

Mapping Vehicle Connectivity

THE DRIVING FORCE BEHIND AUTOMOTIVE INNOVATION



PHASE 1

Connecting the Car

The first phase of the connected car was establishing wireless connectivity to link cars to call centers for features like automatic crash notification, road-side assistance, and concierge services. Additionally, Bluetooth enabled useful wireless features like hands free calling, and streaming content integration with compatible car stereo systems.

TIMELINE

- 1996 OnStar introduces first connected vehicle service
- 2001 First Bluetooth integration into production cars
- 2007 First fleet-wide deployment of speech recognition

75% OF VEHICLES PRODUCED BY 2022 WILL BE CONNECTED¹



PHASE 2

Arrival of Infotainment

The second phase of connected car was infotainment, which was powered by the introduction of smartphones and the rapid consumer adoption of mobile apps. Through this technology integration, automakers began to deliver connected user experiences that extended consumers' digital lifestyles into their vehicles. Soon thereafter, vehicles became equipped with more sophisticated entertainment systems sporting touch screens and colorful interfaces for enhanced features and usability.

TIMELINE

- 2007 Ford deploys Sync infotainment service
- 2010 All major automakers deploy infotainment systems
- 2014-15 Apple and Google infotainment systems rollout



More than 70% of younger Millennials cite technology and infotainment features as “must-haves” when purchasing a car²



More than half of all consumers indicate they already have at least one vehicle equipped with an infotainment or navigation system³



Nearly all consumers familiar with infotainment systems cite interest in having one included in their next new vehicle purchase⁴

PHASE 3

Software & Data

Connected car phase three, the phase we're currently in, introduces driving centric features and services powered by software, data, analytics, and over-the-air (OTA) transmission of software updates and data between the vehicle and the cloud. OTA will also establish a fundamental foundation for continued improvements in advanced driver assistance systems (ADAS), vehicle-to-everything (V2X), and eventually autonomous driving.

TIMELINE

- 2009-17 Transportation diversifies to include software reliant, on-demand mobility services
- 2019 Vehicle-wide software updates and data collection deployments accelerate
- 2022 203 million vehicles on the road enabled for OTA software updates and data collection⁵

By 2030 data and mobility services are predicted to generate

\$1.5 TRILLION IN REVENUE⁶



Global cost savings for mitigating software recalls and cyber security threats forecasted to increase from

2015 **\$2.7 BILLION** → 2022 **\$35 BILLION**⁷



Global connected car technology expected to reach

\$100 BILLION BY 2020⁸

PHASE 4

Autonomous Transforms Mobility

The introduction and adoption of full autonomous driving technology (SAE level 4 & 5) will radically transform vehicle design, transportation models, and how society experiences mobility in general. Autonomous technology, coupled with highly-advanced artificial intelligence (AI) capabilities, will usher in a new era of “smart” transportation where vehicles serve as indispensable transportation assistants that understand passenger preferences and optimize the travel experiences based on access to virtual assistants, off-board content and services, and detailed real-time information about its surroundings.

TIMELINE

- 2018-30 Automakers begin to produce fully autonomous vehicles⁹
- 2026 Global sales of autonomous vehicles approach 1 million units annually¹⁰
- 2035 Global sales of autonomous vehicles grow to 21 million units annually¹⁰

Sources: https://www.airbiquity.com/download_file/535/0

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