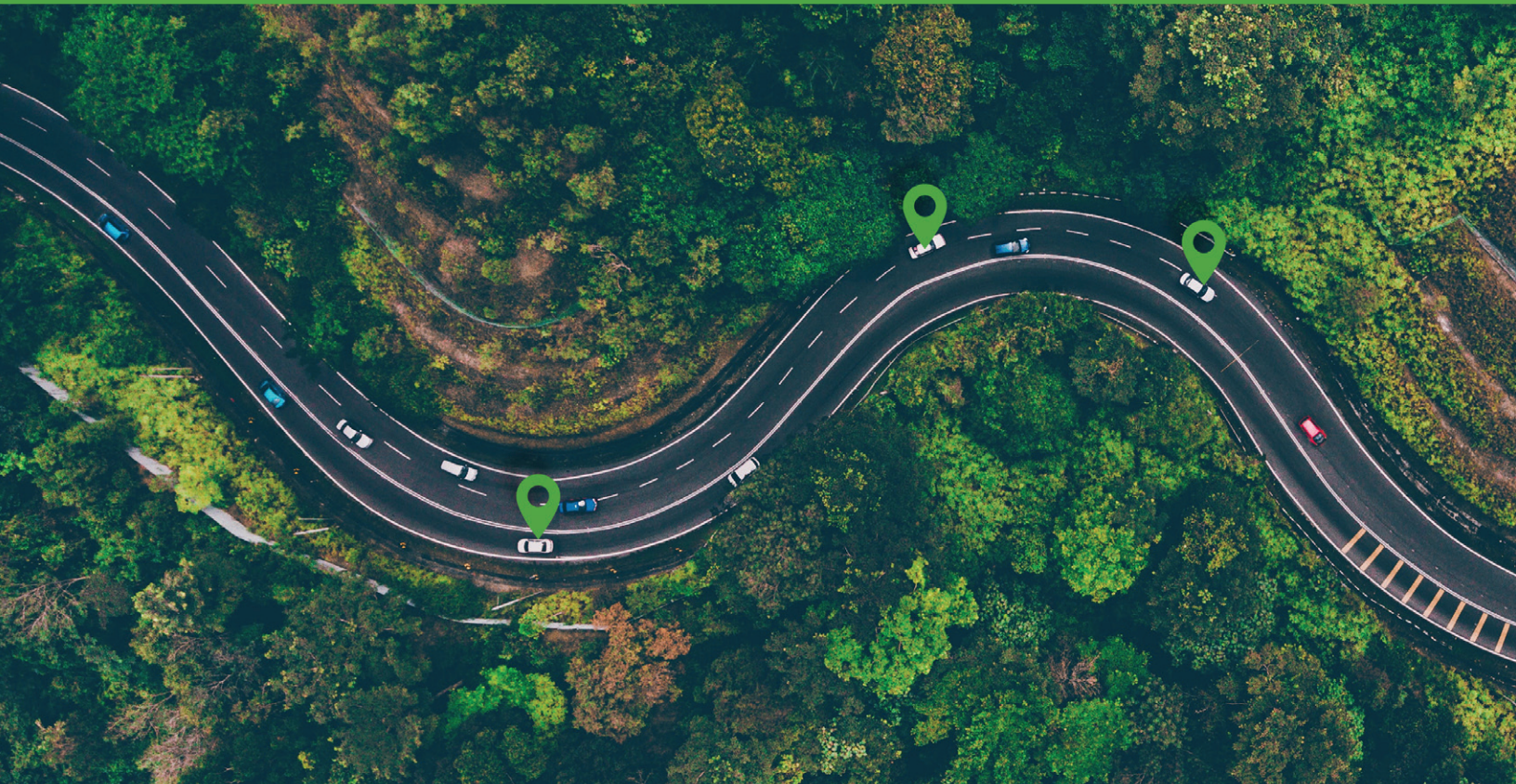


Fleets are getting connected. Is the U.S. insurance sector ready?



Executive Summary

For years, U.S. insurers have grappled with profitability in commercial auto insurance. Telematics, powered by the constant flow of data from Internet of Things (IoT) devices in vehicles, is emerging as a powerful solution. This technology is transforming insurance across the globe, and the U.S. commercial auto sector is poised to reap the benefits.

