



## The Telematics Advantage: Growth, Retention and Transformational Improvement with Usage-Based Insurance

### Executive Summary

We are now in the early stages of the next disruptive shift in work and technology, with a powerful economic catalyst sweeping across industry. As a result of new, cloud-powered technologies, change is coming at an ever-accelerating pace, particularly as the millennial generation comes of age and sees few barriers to the way technology can empower individuals and businesses.

The rise of millennials, along with the globalization of markets, the virtualization of business processes and emerging social and mobile technologies are redefining how work will be done today and tomorrow. As companies seek to match the Sunday night experience of mobility, collaboration and social networking with Monday morning, these striking changes require organizations to rethink and rewire every aspect of their operations.<sup>1</sup> While some companies are still on the sidelines, others are examining every facet of their business model and are adapting “new ways” of working that are more automated, collaborative and virtual.

Within the insurance industry, change has come slowly and predictably over time – until now. One new technology that has the potential to bring significant change to all aspects of the insurance business is telematics, with its ability to monitor vehicle driving behavior and communicate back to the insurer with extremely rich and detailed

data. Early adopters are already reaping significant benefits from this wave of change.

Telematics is defined as machine-to-machine communication, whereby a device plugged into the on-board diagnostics (OBD) port of a vehicle, or originally installed by the manufacturer, collects particular data and sends it via wireless communication to the insurance carrier to derive meaningful and predictive insights about how individuals drive.

For some carriers, telematics data provides the basis for understanding how far, how fast and under what conditions a person drives, as well as a foundation for more sophisticated data modeling and scorecard development. This ability is fostering new and innovative products that more accurately price risk and attract profitable new customers, making the traditional segmentation of pricing auto insurance – based on average characteristics or certain populations’ gender or age – completely obsolete.

In addition to pricing, telematics and usage-based insurance (UBI) approaches are introducing opportunities for carriers to build and maintain richer relationships with customers than ever before, while also laying the foundation for better decisions and core business process optimization. This white paper lays out how telematics and UBI are revolutionizing rating variables and discusses the potential they have for significantly changing or eliminating claims processes and workflow.



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It also offers actionable advice on how insurers can begin integrating these technologies into their IT infrastructure by examining a new managed services approach that we have recently launched in partnership with Evogi Group, a leading provider of usage-based and behavior-based software solutions to the insurance industry.

### Telematics Pioneers

One leading carrier, Progressive Insurance, has over a decade's headstart with telematics. Its patented "Snapshot" program is already rolled out, with enrollments increasing to 50,000 new policyholders a month in 39 states. As such,

Progressive has proved the acceptance and scalability of UBI in the U.S.

Other carriers are following suit with UBI products, teen-driver safety programs or a mix of UBI and behavior-based insurance (BBI) programs, as well as added services to prevent their best customers from being poached by competitors.

Telematics-based insurance products are now being explored by personal and commercial lines insurers to provide policy discounts and enhanced risk management.

Telematics has been around for some time. In the early days, it was used primarily by corporations to govern fleets for improved safety and efficiency. Telematics-based insurance products are now being explored by personal and commercial lines insurers to provide policy discounts and enhanced risk management. This has been made possible by the reduction in data transmission costs and

device prices, which have declined to about \$100 and continue to drop.

Telematics insurance products are offered as opt-in programs by insurance companies in various forms of UBI, either as commercialized products or trial offerings (see Figure 1). Additional carriers are expected to begin UBI market tests this year through 2017, according to Towers Watson. In fact, Towers Watson reports that 18% of U.S. personal and commercial auto carriers use or are planning to use telematics in the next two years. In addition, the LexisNexis Risk Solutions Survey (2010) indicates that 75% of potential customers are interested in the cost savings that can be achieved via UBI.

