



Telematics and the Internet of Things: Value, Opportunities & Risks for Customers and OEMs

There is a lot of buzz about the technological capabilities of telematics and its prospective impact on business relationships and OEMs are starting to make progress in identifying the right business model to derive bottom-line value from these offerings.

IDEA IN BRIEF

- › Telematics can provide OEMs and customers with considerable and valuable data on assets, which can add significant value to optimizing R&D, investment decisions, manufacturing, and operations
- › Ongoing costs can be significant as the installed base grows, and companies need to develop new capabilities to manage service operations efficiently
- › While the theoretical benefits are clear, including greater customer stickiness, OEMs have yet to overcome customer adoption hurdles and many are struggling to monetize their services

Telematics is the integration of machines, sensors, information, software instruction, and communications technologies, creating connectivity between machines or other hard assets, often with a central service. It has to some extent been popularized in the press as part of the “Internet of Things.” Telematics was introduced into public consciousness with General Motors’ OnStar service connecting the car to a GM service center, and although we are in the early phases of adoption, telematics exists today throughout the industrials value chain, from manufacturing line equipment to transportation fleets to production tools in the field. In the production facility, telematics is being used to create “connected” environments that can identify and address issues before problems occur, limiting down-time. Critical machines networked to the facility ERP have been able to alert employees of issues for some time, but two new trends are entering the factory. First, leading manufacturers are now networking the entire manufacturing line, creating “aware” factories. Second, individual equipment is connected directly to the OEM for monitoring, preventive maintenance alerts, deployment of service personnel and even remote service—creating a sticky relationship, feeding OEMs valuable data, and in some cases developing entirely new and profitable revenue streams.

Heavy equipment OEMs are also increasingly offering telematics services, particularly on equipment that is at risk of being commoditized, in hopes of creating value outside of the product's core function. The wealth of data generated by telematics enables OEM customers to track and monitor equipments' use and environmental conditions, and identify improvement opportunities for how the equipment can be better operated, which also impacts equipment maintenance, uptime, and useful life.

While the end-user value of telematics is potentially significant, some OEMs are reluctant to commit investment (think IT R&D) in these areas given uncertainty around the likelihood of adoption, questions on how to address conflicts between competing platforms, and a lack of clarity on how telematics will ultimately create top and bottom-line value.

Tracking and monitoring equipment can provide real-time benefits and long-term operational improvements. Tracking the location of equipment can ensure proper operation and compliance as well as drive capacity utilization and effective asset management. Over the long-term, data collected on the use of equipment can help improve efficiency and cost control. For example, an OEM reported that by tracking usage and location, it realized that equipment operators were idling machines for as long as two to three hours per day. Through a simple notification to operators to shut down the machines, it was able to save the customer \$80,000 per year in fuel, and extended the useful life of their asset. However, data sharing requires that OEMs successfully navigate a number of customer concerns about data security and trust.

The benefits to equipment health and maintenance can be realized both in real-time and over the course of time. Machine sensors that track the temperatures of critical parts such as transmissions can alert the operators to any immediate impending issues, preventing costly breakdowns. Over time, fleet managers can track cumulative hours used and asset performance data to create sophisticated preventative maintenance programs, improving the lifespan of equipment.

The data that telematics generates also provides extremely useful customer insights for the OEM. The same use and maintenance information that the customer is using to better manage their equipment can inform improvements to the OEM's product design, production, innovation, and customer service. But many companies have yet to tackle the internal change to processes, and develop the internal capabilities required, to take advantage of these new data streams.

While telematics can potentially help OEMs develop greater 'stickiness' with end users and a more direct relationship with the end-user community, the prospect of this direct relationship with end users is one that raises a number of tricky issues. Distributors who have traditionally enjoyed the unique benefit of owning the customer relationships may push back for fear of

disintermediation. Figuring out how to best include and engage the channel in the business model of telematics is a critical step in executing a telematics strategy.