Telematics empowers insurers to achieve a paradigm shift. By precisely matching risk to individual fleets based on real-world driving behavior and vehicle usage, premiums become more accurate. **Proactive safety insights can help businesses prevent accidents, reducing overall costs.** Additionally, telematics data streamlines and improves the claims process, while offering a deeper understanding of the entire commercial auto portfolio for better management.

However, simply connecting vehicles isn't enough. To unlock the true potential of telematics, a holistic and strategic integration into core insurance processes is essential. Azuga, a leading force in telematics-based insurance solutions, empowers insurers to navigate this transformation journey. Our proven expertise is evident in the success stories of industry pioneers like Philadelphia Insurance. Azuga is committed to fostering best practices within the market, ensuring all participants can leverage the transformative power of telematics.

Telematics represents a game-changer for commercial auto insurance. Partnering with Azuga, a proven leader in this field, allows insurers to seize this opportunity and revolutionize their approach to risk management.

Global Insurance Trends

The importance of the commercial auto sector is on the rise. Research indicates that between 2020 and 2030, there's projected revenue growth of \$128 billion, followed by a projected increase of \$108 billion from 2030 to 2040. Several factors are fueling this growth, including a shift from retail to commercial auto usage, urbanization and sustainability trends, the expansion of new mobility solutions, evolving perspectives on vehicle ownership, and the popularity of all-inclusive leasing packages.

The profitability of commercial auto insurance has faced significant challenges since 2011. Research conducted by the University of South Carolina reveals that the combined ratio for commercial auto insurance averaged 103.1% from 2000 to 2022, increasing 106.1% from 2011 to 2022. **Notably, commercial auto liability has emerged as the sector with the most daunting economic hurdles.** This predicament can be attributed to a multitude of factors, including heightened traffic volumes, driver distractions, escalating auto repair expenditures, and a surge in litigation leading to substantial verdicts. Conventional pricing methodologies, reliant on rating factors derived from observed frequency and severity within the portfolio/market, as well as fleet-specific risks derived from actual claims experience, have encountered limitations in effectively addressing these challenges.



Reasons For Adopting the IoT Paradigm

The Internet of Things (IoT) bridges the gap between the physical and digital worlds by connecting people and objects to the Internet, facilitating the remote transmission and utilization of data. More than merely a technological advancement, **IoT represents a transformative business paradigm**. This enables organizations to extend capabilities through sensing, communication, interaction, and action. IoT paradigm adoption is about connecting sensors in a way that data is transmitted to a platform where it is enhanced and transformed into actionable insights. These insights empower organizations to make informed decisions. The true impact of the IoT paradigm on organizations lies in leveraging these insights to refine and redefine business processes.

Insurance IoT represents a significant evolution in the insurance industry by leveraging IoT to transcend traditional operational models and foster proactive strategies thus, allowing for a deeper, more dynamic connection with customers, leading to an enhanced understanding of risks.

At its core, the insurance business is centered around the assessment, management, and mitigation of risk. Traditionally, industry professionals have depended on historical data and snapshot assessments through methodologies such as point-in-time data logging, thermography, and aerial imagery to inform their decisions. These techniques are critical in underwriting and risk pricing processes, where a thorough analysis of historical data and questionnaires provide the foundation for accurate risk evaluations. Likewise, in claims management and loss prevention, detailed analyses drawn from these data sources are essential for making well-informed decisions.

The IoT paradigm transforms our ability to **sense, comprehend, and respond in real-time**. When fully leveraged and implemented, IoT presents unprecedented opportunities for innovation across all business lines and geographies. The IoT Insurance Observatory has already found **numerous success stories that have demonstrated a positive ROI** from adopting this insurtech strategy. These pioneering efforts demonstrate the significant benefits insurance companies can achieve by harnessing IoT data to refine their operations, highlighting the potential for any insurer to enhance their performance through effective IoT utilization.

Reasons For Adopting the IoT Paradigm

IoT data offers a continuous stream of insights regarding risk exposure and the likelihood of losses. This represents a transformative development for actuaries and portfolio managers, as the integration of IoT data into continuous underwriting processes facilitates more accurate risk assessment and selection. Insurers can now **align rates more closely with risks**, optimize **portfolio management**, and refine **reinsurance agreements**. Moreover, IoT enables scalable, precise, and timely risk analysis and **loss prevention** strategies, providing a structured methodology to minimize expected losses.

