Connecting Telematics to Business

Corporate Profile
The Internet of Things is dramatically changing the world around us. Increasing connectivity is transforming the way we live and the way we do business. With telematics, it’s now possible to collect huge amounts of valuable data. How can we use this data and get the most out of it?

Connecting IoT devices in your vehicle for barcode scanning or temperature tracking, and integrating it with your telematic system is one way. Automating business processes, taking the cost out of doing business, and increasing customer service — that’s the power of IoT combined with telematics for business.

The Geotab open platform for fleet management offers unlimited possibilities with our Software Development Kit, APIs, and IOX expandability. Businesses can unlock more value from their solution with our growing ecosystem of partner solutions.
Big Data offers new opportunities such as live traffic prediction, benchmarking, identifying dangerous intersections, insurance discounts, and machine learning.

One of our core values at Geotab is to innovate and continuously seek ways to improve. We are committed to advancing technology, empowering businesses and making the roads safer for everyone.

Neil Cawse
CEO
Geotab Inc.

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From its roots as a family business, Geotab has grown to become a global leader in the area of fleet management and vehicle tracking technology, also known as telematics. Geotab now counts many Fortune 500 companies and North America’s largest fleets among its roster of users and is well on its way to 1 million devices in operation. With over 100 resellers and partners around the world, Geotab is a fast growing leader in IoT/M2M and has received numerous prestigious awards for its technology and innovation.

**Company Timeline**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>2000</td>
<td>Geotab Inc. founded</td>
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<td>2002 - 2003</td>
<td>GO2, GO RF™</td>
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<td>2004</td>
<td>Geotab forms Australia partnership</td>
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<td>2005</td>
<td>GO Live™</td>
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<td>2006 - 2009</td>
<td>Support for engine data J1708, J1939 and CAN OBD II, MyGeotab™ hosted software environment</td>
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<td>2010</td>
<td>Product evolution GO4V3 (Checkmate™ 5.3), G05™ hardware plug-and-play device, Geotab opens new 16,000 sq ft. headquarters in Oakville, Ontario</td>
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IOX
SDK
2012
+ GO6 (with IOX expandability)
+ SuperSense® indoor GPS enhancement
+ Geotab Software Development Kit (SDK)

2013
+ IOX-NFC Near Field Communications Driver ID

GO7
2014
+ GO7 (increased automotive protocol expansion)
+ Geotab sponsors OpenStreetMap project
+ Geotab partners with Telefónica

2015
+ Geotab Marketplace of mobile apps, MyGeotab Add-Ins, Add-Ons & software solutions launched
+ GO TALK
+ Active Tracking
+ Geotab moves headquarters to 30,000 sq. ft. production and R&D facility

2016
+ GO RUGGED
+ Geotab Marketplace V2 launched
+ U.S. office moves to new building in Las Vegas
+ Big Data

GO RUGGED

Geotab Marketplace
DEV Channel
GO TALK

Active Tracking

Geotab expands partnership with Telefónica Germany
+ DEV Channel online video site for software developers launched
+ Geotab acquires Strategic Telecom Solutions
+ Geotab expands data visualization with MapsBI
From Grassroots to Global Leader

In the late 1990s, a significant milestone occurred in GPS technology that would change the way business was done and set the stage for Geotab. The range of accuracy for a GPS location went from 100m to 10m. This leap in technology and precision meant that GPS suddenly became a viable source of data for businesses.

The Founding of Geotab and New Beginnings in Canada

In 2000, Geotab was officially founded in Oakville, Ontario, Canada. The company name signifies the blending together of the concepts of geography (Geo) and tabulation (tab).
Technology Breakthrough Paves the Way for Success

It wasn’t until GPS technology was made freely available in the 1990s that the vision for Geotab could become a reality. Telematics started out as a niche market, mainly because it used expensive satellite communications to relay data. Back then, customers were hindered by the high cost of data, collecting only a limited amount of information.

Geotab solved that problem through design. Rather than using satellite to relay information, the initial Geotab GO module stored vehicle data in its memory, which could be transferred to a computer via a memory key. This architecture eliminated the cost penalty of collecting data. With access to affordable, accurate information, customers could gather much greater insight on their fleet.

At the beginning, very few knew about telematics or GPS technology. Eventually, the clear competitive and operational benefits of telematics persuaded the market and sparked widespread enterprise adoption.

Worldwide Growth and Expansion

Global demand for telematics is increasing and Geotab is rising to the challenge. Geotab is expanding its reach by developing relationships with professional services partners, wireless carriers, and value-added resellers across Europe, Australia, Africa and Japan.

The Geotab team is now 250 employees and growing. In 2015, Geotab moved to a larger facility in Oakville to accommodate increased production and staff. Geotab actively recruits the best and brightest software developers, engineers, and support specialists. Looking forward, Geotab is focused on expanding the ecosystem of business apps and solutions and becoming the industry’s standard platform for smart, flexible fleet management.
Five Pillars of Innovation

Innovation at Geotab is driven by five pillars: safety, productivity, fleet optimization, regulatory compliance, and expandability. These pillars represent the benefits that Geotab solution offers to businesses.

