



# Hughes Telematics helps steer the future of the auto industry's "next big thing"

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## Overview

### The Need

A new market entrant, Hughes Telematics, Inc. (HTI), needed to build the business and technology foundation for its breakthrough strategy.

### The Solution

Engaged by HTI, IBM designed and deployed a systems and process infrastructure with the flexibility and intelligence to meet increasingly diverse telematics opportunities.

### What Makes it Smarter

Capturing and interpreting data from onboard automotive sensors, HTI's operational hub provides its agents with the insights needed to take fast and appropriate action—in often life-and-death circumstances.

### The Result

"The depth of IBM's telematics and process expertise has put us on a firm footing for future success."

— Keith Kammer, vice president of operations, Hughes Telematics

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The road is dark, the weather rainy and—hidden from view—a car lies overturned down a leafy embankment. Minutes go by and the scene remains the same, as the driver lies unconscious in the car. Though no one saw the accident or the car, the emergency vehicles know just where to look when they arrive on the scene minutes later—in time to save the driver. The unsung and unseen "hero" is the car's onboard sensing and communications system, which is programmed to automatically seek and guide emergency help in the event of an accident. Variations of this scenario are depicted in television commercials as illustrations of how tomorrow's technology can save lives today, a message that resonates deeply.

In a broader sense, the mainstreaming of accident notification, through services like G.M.'s OnStar, signifies how a long-sought vision—of automobiles as "connected" platforms for delivering services—is rapidly coming into maturity. While it may be the most familiar, accident notification is just one facet of a broader set of capabilities enabled by telematics. The core function of a telematics system is to sense events or conditions in a vehicle, to capture it as data and then provide a means to act on it. This requires not only advanced onboard sensing, but also the ability to communicate it bilaterally with a centralized point of intelligence capable of interpreting the data and initiating action remotely. These technical capabilities serve as the basis for such other major telematics functions as remotely diagnosing vehicle problems, downloading location-aware recommendations on lodging or restaurants—even disabling a stolen vehicle.

## Entering with a new model

When Atlanta-based Hughes Telematics, Inc. (HTI) became the market's newest entrant a few years ago, the prospects for its success were enhanced by its association with sister company Hughes Communications. But to the seasoned industry veterans who formed the company, the strongest foundation for HTI's success was a business model that stands out for its flexibility. They saw the ongoing maturation of telematics producing a flood of new service opportunities that would require the rapid adaptation of business relationships and service





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## Business Benefits

- More flexibility for OEMs to mix and match devices and services by virtue of an open-standard platform
  - Improved ability to develop new services that leverage telematics data
  - Faster delivery of new services (30 days) as compared with proprietary telematics systems (six months or more)
  - Enablement of services from non-OEM providers such as insurance companies, banks and governments
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delivery models, criteria that existing telematics providers—with their rigid business models and proprietary technology—were ill-equipped to meet. HTI, building its business from the ground up, believed that a flexible process framework built on open technology was the key to competitive advantage. It chose IBM to put that framework in place.

## Laying the foundation

Drawing on its broad process expertise and the deep knowledge within its telematics practice, IBM Global Business Services defined, designed and deployed all of HTI's core business processes, from front office (sales, service) to back office (HR, finance, billing) to the operations center processes that govern all customer interactions—including life-or-death situations. Throughout the project, the IBM team employed IBM Rational® Portfolio Manager to manage work products and deliverables, collaborate between onshore and offshore teams, store deliverables, ensure version control on deliverables and communicate on updates. After the solution was developed, the HTI team used IBM Rational DOORS® to store the project's requirements and show how requirements, processes and test cases all mapped together.

As part of the design and implementation of HTI's processes and related workflows, IBM Global Business Services also handles the complex integration between these processes and back-end systems. Accident notification provides a good end-to-end example—and a demonstration of the potentially life-and-death importance of reliable and efficient process flows. In the event of a crash, sensors throughout the vehicle automatically detect key details of the impact, along with the location of the vehicle, and combine them into an event notification message. The onboard telematics device then sends this information wirelessly to HTI's operations center.