The **policyholder journey** is being redefined through the integration of IoT data, affecting every aspect from initial quotes and contract closure to billing and policy renewals for both personal and commercial lines. Furthermore, the **management of claims** has been profoundly revolutionized, enabling faster detection of incidents, proactive engagement with policyholders, and the leveraging of IoT data to expedite decision-making throughout the claims process. This advancement not only reduces the cost of claims through improved loss ratios and through the implementation of anti-fraud measures but also diminishes processing expenses.

IoT also redefines risk transfer mechanisms, making previously uninsurable risks insurable, necessitating a strategic shift in how insurers present their value proposition to customers. The sales and distribution landscape is also evolving, with the introduction of new customer acquisition tactics, such as providing risk scores at the point of sale. Access to pre-existing data allows insurers to offer more accurate rates or discounts immediately, thereby facilitating more effective up-selling and cross-selling strategies. While IoT does not overhaul the entire insurance sales process, its impact is significant. Agents play an essential role in promoting the adoption of these new technologies and ensuring their success.

Support functions within insurance companies are transforming, as the influx of IoT data necessitates a more extensive skill set than traditional roles and demands substantial investments in IT infrastructure and data management systems. A leading example of IoT's application in insurance is telematics in personal auto policies, known as Usage-Based Insurance (UBI).



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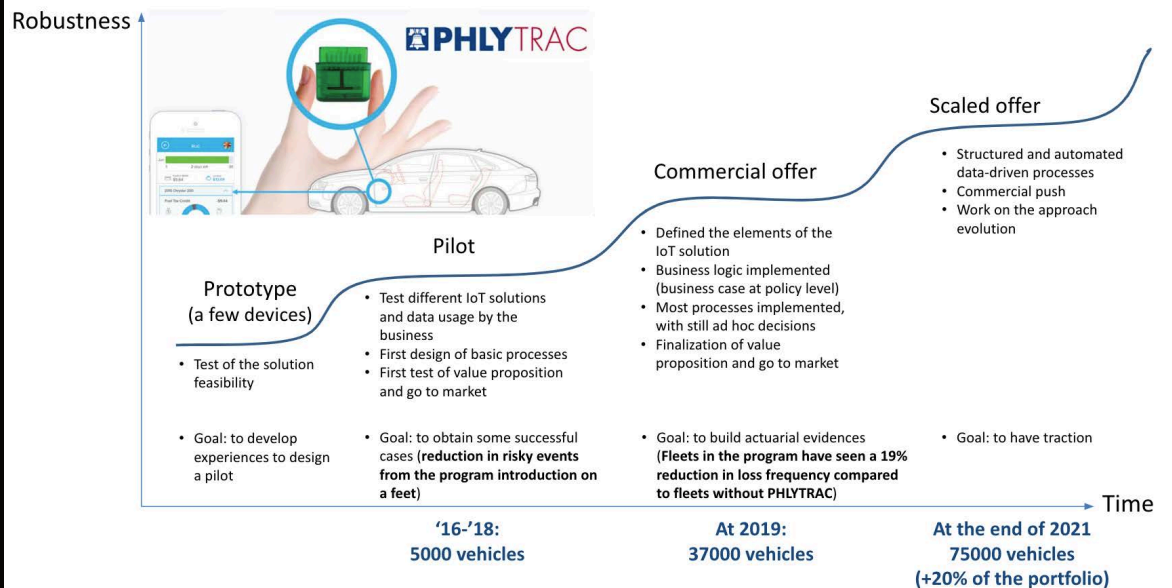
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The Current State of the U.S. Telematics Market

The U.S. commercial auto telematics market has undergone significant evolution since 2019, progressing through distinct phases. The market incubated this opportunity for years, with many players, assessing the viability of the approach. Over the past few years, we have experienced the evolution to the Exploration phase thanks to different pioneers that have scaled their programs and stimulated more insurers to experiment with similar approaches. This stage of evolution in the telematics adoption is focused on determining the ROI of various use cases. Based on the IoT adoption journey in other insurance business lines, as soon as a carrier is confident with the ROI of the program, the commitment to connecting a large part of the portfolio starts.

