

Quick Answer: What Is the Market Size for Connected Car Data

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Many automotive companies are seeking ways to monetize their data assets. Although the market to buy data from vehicles is nascent, use cases are increasing, which could create an additional market for companies with connected vehicle fleets.

Quick Answer

What is the potential size of the market for selling connected vehicle data?

- Gartner estimates that the total market value for connected vehicle data, including aggregated anonymized data and consumer-authorized services, will be \$10.8 billion in 2030.
- Automakers and other data owners can expect marketplaces to charge up to 40% in broker fees for data sales.
- In recent special-purpose acquisition company (SPAC) filings, the two leading resellers of connected vehicle data, Otonomo and Wejo, have bullish growth forecasts. They estimate that the total serviceable market for connected car data in 2030 could be as high as \$61 billion or \$70 billion, respectively.
- Most of the market and value for connected car data is through the creation of specific services and not bulk data sales.
- The primary companies buying data generated by connected cars include: mapping companies, governments, insurance companies, part makers, advertisers, fleet owners/managers, concierge services, car dealerships and finance companies.

More Detail

Automakers, transportation companies, telematics providers and other fleet owners are gathering petabytes of data from vehicles. This data is used to help engineers understand how vehicles are performing, predict problems and to create new services, among other things. Many of these data gatherers are also looking for ways to sell the data.

We have outlined aspects of the huge growth in data collection in [Market Trends: Monetizing Connected and Autonomous Vehicle Data](#).

There have been a few estimates made about the potential value of connected vehicle data made by various sources. Some estimates include virtually every benefit a connected car could generate to businesses, inside and outside the auto industry. Management consulting firm McKinsey put out a report in 2016 that estimated the total extended value of connected vehicle data at up to \$750 billion by 2030. In 2021, it updated that same estimate to \$250 billion to \$400 billion. ¹ Gartner's estimate for market sizing only attempts to capture a small piece of that larger value chain pie.

Gartner is attempting to narrow the market sizing to encapsulate the revenue that could be generated by selling bulk data feeds, aggregate data insights and personal/specific vehicle data attributes. There are multiple business models for transferring these data assets, which complicates creating estimates for market sizing.

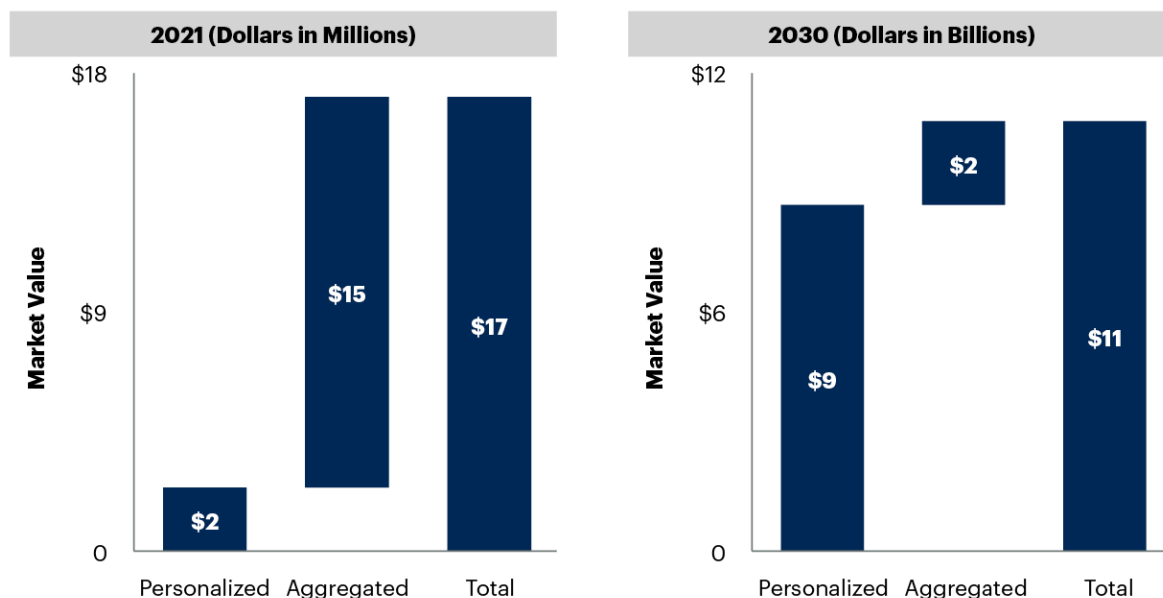
Data marketplaces, such as those offered by Wejo and Otonomo, standardize data that comes from a variety of sources and sell it to businesses, taking a commission on the data transaction. Other companies, such as [Motorq](#), serve almost like IT infrastructure, creating the means to connect vehicle data to an end user. They are not selling data, but instead are acting like an Internet of Things platform to connect service providers to drivers or fleet managers on behalf of automakers. Motorq's business model is based on usage, not on commission. This is similar to how the market for cloud-based mapping services like Google Maps or TomTom has developed.