**Productivity**
Businesses can increase fleet and driver productivity through real-time tracking, detailed and accurate trip recording, and custom rules and reports.

**Safety**
Get advanced insight into driving behavior with fleet safety reports. Geotab’s safety solutions help reduce accidents and support company policy. Access risk and safety reports, seat belt detection, instant accident notifications, and driver coaching tools such as the GO TALK in-vehicle verbal feedback solution.

**Fleet Optimization**
Reduce fuel costs with fuel consumption tracking. Route optimization reduces fuel consumption, mileage, and CO2 emissions, while increasing customer satisfaction. Extend vehicle life with predictive maintenance based on fault diagnostics and engine information.

**Compliance**
The Geotab Marketplace has tools for Hours of Service (HOS), Driver Vehicle Inspection Reporting, and IFTA. Geotab Drive is a smart mobile app that simplifies compliance for drivers.

**Expandability**
Geotab’s unique open platform gives customers the keys to greater insight. Easily build custom apps and integrate business systems with the Geotab Software Development Kit (SDK) and APIs. Endless customization is available with solutions from the Geotab Marketplace.
Expanding Possibilities with the Open Platform

Geotab Software Development Kit and APIs

Geotab’s open platform makes it unique in the industry. Geotab data is completely open and easily integrated with other business systems for added value. Hundreds of partners use the free Geotab Software Development Kit (SDK) and APIs to integrate MyGeotab data with systems for maintenance, invoicing, route planning, risk management, and safety. The DEV Channel provides training and support for developers.

Geotab Marketplace

The Geotab Marketplace is a one-stop shop of mobile apps, MyGeotab Add-Ins, hardware accessories and Add-Ons, and custom reports. Businesses of every size and every industry can find a whole ecosystem of solutions, all fully integrated with the Geotab telematics platform.

The Marketplace features leading-edge technology such as in-vehicle cameras, real-time temperature tracking and tire pressure monitoring, as well as innovative apps for dispatching and compliance, third-party integrations, business services, and more. Users across the globe can leverage Marketplace solutions to harness the power of Geotab’s rich telematics data for greater business insight and improved performance.

Intelligent Design and Continuous Innovation

Recognizing the critical need of fleets to manage costs, long ago Geotab began developing smart, patented algorithms and other techniques that determine the most important data points for each customer’s business objectives. That architecture minimizes the amount and expense of cellular traffic uploaded by each Geotab GO device, without diminishing the quality of information.

Geotab owns all IP for the device hardware and firmware, and for the software that powers the server and customer-facing tools. This means Geotab can quickly add features to meet emerging customer needs and market opportunities, unlike firms that outsource IP and development.

Geotab has a dedicated security team that continuously reviews, evolves, and improves our mechanisms and processes to ensure the highest level of security and privacy for our customers and partners.
Technology & Solutions
Powering Business Growth with Rich Insight

Geotab makes it possible to capture rich, second-by-second data on vehicle position, speed, fuel use, idling, and more. Businesses can optimize their fleet with high-performance technology that’s scalable, flexible, and customizable. With more than 1 billion points of data collected daily, Geotab delivers accurate intelligence for real results.

Geotab GO7 GPS Tracking Device
Plugs directly into a vehicle’s OBD II port and begins tracking as soon as driving begins, providing rich, second-by-second data on position, speed, trip distance/time, idling, harsh braking and driving, seat belt, fuel consumption, vehicle faults, battery voltage, and other engine data.

GO RUGGED
A ruggedized telematics device designed for harsh conditions or external installation. It has the same advanced GPS technology as the Geotab GO7, with the added benefit of being designed to the IP67 standard (international standard for protection against intrusion of solids, dust, contact, and water).

GO TALK In-Vehicle Verbal Feedback
Delivers instant, spoken alerts to drivers for events to help fleets reduce accidents, increase productivity, and control costs. Improve dangerous or poor driving habits with warnings for speeding, seat belt usage, and harsh driving. Customize your messaging in MyGeotab fleet management software.

IOX Technology
Through input/output expander (IOX) technology, customers can add functionality to their solution, such as driver id, Garmin HOS and messaging, salt and sand spreader monitoring, and iridium satellite coverage.

MyGeotab Fleet Management Software
Provides real-time insights on fleet activities and trends. MyGeotab takes the complexity out of collecting data and transforms it into useful information for businesses.

Active Tracking
See fluid vehicle movements on a live animated map, ideal for first responders or any fleets requiring close monitoring.
(1997) The original GO device was a 4 x 3 x 1.5 inch box, which recorded vehicle GPS data. Customers could download the GPS data through a “key” that connected to the device.

It was a passive telematics system including a Conexant Jupiter GPS module and 16 bit pic from Microchip. The firmware was running on PIC16 at 4MIPS, which was sufficient for storing limited data at that time.

(2002) The Geotab GO2 fleet management device had strengthened data collection, including 900/868MHz radio frequency (RF) download and live tracking (by connecting an add-on modem to the GO device).