While large carriers have the capacity to fund and establish telematics pilot projects, many others are challenged to build a business case and are launching projects to determine the impact on product cost, as well as the effect on selection, retention and acquisition of customers. In addition, the U.S. telematics market is the largest in the world and will remain so, at least through 2017.

Usage-based insurance has social advantages, as well, and is promoted as a green initiative since it has the potential to reduce miles driven and, hence, emissions. In addition, UBI has been shown to reduce the frequency and severity of accidents, according to a review of available data by the National Highway Transportation Safety Administration ([www.NHTSA.gov](http://www.NHTSA.gov)), by reducing the speed of travel and the number of vehicles on the roadway.

### The U.S. Competitive Landscape

	Market Tests Employees and existing customers	Mass Market Offerings Launched products	Segmented Offerings Launched products for teens	Other Offerings Commercial, asset recovery, etc.
Years of Experience < 3	Farmers Insurance AAA MetLife Unigard State Farm Insurance Plymouth Rock Allstate Erie Insurance Travelers Nationwide The Hartford	State Farm Insurance OnStar	Safeco Insurance 21st Century Insurance	Geico Liberty Mutual Travelers The Hartford GMAC Insurance
3-6		GMAC Insurance OnStar	American Family Insurance	Zurich
> 6		Progressive		

Source: Evogi  
Figure 1

## Creating a New Telematics Product

Building a new telematics-based insurance product can be complex. It begins with the desired strategy of the insurer and impacts the selection of the telematics device(s), the desired analytics and the required integration with the insurer's operating systems. It also necessitates a close assessment of the potential impact the technology may have on underwriting and actuarial rules, billing, marketing and distribution, as well as the claims process. Other considerations include:

- How will the insurer collect, aggregate, normalize and use the data for risk selection and pricing?
- What information, and in what format, will be provided to policyholders to easily monitor their driving behavior?
- What requirements will be necessary to integrate telematics into the insurer's operations and core systems?
- How will insurers support fulfillment and UBI customer care?
- What are the economic considerations, and how will the insurer account for ROI?
- What device(s) are compatible with my policyholders' vehicles?
- How can insurers create a pilot program?

## Telematics Benefits, Potential ROI

Since most carriers are still in market tests and seeking to operationalize UBI and/or BBI programs, it will potentially take them at least 12 to 18 months to move into full production from the start of a pilot. This foundational focus will continue throughout this year, into next year and beyond. Companies that are first adopters will move on from operationalizing a telematics program, to exploring further applications for telematics data.

This next wave will produce even more significant change in the insurance industry, as predictive analytics can be deployed to enhance decision-making, reduce costs and eliminate manual processes in the claims arena, while bringing transformation and innovation to the insurance enterprise.

As the use of predictive modeling in underwriting has accelerated, these models will be increasingly applied to improve claims accuracy. As a result, and in addition to streamlined processes, the use of mobility solutions will increase across the enterprise to accommodate a new demographic

of policyholders who prefer to use a handheld device for anytime, anywhere communication.

While the complexity of establishing UBI as a rating tool may appear significant, the benefits are extensive, as emerging technologies collect an expansive amount of data beyond mileage. This information can be used to create value-added services, while increasing pricing accuracy, reducing claims leakage, reducing loss costs and, therefore, lowering expenses. Areas of greatest impact and potential redesign include:

- Fraud reduction.
- Stolen vehicle recovery.
- Pricing accuracy/adequacy.
- Lower acquisition costs.
- Improved renewal retention.
- Improved liability determination.
- Improved accident investigation facts.
- Kinematics reconstruction.
- Reduction or elimination of towing charges.
- Automated repair processing.
- Automated first notice of loss (FNOL) and triage of claims.
- Automated reserving.
- Automated bodily injury estimation.
- Automated physical damage estimation.
- Automated claims management.
- Automated subrogation recovery.

## Claims Impact of Telematics

As insurers continually examine their claims efficiencies, including technologies, branding and customer care, while striving to leverage analytics for improved decision-making, telematics has the potential to bring the most significant transformation to date to insurance operations.

