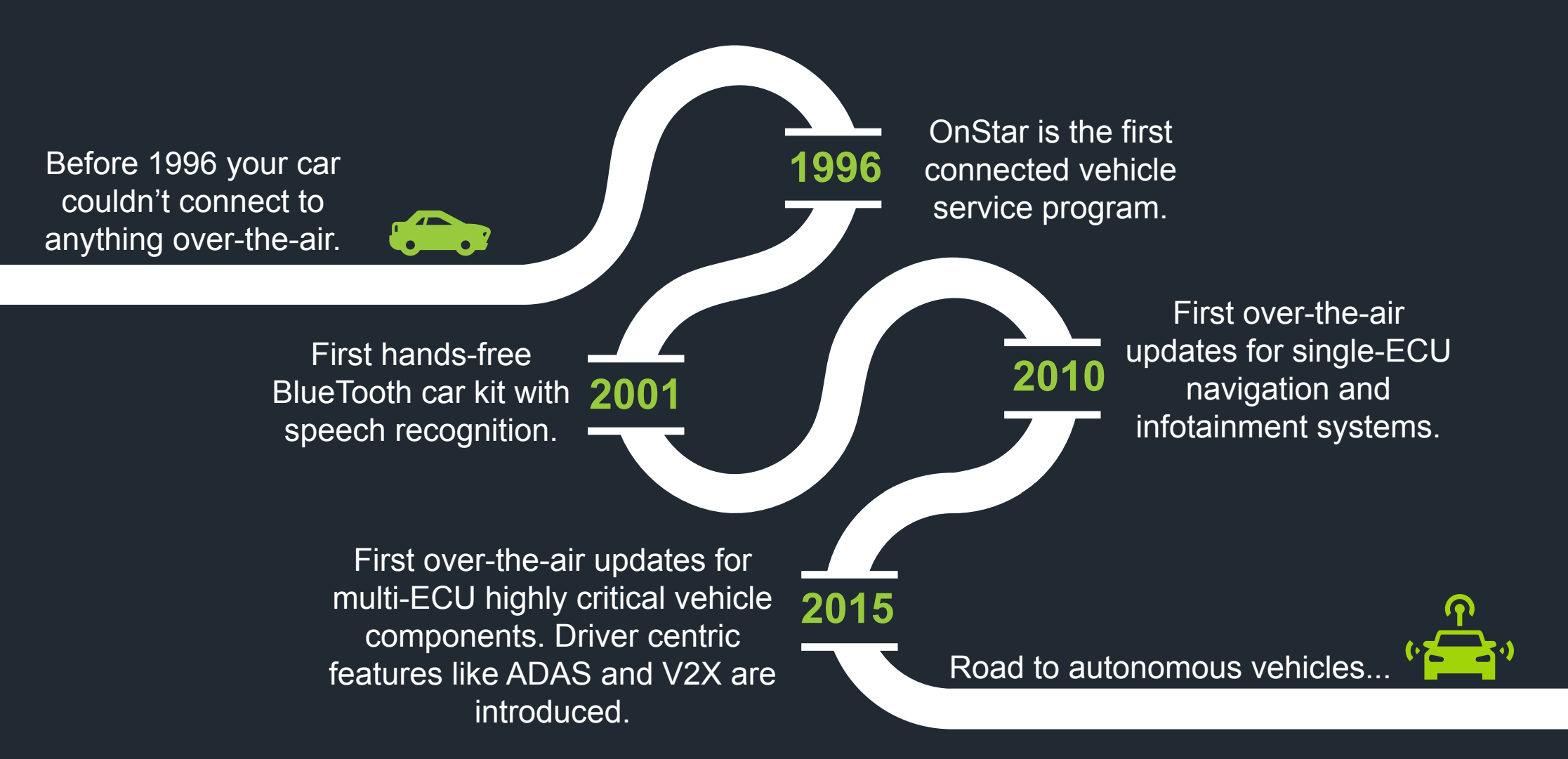
LEVERAGING AUTOMOTIVE OTA

FUNDAMENTAL TECHNOLOGY FOR AN AUTONOMOUS DRIVING FUTURE

Remember when... Phones only made calls?

Now, with a connection to the internet, smartphones can do so much more

A similar trend is happening in automotive



Software is at the center of automotive innovation

Software technology for connected vehicles is transforming the automotive landscape, and software advancements will lead to new opportunities and innovations we are just now beginning to realize.

These advancements come with a massive increase in the amount of code, and will increasingly require updates similar to what we've come to expect with our smartphones, PCs, and other consumer electronics.

Today's luxury sedan has more lines of code than...

Fighter Jet	22 Million
Particle Collider	50 Million
Luxury Sedan	100 Million

How much code will autonomous vehicles have?

Autonomous Car	300 Million?

Vehicle recall costs are increasing

As more software is built into vehicles, the number of vehicle software recalls will continue to grow year-over-year

And these software recalls will cost automakers billions of dollars a year globally

Percent of US software related recalls

2014: 6%*

2015: 27%*

US software recall repair estimate

2014: $34 million**

Nearly 5x increase

2015: $164 million**

*NHTSA Automotive Recall Database

**Airbiquity Estimate Based On Automotive Software Recalls vs. Vehicle Production

Benefits of over-the-air (OTA) software updates

The current recall process involves automakers sending letters to consumers who then drive to dealerships for manual software updates. With OTA software updates, this process can be automated from the cloud, and consumers can remotely receive updates faster and with far less hassle.