The U.S. commercial auto telematics market has shown a relevant evolution since 2019

A success story based on Azuga's services



One notable success story within this landscape is Azuga's PHLYTrac program. Beginning as a prototype, the objective was to create tailored experiences and a pilot. The pilot phase from 2016 to 2018 started with 5,000 vehicles and focused on generating successful case studies and testing various IoT solutions and data utilization methods. By 2019, the program had expanded to include 37,000 vehicles, to accumulate actuarial evidence (demonstrating a 19% reduction in loss frequency for fleets utilizing PHLYTrac compared to those without). At the end of 2021, the program encompassed 75,000 vehicles, representing a penetration higher than 20% of the portfolio.

Progressive's Data-Driven Approach



Progressive Insurance has successfully developed a telematics-based commercial auto portfolio exceeding \$1 billion with a penetration higher than 13% on its commercial auto portfolio. This result has been achieved from 2019 to 2022 by employing two key programs: SmartHaul and Snapshot. The SmartHaul initiative primarily caters to for-hire truckers and small fleets, providing discounts based on driving behavior. This program utilizes a telematics approach where the enterprise collects data from the Electronic Logging device (ELD) installed in the truck, subsequently calculating a driving score without the need for continuous monitoring. On the other hand, the Snapshot program targets light vehicles and small fleets, incorporating continuous monitoring through an OBD dongle.

Avoid Claims From Happening

From Risk Transfer to Risk Prevention

Over the past three years, since the publication of the Geneva Association's paper titled, "*From Risk Transfer to Risk Prevention: How the Internet of Things is reshaping business models in insurance*," insurance companies have increasingly recognized the potential of IoT and have made substantial investments in this area. They have not only experimented with various solutions but have also successfully scaled up selected initiatives. **These efforts have yielded tangible results in preventing** adverse events for their policyholders, ultimately benefiting society.

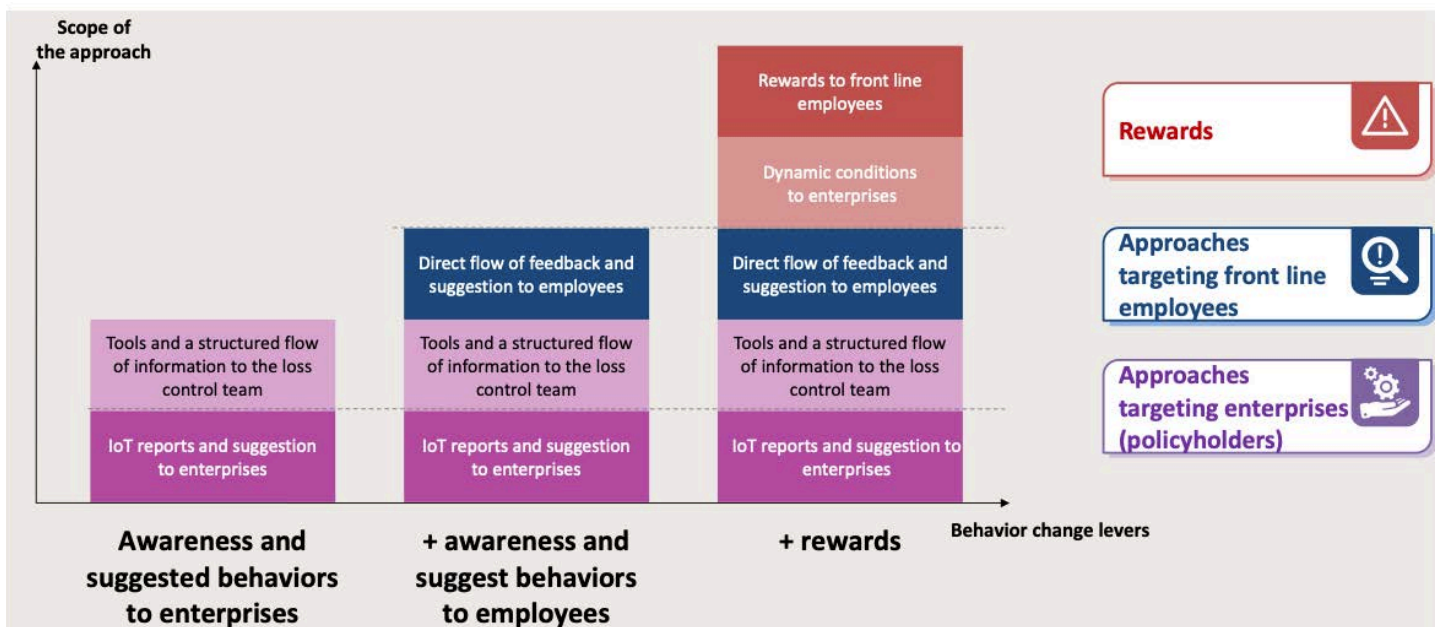
Insurers have taken a proactive approach by incorporating prevention services alongside their traditional risk transfer solutions. According to research conducted by the IoT Insurance Observatory, telematics initiatives have primarily focused on mitigating the consequences of three distinct situations:

1. **Responding to an incident (insured event) that has already occurred**, such as a severe crash. In such cases, insurers aim to act swiftly to minimize the event's repercussions by dispatching assistance promptly.
2. **Risky Situations**, such as detecting a drowsy or distracted truck driver in real-time. The insurer's objective is to intervene immediately to prevent such situations from escalating into accidents and resulting in losses. Additionally, insurers have introduced programs to encourage less risky behaviors, reducing the frequency of these risky situations.
3. **Addressing missed safety tasks**, such as scheduled inspections or maintenance, or bald tires, as well as the malfunction or absence of risk mitigation systems (e.g., deactivated ADAS systems). In these instances, insurers proactively act to restore the prevention capabilities. Complementary insurance programs are also introduced to promote compliance with safety tasks and the proper use of risk mitigation tools.

Avoid Claims From Happening

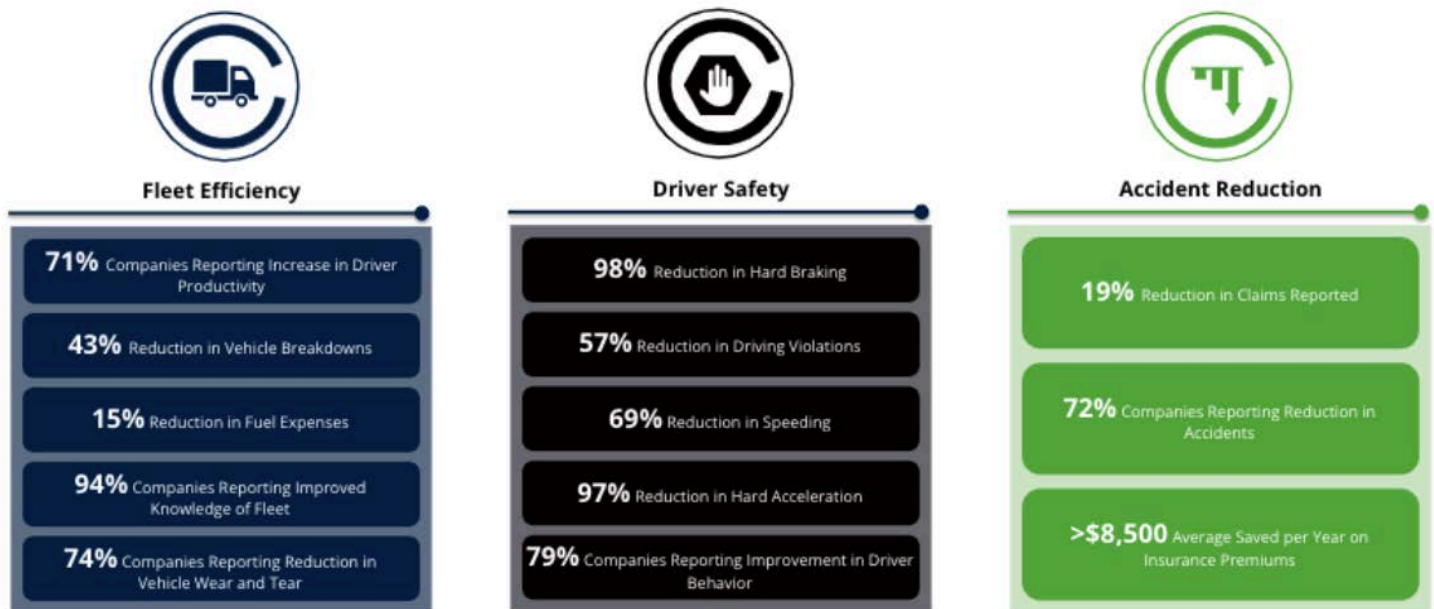
These structured initiatives aimed at promoting less risky behaviors in situations mentioned in points 2 and 3 are referred to as "safety programs." As illustrated in the figure below, the full potential of these programs is realized when they:

- Provide reports detailing risky behaviors and offer recommendations for improvements to both the enterprise and the loss control team.
- Offer insights into risky behaviors and recommended actions directly to the drivers themselves.
- Implement reward systems that incentivize both enterprises and drivers to reduce their risky behaviors.