With the communication of behavioral and geospatial data from the vehicle at the time of an accident, telematics can enable real-time FNOL and first report of injury (FROI) reporting. By creating deeper predictive analytics and triggers for crash data and bodily injury assessments from similar incidents, insurers can potentially streamline the front-end of claims reporting. By doing so, they can reduce their loss expenses, while employing better triage of claims, potentially realizing a reduction of 20% to 50% or more in claims expense over time.

Telematics data can also improve fraud monitoring by augmenting fraud data models with crash monitoring data to recreate scenarios

and detection of false claims. Applied to claims processes, analytics can help reduce fraud by spotting the elements of a claim that indicate a higher propensity for fraud. In the U.S., for example, the National Insurance Crime Bureau suggests that 10% of all property and casualty claims are fraudulent, yet only 20% are detected.

**Telematics will, in time, introduce more accuracy and change workflow entirely, delivering significant ROI over time.**

Understanding crash data with more accurate assessments will provide better triage of claims as a result of more detailed accident information received by the carrier, thus improving insights into which claims incur increased loss adjustment expense (LAE). Having crash data will also improve estimate reserves by receiving detailed accident characteristics and thus streamlining the efficiency of the investigation and adjudication process, further reducing LAE.

For example, by obtaining UBI, BBI and geospatial data elements, a vehicle can call in the FNOL and potentially trigger automated subrogation recovery or engagement of the tow and repair shop, thus reducing downtime, tow charges, impound fees and rental car costs. Moreover, total claims costs will be further reduced by utilizing an automated estimation of the costs of repair and streamlining the repairs by analyzing data of the needed auto parts and enhancing fulfillment of those parts.

As the delay in receiving notice of loss leads to higher costs, the delay in adjudication and using subjective elements further contribute to leakage. Telematics will, in time, introduce more accuracy and change workflow entirely, delivering significant ROI over time.

As on-board telematics devices can produce enormous amounts of valuable data, its persistent connectivity in the event of a claim can yield tremendous benefits in quickly and efficiently assisting with managing the claims process. These new developments are especially timely, as the ranks of experienced adjusters are retiring.

### Added-Value Services

With a UBI program, the carrier obtains the data and the opportunity to improve the risk characteristics of its book of business, while the policyholder receives a premium discount or the promise of a premium reduction. However, telematics can also enhance revenues for insurers and increase the stickiness to the insured by easily attaching

value-added services. These include emergency roadside assistance, stolen vehicle locator, vehicle diagnostics, speed alerts, real-time driver feedback and driver training programs, teen driving alerts, safety monitoring for cell phone use and texting and geo-fencing.

In short, a case can be made that an insurer will get a favorable ROI from a telematics device with proper installation, selection and use of data and the addition of value-added products in its strategy.

### 'UBI in a Box'

To achieve these benefits, most insurers will find it necessary to enlist the services of a partner with experience in developing and deploying end-to-end UBI products. An experienced partner providing strategy consulting and end-to-end solutions – including device selection, pilots, field tests, fulfillment, support, actuarial services, integration, predictive analytics, claims solutions and insurance domain expertise – is more likely to understand the technological and business process nuances of telematics, to mitigate the risks and accelerate time to value.

One way to approach this is with an end-to-end solution that is delivered as a managed service and spans strategy consulting, evaluation, field pilots, integration of data into core systems, fulfillment and help desk/customer care and advanced predictive analytics. With Evogi Group, we have created a "UBI in a Box" service. Evogi provides the integrated data hub to collect, normalize and apply analytics to UBI data for better decision-making, while we provide a private cloud service to deliver (at scale) technology, as well as domain and business process expertise to carriers.