The integration of an RF module meant that data could be transferred wirelessly to the database when the vehicle passed within close proximity to an RF receiver. The printed circuit board (PCB) size was the same as the GO1, but the device was larger to improve the wiring stability. The multiple control unit (MCU) was upgraded to PIC18 at 10MIPS and the data FLASH was enlarged to 8MB in order to support the added functions. An Intelligent Logging Processor was developed and patented.

GO2 enhancements included faster key download speed (down to 20 seconds from minutes), Relay Control Ability, and detection of vehicle ignition on and OFF status of vehicle circuitry through auxiliary inputs. The GO2 could store 20,000 records, which meant that more than two days of data could be saved inside the device when sampling every 10 seconds.

A sub-version of the GO2 called the GO2-J1708 (supported J1708 interface) allowed the engine data to be recorded. The data FLASH was enlarged to support a 40K record size and four days of data.

(2004) The GO3 supported more functions such as J1939 (CAN bus) and wifi. On the engine side, J1708 supported RS485 for legacy vehicles, while J1939 supported the CAN standard, which was increasingly popular at the time. The MCU was upgraded to PIC24 running at 20MIPS while data FLASH was enlarged to 32MB. Multiple download options were provided, including RF and wifi.
GO4 (2006) The GO4 was more robust than previous versions, with an integrated and switchable cellular modem. J1850 and ISO K&L Line were introduced with the GO4. The main MCU PIC24 was running at 20MIPS and a second PIC24 at 16MIPS was dedicated to controlling the peripheral interface to improve system stability.

There were three versions of the GO4. V1 supported the J1708 standard for engine communication, while V2 supported automotive legacy protocols and J1939 CAN. Both elements, as well as J1708 were applied in three separate boards. Three years later, V3, J1708, J1939, and automotive legacy circuitry were integrated in one board to provide optimal flexibility for customers. An accelerometer was also introduced to measure the multi-axis acceleration of the vehicle.

GO5 (2010) The GO5 was small enough to fit in the palm of your hand, a truly compact, plug-&-play device. At 1 x 2 x 3 inches in size, the GO5 could be plugged into the vehicle OBDII connector directly, shortening installation time to seconds.

This version of the GO device, with GPS/cellular antennas and buzzer, had GO4V3 functionality with no auxiliaries. By working at 20MIPS, the PIC24 MCU collected engine data from CAN, J1850, or ISO K&L Line, acquiring GPS and acceleration information, and then transferring the data to the database through GSM or 3G network.

GO6 (2012) In response to customer demand for auxiliary functionality, the Geotab GO6 was the first device to offer IOX™ expandability in addition to all the features of the GO5. The PIC24 MCU ran at 40MIPS to increase processing capability and data was transmitted through the CDMA network.

GO7 (2014) The Geotab GO7 is an affordable, easy-to-install GPS vehicle tracking device with increased automotive protocol expansion. In addition to the standard CAN bus, the Mid-Speed CAN and Single Wire CAN are supported for legacy vehicle. There are also four Manufacturer Discretion Interfaces, which could be configured in firmware to fit different custom peripherals. PIC33 MCU runs at 60MIPS.

This device includes the IOX Expansion system of the GO6, as well as additional IOX expanders.
As a company that develops leading fleet management and fuel-saving technology, Geotab recognizes its role in protecting the environment and promoting a green economy. Geotab’s technology alerts drivers to turn off their engine when the vehicle is left idling, thereby reducing CO2 emissions.

Geotab takes a comprehensive approach to environmental responsibility and invests efforts into preserving the earth’s natural resources through constant innovation and the efficient use of materials in our daily productions. Through growth and expansion into other global regions, Geotab looks to use new methods that are socially responsible. As a company that develops leading fleet management technology, Geotab recognizes its role in protecting the environment and promoting a green economy.
Geotab is built upon a culture of trust, continuous learning and teamwork. Geotab’s collaborative work environment and flat organizational structure empowers employees, while requiring significant contributions and accountability from each member. The horizontal corporate structure and open communication across departments enables fast decision making in a rapidly evolving industry. Thanks to this open door policy, the company has a very strong employee retention rate.

Core values of the Geotab Team:

To support employee satisfaction and health, Geotab has implemented many progressive initiatives, including an Inventor reward program, customer experience and support incentive program, training plans, community outreach, company-wide social events, theme days and team building activities.

Geotab also provides employees with ergonomic work stations, Friday lunch, light breakfast program, putting green and games room, nap room, walking treadmill, and subsidized fitness club membership.
Employee Training and Development

Each Geotab employee has a set of Key Performance Areas (KPAs) aligning with Geotab’s goals, which develop individual capability and help achieve organizational goals. The measurable KPAs are evaluated annually. Geotab makes significant investments in employee training and encourages ongoing development through company-initiated training and tuition reimbursement.

Supporting Our Community

Geotab Gives: Charitable Activities

Geotab encourages and supports community involvement through a wide range of company-sponsored programs and initiatives. These efforts have been designed to positively impact our communities by working to create a better place for everyone to live.