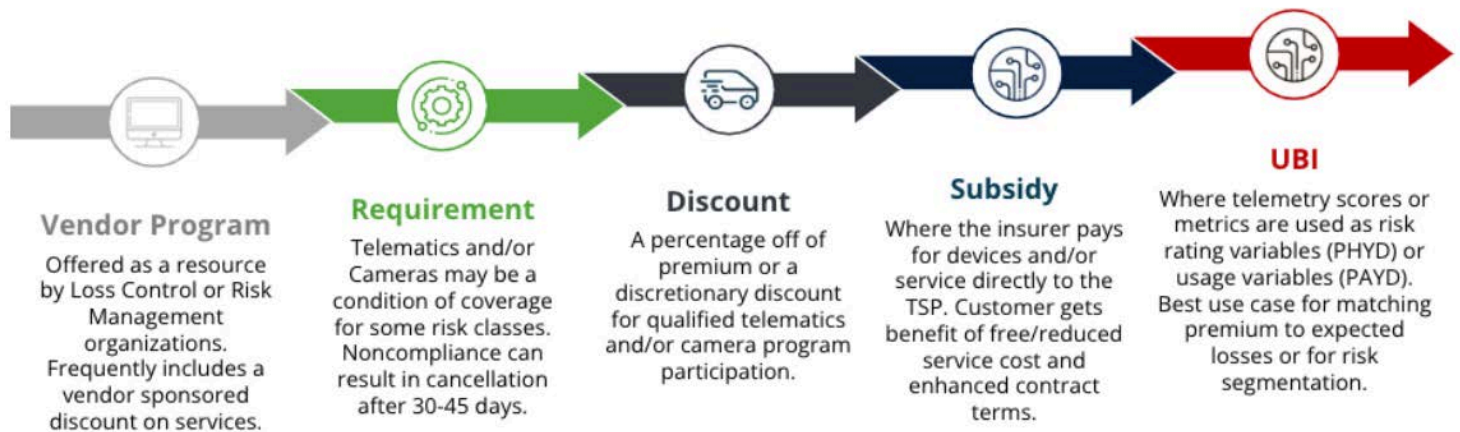
Azuga's Experience in Managing Insurance Safety Programs

A significant challenge for numerous fleet operations lies in the adoption and effective integration of a telematics-based safety program, alongside adjusting organizational practices to fully leverage the insights provided. In essence, many fleet operations lack the requisite expertise to effectively implement such programs. Moreover, they often face difficulties in recognizing the financial advantages or return on investment (ROI) tied to these initiatives. This predicament underscores the value of engaging either an internal safety manager with specialized training or leveraging risk engineering services offered by insurance providers or brokers. Such experts can offer crucial benchmarks in Fleet Efficiency, Driver Safety, and Accident Reduction, mirroring the outcomes achieved by Azuga clients as depicted in the figure below. Acknowledging the significance of improvements in these three areas is critical, illustrating the direct correlation between the operational enhancements derived from a telematics-based safety program and the benefits realized within the insurance framework.



Azuga's Experience in Managing Insurance Safety Programs

Insurance carriers can set up these programs and administer the underwriting guidelines, benefits, and obligations of the insured in multiple ways. The common scenarios are shown in the figure below.



Implementing such a program entails progressively advanced levels of execution, which typically bring about a corresponding increase in participation and a reduction in losses. This situation exemplifies the principle of "you get what you pay for." Telematics programs are often reported to achieve a reduction in the frequency of incidents by around 20%. Further gains can be realized when these programs are employed for more sophisticated purposes like modeling and segmentation.

