



## TomTom Collaborates with DENSO to Develop End-To-End Autonomous Driving System

January 4, 2019

**CES Las Vegas, January 4, 2019** Location technology specialist, TomTom ([TOM2](#)), today announced that it will accelerate the future of driving by collaborating with [DENSO](#) on its software platform for autonomous vehicles. TomTom's High Definition (HD) Map will work in combination with DENSO in-vehicle sensors such as cameras and radars to power the localization, perception and path planning functions for a complete autonomous driving system.

This collaboration will allow DENSO to offer a market-leading system targeting Level 2 automation for highways and major urban roads, by leveraging the end-to-end mapping system developed together with TomTom. Combining DENSO's sensors with TomTom HD Maps will result in a system that is more advanced, more reliable and safer. TomTom and DENSO have teams working together in Japan.

As part of this agreement, DENSO will provide processed sensor data to TomTom's end-to-end mapping system for autonomous vehicles and advanced driver assistance systems (ADAS), updating TomTom's HD Map on the fly. This will be achieved by generating crowdsourced map updates called Roadagrams which are used to ensure the HD Map reflects the reality of the road. Combined with sensor data from survey vehicles, TomTom can guarantee an accurate global HD Map. AutoStream - TomTom's innovative map delivery system - then delivers the latest map data to the vehicles on demand.

Harold Goddijn, CEO, TomTom, said: "DENSO is a long-time leader in automotive ADAS technology. We're proud to be working with them to serve their Japanese and global customers. This collaboration proves the value of the TomTom HD Map and TomTom AutoStream as critical components for autonomous vehicles."

Hiroyuki Wakabayashi, Executive Vice President, DENSO, said: "We reviewed various digital mapping platforms and determined that the TomTom HD Map and TomTom AutoStream reflect our vision of bringing changes in the road noted by our sensors back to all vehicles as quickly as possible through HD Map updates. Just as importantly, TomTom shares our commitment to safety that is paramount to the autonomous driving experience. Together, we will lead the industry with innovative solutions for all OEMs."

Join TomTom at CES - January 8-11, 2019. North Hall, Booth #5226.

### ENDS

*We at TomTom are excited to share the news about our collaboration with Denso, which is in line with TomTom strategy and is beneficial to our long-term development. This collaboration will have no material financial impact on this year's revenue.*

### NOTES TO EDITORS

The TomTom HD Map is a digital map product which makes autonomous vehicles safer and more comfortable by complementing sensors, powering accurate localization and enabling path planning. TomTom's HD Map is the first to cover highways and interstates across the USA, Western Europe, Japan and South Korea.

TomTom AutoStream is an innovative map delivery service for autonomous driving and advanced driver assistance systems. It ensures an autonomous vehicle can always use the latest map data for the road ahead, while minimizing data consumption.

### About TomTom

TomTom is the leading independent location technology specialist, shaping mobility with highly accurate maps, navigation software, real-time traffic information and services.

To achieve our vision of a safer world, free of congestion and emissions, we create innovative technologies that keep the world moving. By combining our extensive experience with leading business and technology partners, we power connected vehicles, smart mobility and, ultimately, autonomous driving.

Headquartered in Amsterdam with offices in 37 countries, TomTom's technologies are trusted by hundreds of millions of people worldwide.

### About DENSO Corporation

DENSO Corp., headquartered in Kariya, Aichi prefecture, Japan has approximately 220 subsidiaries in 35 countries and regions (including Japan) and employs approximately 170,000 people worldwide. Consolidated global sales for the fiscal year ending March 31, 2018, totaled US\$48.1 billion. Last fiscal year, DENSO spent 8.8 percent of its global consolidated sales on research and development. DENSO common stock is traded on the Tokyo and Nagoya stock exchanges. For more information, go to [www.denso.com](http://www.denso.com), or visit DENSO media website at [www.denso.com/global/en/news/media-center/](http://www.denso.com/global/en/news/media-center/)