



Automotive Insight



Telematics And Mobile Commerce: Rewiring The Automotive Industry

The growth of telematics-ready vehicles — from mid-range to luxury domestic, European and Asian cars — continues as the new model 2002 vehicles roll out. Consumers have demonstrated a strong interest in these in-vehicle services — most notably around safety and security, navigation, convenience, productivity (e.g., e-mail access), and "infotainment." In a recent study, 71 percent of consumers surveyed expressed a strong interest in telematics.

Today, companies including GM – the most recognized for its OnStar venture with more than one million subscribers – DaimlerChrysler, Honda, Fiat and Ford are all becoming aggressively involved in telematics.

While consumers stand to gain access to a wealth of new options, the emergence and continued evolution of telematics and mobile commerce (mCommerce) will affect the entire automotive industry. There are certainly challenges involved in implementing telematics; however, the benefits are tremendous. Automakers, suppliers and dealers all stand to gain significantly – from cost reductions and productivity improvements to enhanced customer relationship management (CRM).

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Telematics: The Future Is Now

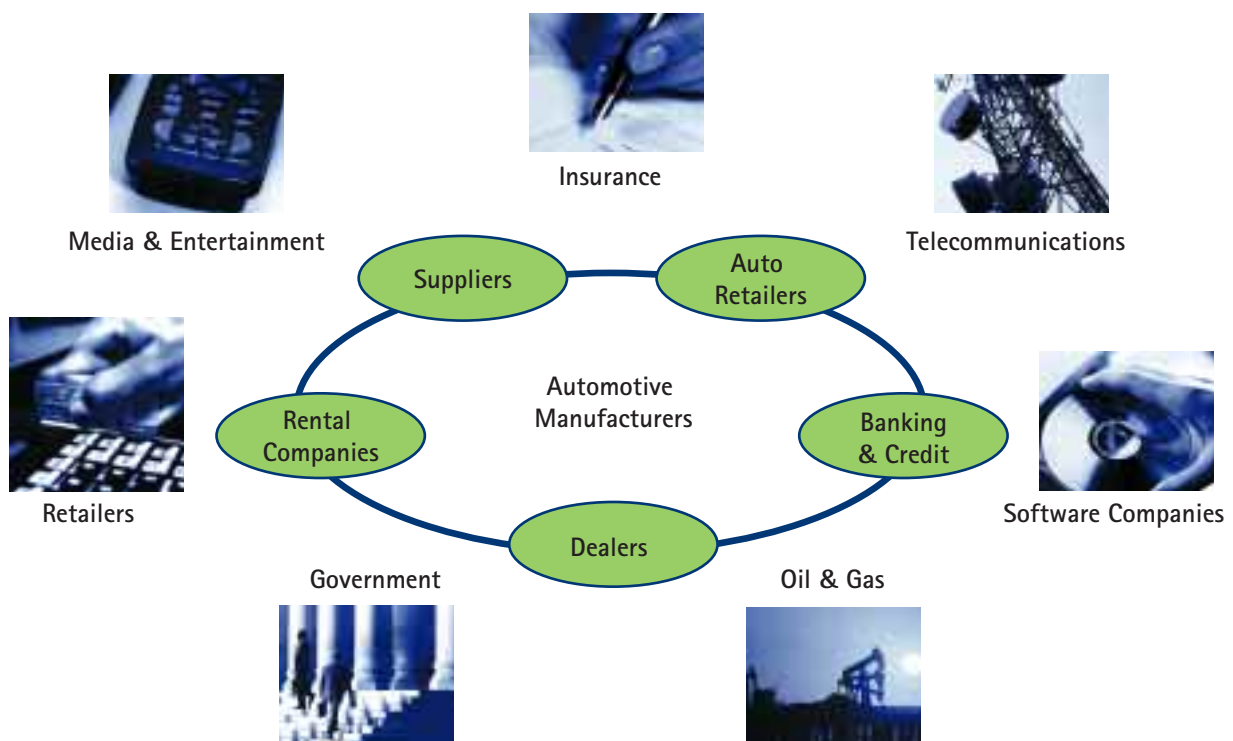
Telematics has been steadily evolving over the past five to 10 years. However, new technologies have recently emerged that are expected to result in explosive market growth. Wireless Internet technology, location-based services, wireless local area networks, user interfaces, mobile computing platforms, and other technologies have suddenly made possible a number of new in-vehicle services which previously seemed years away.