Azuga's Experience in Managing Insurance Safety Programs

For commercial auto insurance providers, the hurdle often lies in establishing a program that is both capable of being efficiently managed and demonstrable in its effectiveness. Key challenges include securing adequate resources and expertise in the relevant fields. Achieving cross-functional consensus can be particularly challenging without a clear articulation of the program's objectives and its significance. The subsequent figure aims to offer a framework that clarifies these points.



Providing a structured approach serves as a blueprint for the development and management of an effective program. However, merely presenting this blueprint does not guarantee the success or attainment of the anticipated outcomes of a carrier's program. The key to realizing these objectives lies in forging strong partnerships and selecting the appropriate allies. Azuga distinguishes itself by offering not just a strategy and structure, but also a team of experts, comprehensive resources, and advanced technical platforms. These elements are leveraged to function as an integral extension of the carrier's team, embodying the true essence of partnership and collaborative effort to enhance the program's effectiveness.

Azuga's 2023 Insurance Carrier Roundtable

In September 2023, leading insurance executives and the Azuga team convened for a day-long roundtable discussion focused on the future of commercial auto insurance powered by telematics. This Azuga-hosted event served as a valuable opportunity to analyze past experiences and identify key challenges associated with integrating telematics data into daily operations.

Four Key Insights have emerged:

1. **Telematics is a continuous journey**

Insurance telematics is evolving, with programs at various maturity levels. Continuous evolution is essential, expanding data integration into business processes and functional use cases. Programs that are adequately supported and resourced yield sustainable impacts and positive ROI.

2. **Community collaboration for safety and cohesiveness**

Challenges and opportunities are common across insurance carriers. Sharing best practices and vetting challenges can accelerate innovation and adoption.

3. **Vital information flow into carrier and insured operations**

Effective telematics requires a seamless flow of information into carrier and insured operations for value creation and impact. Additionally, providing feedback to drivers is crucial for behavior modification. Programs that systematically integrate information into business processes, focusing on drivers/mobile workers with incentives like recognition and rewards, achieve more sustainable impacts. Participation alignment across teams (insured, agents, success managers, risk managers) enhances engagement and risk/safety improvements. Carriers should balance immediate and long-term data strategies. While collecting big data for future model development is essential, using current data to enhance risk management, underwriting, and claims processes is equally important.

4. **Azuga's role in best practices and program structure**

Azuga has a broad purview across the community and should take an active role in sharing and enabling the execution of best practices. Programs need to align with carrier and insured maturity and objectives, supporting each functional discipline with specific data use cases. The inclusion of video in telematics significantly enhances behavior modification, contributing to the overall effectiveness of the programs. These insights reflect a comprehensive understanding of the current state and future potential of insurance telematics, emphasizing the importance of collaboration, continuous improvement, and strategic data utilization.

Executing and Scaling Your Telematics Program

Business transformation enabled by the usage of telematics data

The tangible impacts outlined in the preceding chapter present an exceptional opportunity for auto insurers to elevate their operations. Nevertheless, it is not a one-size-fits-all solution; the mere deployment of telematics devices adds costs without an immediate benefit to the insurer's bottom line. The true value of telematics lies in its strategic utilization within insurance processes. The integration of telematics into an insurer's operations represents a significant business transformation journey.

Research from the IoT Insurance Observatory has revealed that the limited impact of referral programs in the industry stems from inadequate data utilization for value creation, along with a lack of commitment to drive adoption within insurance organizations.

Each business function must recognize how telematics data can enhance its operations and determine the type of business transformation required for its effective implementation. This shift involves moving from viewing telematics as merely a product or an IT project to recognizing it as a fundamental capability—an essential element for the auto insurer of the future.



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Executing and Scaling Your Telematics Program

A recent article, "The Tipping Point for Insurance IoT" (Hui and Carbone, Carrier Management, November 2023), highlighted six recommended best practices for executing IoT insurance programs. These recommendations align with Azuga's experiences with carrier partners:

1. Fully Commit to IoT

Limited-scale pilots and device giveaways often fall short of achieving substantial business outcomes or developing a strong telematics capability. Telematics-driven business transformation demands full commitment from C-level executives. It's vital to focus on early successes in specific niches and use cases where telematics data can effectively tackle immediate challenges, creating organizational momentum and paving the way for broader program implementation.