Faster Recall Compliance

Reduced Recall Expense

Improved Cybersecurity Response

The other side of the coin: data management

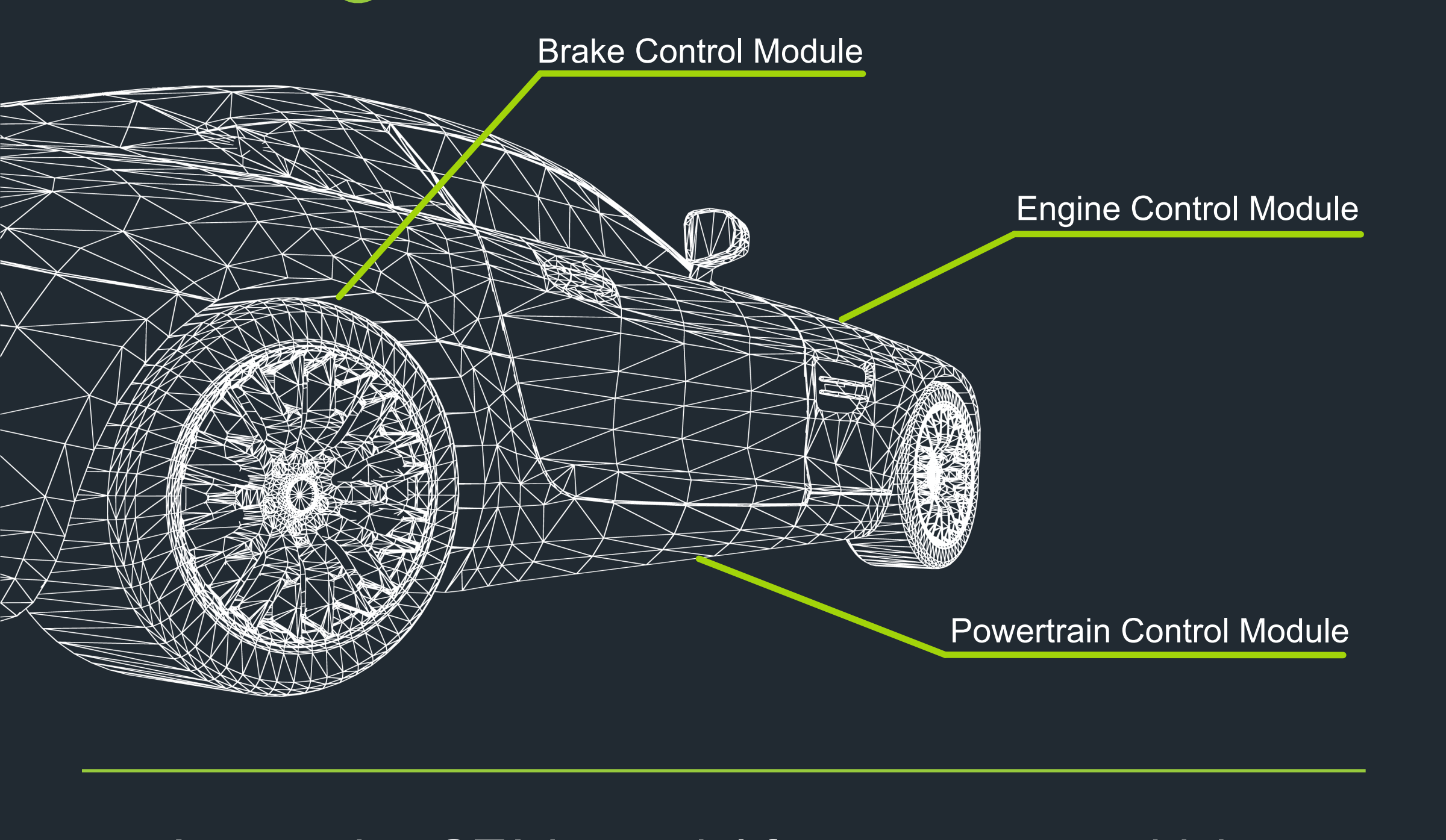
Connected cars with OTA can not only receive software updates - they can transmit data to the cloud for analytics. This will increasingly allow automakers to understand and manage the vehicle's operations and performance, as well as deliver new services leading to enhanced consumer experiences and brand loyalty.

Data Management

Software Updates

Automotive OTA is getting more complex

Automotive OTA software update and data management is growing more complex as automaker requirements transition from single ECUs like head units to multiple ECUs for highly critical vehicle systems and components controlling engines, powertrains, and other vital functions.



Automotive OTA is crucial for autonomous driving

24/7 software updates and data management will be mandatory to keep autonomous vehicle software optimized and allow a continual flow of information about vehicle health, location, condition, direction, and communications with other cars, traffic signals, and even people in our increasingly connected world.

Corporate Headquarters 1191 Second Avenue | Suite 1900 | Seattle, WA 98101
Web www.airbiquity.com Email contact@airbiquity.com Phone +1 206 219 2700

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