Upon receiving the alert, the system's SOA-based messaging hub disassembles the vehicle-sensing information contained within it. At the same time, the receipt of the message initiates the critical workflow

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## Smarter Transportation: Leveraging driving data to improve safety

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### Instrumented

Telematics-equipped vehicles use sensors to capture critical driving data—from the location of impact to crash severity.



### Interconnected

HTI's hub receives vehicle-sensing data wirelessly, which can either trigger action (such as emergency assistance) or be leveraged for insights.



### Intelligent

Insights from driving data provide the basis for usage-based insurance offerings, safer vehicles and more effective traffic regulations.



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## Solution Components

### Software

- IBM Rational® Portfolio Manager
- IBM Rational DOORS®

### Services

- IBM Global Business Services  
CRM – Contact Center Optimization
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sequence (also designed by IBM Global Business Services) within HTI's contact center. When the agent is first alerted of the event, the system also displays other information parameters that give the agent a clearer picture of the situation and, therefore, a stronger basis for action. In what amounts to a “reverse” 911 call, the agent can then attempt to contact the occupants of the car through the onboard device to determine if they need emergency assistance. In the event they do, the agent can hit another on-screen button to dispatch an ambulance to the scene. Robust and redundant alerting systems are built into the workflow to deliver maximum safety and reliability to HTI customers.

When it comes to safety in the telematics business, rock-solid reliability is assumed—and the HTI solution delivers. But telematics is also a dynamic and evolving business, likely to create a range of new and unforeseen opportunities. That's because the diverse information gathered by telematics sensing devices within vehicles have so many potential uses. In the realm of public safety, for example, detailed vehicle-sensing data can provide valuable insights into accident risks and, thereby, prevention. Transport agencies and the police can better analyze safety issues, insurance companies can offer usage-based insurance by tying their premiums more closely to underlying risks, and automobile manufacturers can improve the safety of their cars.

Each of these examples underscores how the focal point of telematics is rapidly shifting away from the technology itself toward finding new ways of using information. In this or any environment in flux, success comes to those best able to adapt to the new kinds of business relationships such opportunities will inevitably create. The fact that HTI set out from the start to build its business on a foundation of open systems and flexible processes gives the company major strategic advantages, one of which is the ability to bring new services to the market in less than 30 days—far faster than its less agile competitors. Bearing this out is an impressive array of early projects that point to the future of telematics, including HTI's involvement in a pilot program in California that enables continuous remote testing of automobile emissions and automatic notification of noncompliance.

To automobile manufacturers, the more fundamental advantage of HTI's solution is the increased flexibility they gain to forge—or dissolve—strategic relationships with telematics device manufacturers' network providers. In contrast with the traditional business model, in which automotive OEMs are in effect “locked in” to relationships with telematics providers, HTI's more open platform gives each OEM the flexibility to mix and match the onboard devices it embeds in its vehicles without cutting off its strategic options down the road. This same quality gives HTI an advantage in offering aftermarket solutions, considered one of the fastest-growing segments of telematics.

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*“Working with IBM gave us the combination of breadth, depth and credibility that was critical to making our service world-class from the start.”*

— Keith Kammer

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## A firm footing for success

Having signed Mercedes-Benz USA as a customer, HTI expects to reach the 10 million subscriber mark by 2011. As the momentum for telematics continues to grow, vice president of operations Keith Kammer believes that HTI's open-platform strategy will catalyze the growth of the market by making it easier for OEMs to develop and rapidly introduce new kinds of telematics services. "When we entered the telematics market, we had the unique opportunity to build our systems and processes right the first time," says Kammer. "The depth of IBM's telematics and process expertise has put us on a firm footing for future success."

## For more information

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Armonk, NY 10504  
U.S.A.

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November 2009  
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