Indeed, the telematics market size currently stands at US \$1 to \$5 billion, and it is expected to grow explosively to about \$30 billion within five years, according to UBS Warburg.

These emerging technologies create the ultimate telematics opportunity for consumers – the “fully networked car,” or the truly intelligent automobile, which is seamlessly networked to its external environment. The car will be constantly linked to other wirelessly-enabled entities – regardless of location – for communications, content and commerce. Going even further, Accenture considers telematics to be a transformational technology across industries with the potential for an economy-wide impact (see Figure 1).

Imagine the not-to-distant future of an automobile owner: Noticing a temperature drop, the driver remotely turns on the heat in his house from a device in his car. He picks up dinner at a drive-thru, where payment is automatically transmitted from the car, which is connected to his bank account. Just before arriving home, the car beeps to alert the driver of an alternator problem and simultaneously sends the information to the dealer. In seconds, the dealership responds with a notice of parts availability and servicing options.

Figure 1. Telematics' Economic Impact



Telematics Benefits: Reaching Beyond The Consumer

The value proposition of telematics extends far beyond simply providing consumers with nice-to-have in-car features and functionality. It also offers several compelling — and often greater — benefits to original equipment manufacturers (OEMs) through gathering and extracting information from the car. This includes everything from driver habits and preferences to vehicle usage, condition and component performance. This information could ultimately provide OEMs with unparalleled opportunity for competitive advantages through:

- Cost reductions
- Brand differentiation
- New revenue streams
- Superior product design
- Customer intimacy

Financial Benefits: Cost Reductions And Increased Revenues

Telematics offers three business models which create significant value for OEMs: "B2C," "B2V" and "B2B." Business-to-Consumer (B2C), by far the most common use of telematics, involves the collection of monthly subscription revenues by the OEM for telematics services.

Business-to-Vehicle (B2V) is an emerging telematics model, but the one with the most potential for significant cost reduction opportunities through early warranty problem detection as well as lower recall and product liability costs. Ongoing wireless data transfer from the automobile to the OEM allows for an immediate alert in the event of vehicle component malfunctions, providing the OEM with specific information to allow for early modification of future vehicles on a given platform. With billions of dollars spent annually on warranty repair costs by automakers, the savings potential is tremendous — up to several hundred dollars per vehicle.

Currently, consumers take their vehicles in for service once they've noticed a problem — often to independent repair shops. Imagine an automobile that could alert the driver and the dealership about a potential issue before it becomes a major repair problem. Dealerships could proactively alert consumers to problems and schedule servicing earlier — resulting in increased service revenue for the dealership and parts pull through revenue for the OEM.

Business-to-Business (B2B) is a third telematics model which is only now beginning to be given serious consideration, yet also has potentially large revenue opportunities. As with the "insurance by the mile" example, telematics can create new revenue streams as data is collected and sold to other entities to allow them to provide specialized products or services tailored to the customer, or to provide intelligence for new product development.

Strategic Benefits: Enhanced Customer Intimacy

Telematics can also help OEMs achieve their strategic objectives by creating a much stronger relationship with their customers. Unlike, for example, credit card companies that have instant access to a wide range of data about their customers, automakers know very little about how their customers interact with and use their cars. Telematics immediately opens up to manufacturers the possibility of truly understanding their customers' needs, wants and habits. Access to this kind of information provides a direct personalized marketing channel from OEMs to their customers.

Automotive manufacturers can also gain closer control of the customer relationship by transmitting information to drivers, such as service reminders, marketing messages and traffic alerts. Information taken from the car on vehicle usage, location and driver preferences would also enable OEMs to design better, more tailored products for their customers. By extracting and then using information from a car's systems — such as diagnostic information and vehicle and services usage behavior — auto manufacturers can provide better maintenance, enhanced marketing programs and superior product design, in turn increasing customer satisfaction and loyalty.

In the past, once the customer left the lot, it was more difficult to determine what the next model should be based on consumer information. With telematics, this information is available in real time, all the time.

Telematics immediately opens up to manufacturers the possibility of truly **understanding** their customers' needs, wants and habits.

Additional Benefits To Dealers

Dealers could additionally reap significant benefits not only from telematics, but also through wirelessly enabling some of their operations. For instance, sales representatives on the lot could use portable devices to receive and respond to customer e-mail inquiries, obtain real-time vehicle updates, and even provide on-the-spot quotes for financing and leasing.

