

**IMMEDIATE RELEASE**

December 13, 2017

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## **DENSO and Toyota Tsusho to Conduct a Test Applying a Quantum Computer to Analyze IoT Data with a Commercial Application**

**– Test will advance R&D on essential technology for vehicles and transportation systems in the connected age –**

**KARIYA (Japan) —** [DENSO Corporation](#) and [Toyota Tsusho Corporation](#) today announced to conduct the world's first test using a quantum computer to process data from a traffic IoT platform. The companies will process vehicle location and travel data in real-time from about a130,000 commercial vehicles in Thailand, aiming to establish best practices for quantum computer applications in transportation.

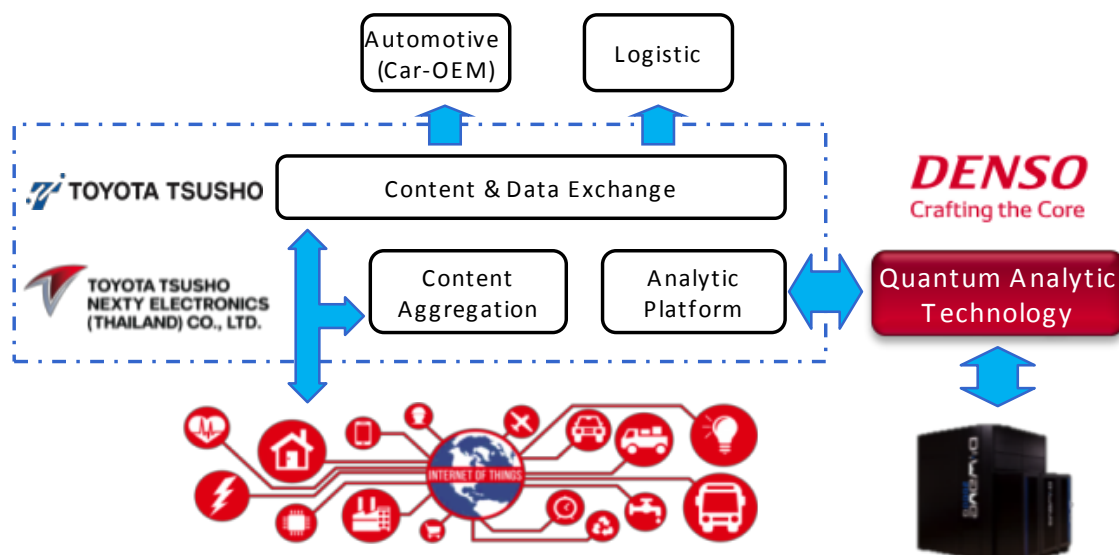
This type of technology will be essential in the connected era, when vehicles and mobility systems need to process large amounts of data in real-time. DENSO will present the concept and overviews at the International Consumer Electronics Show ([CES 2018](#)) in Las Vegas, Nevada, United States from January 9 to 12, 2018.

The test will collect and analyze location information from about 130,000 taxis and trucks in Thailand through cloud-based quantum computer devices developed by Canada-based [D-Wave Systems Inc.](#) DENSO and Toyota Tsusho will also implement quantum computer-based data analysis and processing technologies from [TSquare](#), a traffic information service application from Toyota Tsusho group company [Toyota Tsusho Nexty Electronics \(Thailand\) Co., Ltd.](#) DENSO will create an algorithm to process and analyze quantum computer-based data, and Toyota Tsusho will integrate the algorithm into a new application on TSquare's platform. Findings will help guide application development to make transportation more efficient, from traffic decongestion to route optimization for emergency vehicles.

Unlike conventional computers, quantum computers perform calculations to find an enormous number of combinations simultaneously, and can analyze certain data more than 100 million times

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faster than conventional computers. Algorithms like the one DENSO will develop will also be key to translate the calculations into decisions, making the future of mobility a reality.



### About DENSO Corporation

DENSO Corp., headquartered in Kariya, Aichi prefecture, Japan, is a leading global automotive supplier of advanced technology, systems and components in the areas of thermal, powertrain control, electronics and information and safety. Its customers include all the world's major carmakers. Worldwide, the company has more than 200 subsidiaries and affiliates in 38 countries and regions (including Japan) and employs more than 150,000 people. Consolidated global sales for the fiscal year ending March 31, 2017, totaled US\$40.4 billion. Last fiscal year, DENSO spent 9.0 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 our media website at [www.denso.com/global/en/news/media-center/](http://www.denso.com/global/en/news/media-center/)

### About Toyota Tsusho Corporation

Toyota Tsusho Corporation was founded in 1948 as the trading company for the Toyota Group. Today, Toyota Tsusho operates in more than 120 countries with approximately 58,000 Group employees, all striving to contribute to the creation of prosperous societies. Toyota Tsusho continues to expand as a global leader in vehicle exports and automobile production support. The company has seven operating divisions (Metals/ Global Parts & Logistics/ Automotive/ Machinery, Energy & Project/ Chemicals & Electronics/ Food & Consumer Services/ Africa) focused around three business fields. These are the Mobility field, which contributes to future convenient societies, the Resources &

Environment field, which ensures sustainable societies, and the Life & Community field, which supports comfortable and healthy lifestyles.

#### **About DENSO in North America**

DENSO is a leading global automotive supplier of advanced technology, systems and components in the areas of thermal, powertrain control, electronics and information and safety. With its North American headquarters located in Southfield, Michigan, DENSO employs more than 23,000 people at 28 consolidated subsidiaries and 4 affiliates across the North American region. Of these, 25 are manufacturing facilities located in the United States, Canada and Mexico. In the United States alone, DENSO employs more than 17,000 people in Alabama, Arkansas, California, Iowa, Georgia, Kentucky, Michigan, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee and Texas. DENSO's North American consolidated sales totaled US\$9.6 billion for the fiscal year ending March 31, 2017. For more information, go to [www.denso.com/us-ca/en](http://www.denso.com/us-ca/en). Connect with DENSO on Facebook at [www.facebook.com/DENSOinNorthAmerica](https://www.facebook.com/DENSOinNorthAmerica).

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