Another common challenge faced by OEMs is determining whether, and how, to monetize their telematics offerings. Companies that base their investment and return expectations of telematics as a standalone offering often run into problems when they incorrectly anticipate sensitivity of market adoption based on variations in the revenue model and pricing levels. For example, a construction equipment manufacturer added telematics to their premium line of products as an optional value-added service. When the customer base resisted paying monthly for the service, the OEM built the cost into the sales price, hoping the increase in sales of the higher margin premium line would offset the cost. With limited resources allocated to their telematics service, customers using telematics were disappointed with the quality of service, forcing the OEM to allocate more resources to maintaining telematics, making it unprofitable.

For other OEMs, adoption of telematics on their machines is dependent on adoption of other products in the ecosystem. For example, a European appliance manufacturer recently added telematics to their household appliance line to differentiate their product from their competitors. After months of marketing, the OEM realized customers were not willing to use telematics for a single appliance in the household, as they wanted just one interface, one platform, for all their appliances. Unable (or unwilling) to negotiate a common platform with other major appliance manufacturers, the telematics offering was dropped. Dominant third party platforms (e.g., Apple's iOS) offers an intriguing option (and in evidence at 2014 CES) but cedes significant value to the owner of the platform.

There are challenges related to the natural rate of market adoption and how much OEMs can incentivize uptake. Although customers who want entire fleets activated immediately can engage third party suppliers, the cost-benefit analysis is not compelling for most and many will choose to slowly introduce telematics as older equipment is replaced with newer systems. These examples demonstrate that the drivers of adoption and perceived need for telematics differ significantly across industries and what drives value for the customer may go well beyond your company's offering. More critically, how you define and package technology offerings has great impact on outcomes.

Certain companies that have been successful with their telematics offering have faced a different set of "success disasters." For instance, many manufacturers fail to consider, let alone prepare for, the impact of a growing installed base. If you sell 100,000 units a year, in five years you wake up with a half a million connected machines, and all of the associated customer and technical support costs. Entirely new organizational capabilities and competencies are required (e.g., data analytics, data governance, IT support, liability management, etc.) and carry associated costs.

The technological potential of telematics continues to increase at astonishing rates as advancements in information and communications technology (including cost reduction) unfold on a daily basis. However, what may be more ultimately disruptive in the long term may not be the advent of new system capabilities, but the rise of new service innovations and delivery models that transform how industrial products deliver value to end customers. Firms

that are able to more quickly recognize how telematics can vastly enhance their traditional product-based value propositions. Those that adapt their business / organizational models to deliver against these promises stand to gain competitive advantage relative to those that are slower to adopt, including the potential to materially shift market share even in tired and otherwise mature market segments.

In order to develop profitable telematics strategies, business models, and value propositions, OEMs should rely upon investigative primary research and analysis that answer the following questions:

- › What does current state look like and what paradigms need to shift?
- › What are true customer needs and how can they be best addressed?
- › What do customers expect of an OEM and its telematics offerings versus that of the channel or third party integrators?
- › What business models will prove viable and attractive?

Furthermore, OEMs are not alone. You can capitalize from others' experiences. Many firms have already tackled these challenges, developing unique and practical answers to the questions above (and painful lessons learned). Consequently, benchmarking how competitors and best-in-class telematics OEMs are managing these issues can shorten the time to implement and improve the confidence of management teams.

Lastly, external research can keep OEMs on top of technology developments in other parts of the industry ecosystem so that OEMs can determine:

- › What technology standards are being used?
- › How are competitors investing against different telematics challenges?
- › How have technology challenges been met in similar circumstances?
- › Who is leading the field in specific areas?

Kaiser Associates can help address these questions by leveraging our experience helping other clients tackle similar issues, conducting competitive studies, applying best practices and, most informatively, by conducting deep investigative and empathetic study of customers, customer circumstances and channels.

Founded in 1981, Kaiser Associates is an international strategy consulting firm that serves as a key advisor to the world's leading companies. We provide our clients with the unique insight derived from unparalleled primary research capabilities to drive critical decision making and solve their most pressing problems. We are dedicated to helping leading corporations improve their performance and achieve sustained profitable growth.

KAISER

ASSOCIATES

John Wilhelm

Senior Vice President
North America
+1 202 454 2029
jwilhelm@kaiserassociates.com

Mark Stein

Senior Vice President
North America
+1 202 454 2060
mstein@kaiserassociates.com

James Tetherton

Senior Vice President
EAME
+44 (0) 7980 818216
jthetherton@kaiserassociates.com