. Bloomberg New Energy Finance has estimated that worldwide sales of electric vehicles will soar to 5.6 million vehicles in 2021 – a huge increase of 80 percent compared to 2020. And we're working on further enlarging these numbers.

4 **Fourth:** Rising policy pressure is forcing change. The EU, USA, UK and China, to name just a few, are all working toward lowering their emissions by tightening regulations and laws in the years to come. By making individual mobility CO_2 neutral we will help to keep people mobile.

5 **Fifth:** The business case for electric vehicles at OEMs continues to improve: At Mercedes-Benz, for example, we expect that the cost of the electric drivetrain will be further optimized in the second half of the decade thanks to scale benefits and continued innovation. We also expect battery prices to fall.

6 **Sixth:** Capital markets are demanding the change to sustainable mobility. The stock market valuation of car manufacturers embarking on concrete, coherent and bold strategic shifts toward e-mobility, are higher.

7 **Seventh:** The ambitions of all OEMS are increasing. An analysis found that, within the last three years, global automakers have increased their investment plans for electric vehicles and batteries by 200 billion to more than 500 billion U.S. dollars.



The bottom line is this: The tipping point is getting closer. Therefore, Mercedes is accelerating from EV-first to EV-only: As of this year we will offer battery-electric options in all segments we serve. From 2025 on all of our new vehicle architectures will be purely electric. By the end of this decade we will be ready to go 100 percent electric wherever market conditions allow. In addition, since this year all global passenger car and battery assembly sites run by Mercedes-Benz AG will switch to carbon neutral production. Electricity purchased for our plants will come exclusively from renewable sources.

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Holistic sustainability approach:
A total of 287 components made of resource-saving materials for the EQS, including small parts.

"Digitalization will also contribute to cars serving as flexible, rolling storage units for surplus wind and solar power in the future."

Digitalization: A booster for decarbonization

Decarbonization is greatly accelerated by another megatrend of our time: digitalization. Let me give you two examples from my industry: Distance is no longer the only decisive factor in calculating ideal routes for vehicles. Digital systems can now also take into account the charging level of the battery, charging infrastructure, topography, the real-time traffic situation and weather data. In doing so, digitalization makes traveling smarter, more efficient and relaxed. That way, it can help to make it easier for undecided customers to switch to a battery electric vehicle.

Digitalization will also contribute to cars serving as flexible, rolling storage units for surplus wind and solar power in the future. Thanks to bidirectional charging cars will no longer just draw electricity, but also be capable of returning it to power grids, thus stabilizing them.

There are, of course, many more examples showing how our industry and our products are being transformed. I firmly believe decarbonization and digitalization are the most important tasks of our generation. When I started at Daimler, technologies such as automated driving, or emission-free and fully connected cars were pure science fiction. Today, they are a reality. If we pull together across our borders the transformation to a CO_2 neutral society will be the next reality. And I'm positive this goal is within reach.