In our estimate, revenue for those companies serving as intermediaries between the vehicles and the services would be included in the market size. However, the services created by the use of the data would not be included in the estimate. For example, the forecast includes the amount an insurance company would pay for the data to create a usage-based insurance offering, but does not include the size of the usage-based insurance business, which would be many times larger. For comparison, McKinsey & Company is including those wider businesses in the estimate.

In Figure 1, we show the size of the current market for connected data, which is almost entirely made up of aggregated, anonymized data assets, and the future forecasts for this data.

Figure 1: Connected Vehicle Data Sales Market

Connected Vehicle Data Monetization Market



Source: Gartner
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Gartner

Data can be packaged and sold in two ways:

- Detailed, consent-given transactional data related to an individual vehicle or driver
- Aggregate data that is anonymous and provides insights into trends, such as road congestion

Aggregate data provide insights about general behavior or conditions. This data can tell you how congested a street is, whether there is a pothole in the road or what route most people take from one point to another. Many of these insights can also be gleaned from mobile phone data, but there are some use cases specific to the vehicle.

Mercedes-Benz has launched a new platform ² that sells insights to cities. It gathers data from Mercedes-Benz vehicles from sensors and cameras, indicating where there might be traffic problems or dangerous situations. For instance, if several cars' safety systems engage at the same spot, it would send that information to a server that would begin to create a machine learning model to determine whether there was an unsafe traffic situation. This service could automatically create a map for city traffic managers to understand where problems were occurring.

Currently, the clearest use for personalized vehicle data that comes from embedded connectivity is for it to enable usage-based insurance, and Gartner expects it to continue to be among the most important uses for data collected from cars. For insurance companies, collecting data directly from vehicles about how many miles have been driven, speeding, time of day, and harsh braking or acceleration can provide real-time underwriting data on drivers. While insurance companies already use plug-in devices and mobile phone apps to collect this information, connected car data should offer more data points and more-accurate information than a mobile phone, and be less expensive than an add-on telematics device. In addition, when gathering data from automakers directly, the insurance companies are able to target certain risk profiles. For example, the insurance company could make offers to drivers that drive primarily short distances and during the day.

Over the next decade, Gartner expects that vehicle fleets, electric-vehicle-charging companies and roadway authorities could grow to match or exceed insurance as data buyers. The market for this data would be generated by vehicle owners agreeing to share data from their vehicle in exchange for accessing services. Governments that are interested in shifting to a road-usage tax from a fuel tax would need data from vehicles to know how far they traveled and perhaps where they traveled, to generate an accurate bill. So, a driver would agree to share this information with the government to drive their vehicle. In this case, it is likely the cost of this would be passed onto the consumer, much like a processing fee.