Working with us, carriers can better manage the complexity and moving parts of a UBI initiative (while applying a unique strategy for competitive advantage). By taking a managed services approach, they can limit the number of vendors and costs associated. Our solution enables carriers to begin with an evaluation and pilot before going live with a UBI service. A limited number of devices can be deployed as an internal pilot for the carrier to familiarize itself with the program, while further developing its strategy and roadmap before offering UBI to policyholders.

Innovation and business strategy units are well-served by assessing telematics in a pilot environment, while creating a blueprint for a successful UBI roadmap. This will allow them to further the



alignment of all program partners and define the roles and responsibilities of stakeholders. In addition, this approach allows for testing price and segmentation capabilities and value-added services, reviewing the functionality of the output and integration steps, while providing additional organizational orientation and agent training. A pilot environment enables carriers to build a brand around the use of telematics in advance of the launch of a UBI program.

### Improved Economics in Commercial Fleets

Calculating ROI in a commercial program may be easier to establish than in personal lines; however, the long-term results for early adopters of a UBI or commercial program will change over time.

For example, a 105-vehicle fleet had determined that both revenue per employee and revenue per unit (vehicle) decreased each of the past four years. The ratio of hours billed to hours paid eroded, as well. (Because of the economy, pricing per hour and per move are both flat except for a per-mile fuel surcharge.) As a solution, the telematics program was initiated, resulting in the following improvements:

- The hours-billed-to-hours-paid ratio improved, as actual travel time began to conform with estimated travel time.
- Specific to office moves (primarily weekend and evening work), return-to-office trip time decreased by 50%, resulting in \$13,000 of improved productivity in the first 90 days.
- The company essentially eliminated side-trips and other non-optimal route selections.
- By ranking the drivers by company (by number of speeding incidents, hard brakes, hard accelerations and excessive idling), speeding

incidents decreased by 12% and idling by 35 minutes per vehicle, per day.

Similar types of benefits could be accrued by insurers. In addition to monitoring drivers for safe driving habits, agents could more effectively manage risk and offer policy discounts to customers.

### Deployment of UBI and Competitive Advantage

As carriers work through their approach to rolling out UBI programs in personal or commercial lines, they will need to consider their strategic objectives, desired competitive advantages and ways a connected vehicle will impact their business processes.

By integrating telematics data into core systems – policy administration, actuarial and underwriting, billing and claims, as well as new action-oriented policyholder portals – more predictive and faster decisions can be made, perhaps even in real-time. Manual and time-intensive work can be streamlined or eliminated as processes are automated with accurate geo-spatial and vehicle data. This will have a noticeable impact on loss ratios. As more data is collected and analyzed over time, more quantifiable savings will be determined and verified – benefits that will accelerate with greater UBI program adoption rates.

### The Future is Now

Telematics has arrived. Its speed of deployment will continue to accelerate, but there are limited available resources to deploy to make it work effectively within your organization. Speed matters. Thus the fastest, most complete route to telematics adoption will produce a competitive advantage.

### Footnotes

- <sup>1</sup> Malcolm Frank and Geoffrey Moore, “The Future of Work: A New Approach to Productivity and Competitive Advantage,” Cognizant Technology Solutions, December 2010, <http://www.cognizant.com/futureofwork/assets/whitepapers/FoW-New-Approach-TL.pdf>.

### Resources

[http://www.nhtsa.gov/Research/Event+Data+Recorder+\(EDR\)/Welcome+to+the+NHTSA+Event+Data+Recorder+Research+Web+site](http://www.nhtsa.gov/Research/Event+Data+Recorder+(EDR)/Welcome+to+the+NHTSA+Event+Data+Recorder+Research+Web+site) This Internet Web site is another Event Data Recorder (EDR)-related effort to promote the understanding and widespread use of these devices. It is designed to be a useful resource for anyone seeking knowledge of the emerging highway-based EDR technologies. By sponsoring this effort, NHTSA encourages dialogue, research and development in emerging EDR technologies, with the goal of fewer crashes, injuries and deaths.

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