In addition, equipping service and parts technicians with portable diagnostic tools that are integrated with a dealership's computer system could facilitate repairs and give drivers more accurate estimates. For example, when a driver brings in a car for service, these networked devices could allow the technicians to do an immediate check on parts availability, price and length of repair time.

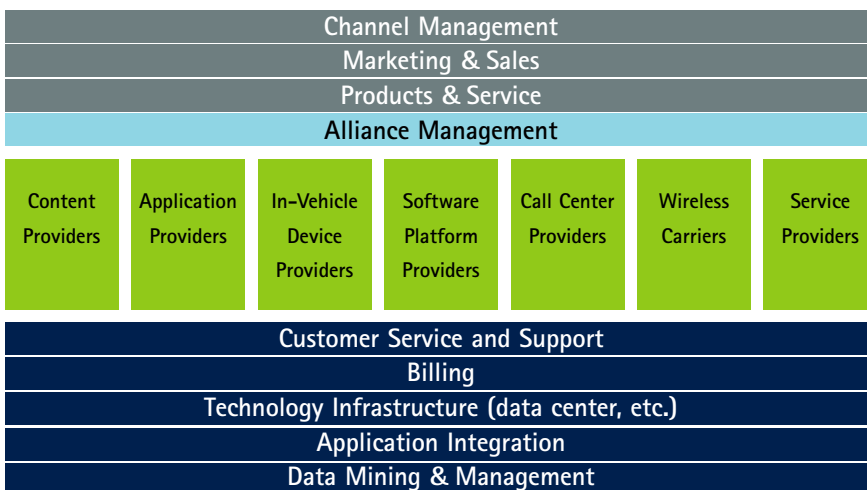
The Bottom Line

As attractive as the potential benefits to customers and OEMs are, so are the business and technology complexities and challenges inherent in the telematics opportunity. A complete telematics solution requires OEMs to develop new business processes and capabilities as well as a new and complex technology architecture. Other components of a complete telematics solution include customer service and support, billing, technology infrastructure, application integration, and data mining and management.

The OEM's back-end infrastructure also must be revamped, as well as appropriate alliances established with technology and service providers (e.g., emergency services) (see Figure 2). Evaluating, understanding and choosing between the various technologies and alliance partners will require education and guidance.

Due to the large projected growth of the telematics industry and the variety of capabilities needed to succeed, a host of players are attacking the telematics market with their products and services. These include wireless carriers, retailers, hardware providers, service providers, and the like. However, most only offer point solutions, with few, if any, integration capabilities – placing an additional burden on the shoulders of the OEM to evaluate, select and cost-effectively integrate the best options.

Figure 2. Telematics Business Architecture



There is plenty that automakers can and should do now and over the next one to three years to begin reaping the **benefits** from mobile technologies.

Getting Started

Ultimately, telematics is not an "if" anymore, but a "when." There is plenty that automakers can and should do now and over the next one to three years to begin reaping the benefits from telematics and mobile technologies.

It is difficult, if not impossible, to implement everything at once to deliver comprehensive telematics and mCommerce solutions. But there are plenty of opportunities to grab the proverbial "low-hanging fruit" through basic telematics and mCommerce offerings while developing the backbone and infrastructure necessary to implement the more complex – and higher value – opportunities down the road.

As a first step, companies should develop a telematics strategy and a reasonable migration plan for technologies and service offerings over the next one to five years, including:

- A prioritized, time-phased list of applications that companies want to offer their customers, developed in the context of available technologies.
- A comprehensive map of the alliances and partnerships required to implement telematics and a view on what elements of the telematics solution are "core" to a company (i.e., should be developed in-house vs. outsourced).
- A comprehensive business case, which includes the full cost of implementing telematics. Companies should recognize that what drives the cost of telematics is not only the "onboard" technology, but the cost of the all the "back-end" infrastructure and processes (e.g., billing).

Using wireless technologies now available, automakers can leverage the continuous flow of information to build closer relationships with customers, suppliers and dealers, as well as enhance corporate productivity and financial performance. Within five years, if all players in the automotive industry deliver on their strategies, they will ensure that they play a landmark role in the wireless revolution.

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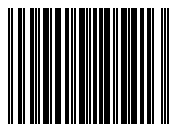
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