Figure 2: Connected Vehicle Data Buyers

Connected Vehicle Data Buyers

Source: Gartner
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Gartner

The existing market for connected vehicle data is largely for anonymized insights from vehicles, which might be used to give roadway conditions, analyze traffic congestion and trip paths, or even monitor radio listening behavior. This market is expected to grow as more data becomes available, but Gartner anticipates that the value of the data per vehicle will decline eventually as such data becomes increasingly commoditized.

Gartner's forecast for data sales differs substantially from the stated addressable market that two of the major marketplaces are using in their forecasts. Wejo, a U.K.-based marketplace that pulls vehicle telemetry data directly from several major automakers, estimated the potential market for its services at \$61 billion ³ and Otonomo, an Israeli firm with largely the same business and offering, estimated the market size at \$70 billion. ⁴ Both companies revealed the estimates in investor presentations made over the past several months as the companies aim to go public and raise capital through a merger with a SPAC.

These estimates imply a very dramatic increase in connectivity of vehicles, which is almost certain to occur. But it also implies a very dramatic increase in the purchase of data from these platforms, which is less certain.

Wejo works only with automakers to collect data, while Otonomo takes data from numerous sources and not just from automakers. In an investor presentation, Wejo's CFO said it takes a 40% brokerage fee from data sales, while the automaker keeps the remainder. Otonomo did not disclose its cut; however, if we assume it is similar, then automakers would keep roughly 60% of the data sale revenue.

Automakers are also selling data access from their own platforms. BMW has set up the CarData platform to share vehicle insights. BMW sells data "keys" at €0.29 per call up to €5 maximum a month. BMW has not disclosed how much revenue has been generated through its direct data sales. General Motors (GM) has created a data service business as well. Pricing is less structured for GM, and the business is set up similar to a consulting arm that answers questions than a brokerage selling data (evidence). ⁵

Considerations Affecting How the Data Sales Model May Develop

While there is potential for this market to grow, there are several significant threats to the marketplace business model:

1. Automakers could choose to sell the data themselves or use a hyperscale cloud provider to manage the trade of information. Amazon Web Services, for instance, has a data sale hosting service. It could even choose to give the data away, as BMW is doing for certain datasets.
2. Legislation could require that direct access to vehicle data by third-party services be allowed, or that it be made available for free through an open-data ecosystem. This would lessen the need for data marketplaces, as data buyers could potentially collect data directly from end users with their consent. Already, companies such as Motorq or Smartcar are creating the capability for governments to directly connect to vehicle data without passing through an automaker's cloud.
3. The data provided by the vehicles may never prove valuable enough to the buyers to justify the cost. For instance, many data points from vehicles are also available through mobile phone apps that are common and low-cost. There simply may not be a good business case to buy the data if there are other options. For instance, mobile phone apps that are used for usage-based insurance can provide many of the data points required and are virtually free for an insurer.

4. Vehicle owners may begin to ask for payment for use of their data once they realize it is being monetized. There is some precedent for this already. Some mobile-phone-based apps that track driver behavior have given drivers gift cards in return for the ability to use the data. This could reduce the revenue generation ability of selling the data.

Recommended by the Authors

[How to Sell on Marketplaces and Direct Channels](#)

[Top Trends in Data and Analytics for 2021: From Big to Small and Wide Data](#)

[What Manufacturers Can Learn From Tesla on Data Monetization](#)

[Market Trends: Monetizing Connected and Autonomous Vehicle Data](#)

[Guide to Connected Car Profitability](#)

Evidence

¹ [Unlocking Full Value From Data From Connected Cars](#), McKinsey & Company.

² [Innovating for Safer Roads in London: Mercedes-Benz Road Safety Dashboard](#), Daimler.

³ [Investor Presentation: February 2021](#), Otonomo.

⁴ [Wejo Unlocks the Value in Connected Vehicle Data](#), Wejo.

⁵ [GM Tracked Radio Listening Habits for 3 Months: Here's Why](#), Detroit Free Press.

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