2. Embrace the Broad Range of IoT Applications

Starting small is practical, but thinking big is equally important. Using telematics technology across multiple scenarios enhances its impact on business and ROI. Establishing a cross-functional team is key to ensuring continuous innovation and building robust telematics capabilities.

3. Generate Immediate and Long-Term Value for Stakeholders

Articulate a compelling vision and value proposition that resonates with everyone impacted by this innovation, from policyholders to employees. Implement structured governance to manage expectations, with consistent monitoring and communication of Key Performance Indicators (KPIs).

4. Facilitate Personalization at Scale

Telematics improves direct interactions and enriches customer-facing operations with data-driven insights. This affects various roles, including loss control teams, underwriters, claim handlers, and intermediaries.

5. Explore Diverse Market Entry Strategies

Telematics transforms the approach to commercial auto insurance, enhancing accident prevention, improving loss ratios, and fostering sustainable growth. Progressive insurers are starting to require telematics for specific coverage conditions. As Hui and Carbone note, integrating IoT into insurance policies as a fundamental risk transfer mechanism represents a significant industry advancement.

Executing and Scaling Your Telematics Program

Incorporating tools and capabilities from experienced partners like Azuga can be beneficial. Leveraging their data ingestion and analytics platforms offers a solid base, overcoming initial challenges. Their decade-long experience with US carriers provides invaluable insights into best practices, saving resources, and accelerating progress.

In conclusion, by leveraging existing solutions and focusing on delivering insights to business functions, insurers can transform their processes without the need to "reinvent the wheel." This approach allows for the creation of unique and sustainable competitive advantages in the field of risk assessment, management, and transfer.

Azuga's Experience in Delivering Value to Fleet Operators

Beyond safety and insurance benefits, tangible and immediate value for fleet owners is a key driver in encouraging their engagement with insurers' telematics programs. Recognizing this, Azuga is acutely aware of the complex needs facing fleet operators. Their primary focus is on revenue-generating activities that are central to their business. However, they also understand that profitability is closely linked to the productivity of their vehicles, effective asset maintenance, adherence to laws and regulations, and ensuring safe operations. In response, Azuga is dedicated to evolving its platform to comprehensively support these critical pillars of fleet management.

- **Productivity enhancement**

Azuga boasts a robust partner marketplace, offering customers maximal leverage of the platform's capabilities. This integration allows for seamless vehicle tracking with leading CRM and POS systems, and vehicle code data incorporation into maintenance platforms.

- **Streamlined maintenance**

Customers of Azuga benefit from a direct link to over 2,200 Firestone service locations and eligibility for Bridgestone Fleetcare, which offers cost savings and convenient fleet servicing options. The integration of Bridgestone's Tire Pressure Monitoring solutions into the Azuga portal exemplifies a fully integrated maintenance platform, providing real, tangible benefits.

- **Reporting and compliance**



Azuga's Experience in Delivering Value to Fleet Operators

Combining Azuga Value with Bridgestone

Bridgestone's investment in Azuga signifies a deep commitment to understanding and addressing the diverse needs of fleet operators. Azuga stands at the core of Bridgestone's digital solutions vision, merging data analytics with practical service applications to bridge the gap between virtual planning and real-world operations.

Vehicle maintenance, which accounts for a significant percentage of the total cost of ownership, exemplifies the unique advantages offered by Bridgestone. Unlike other Telematics Service Providers (TSPs), Bridgestone connects fleets to essential vehicle services seamlessly. Through Azuga's digital tools, fleet managers receive instant notifications about maintenance or repair needs and can easily book services at any of the 2,200+ nationwide locations with just a few clicks. This capability enables fleets of any size to access high-caliber fleet maintenance services typically available only to large enterprise fleets.

Azuga and Bridgestone are at the forefront of expanding the commercial auto risk assessment to include vehicle risk management, beyond just analyzing driver behavior. The impact of vehicle condition, particularly tire health, on accident rates is a focus of ongoing research, with preliminary findings suggesting up to 20% of accidents may relate to tire health issues. Azuga has introduced features for comprehensive tire health monitoring and real-time alerts for tire pressure issues. Looking ahead, the plan includes scoring tire dynamics, thereby enhancing risk management strategies to encompass this vital factor in collision risk, extending the scope of safety measures beyond driver behavior to include vehicle conditions as well.



Closing Remarks

The integration of telematics into commercial auto insurance programs has been anticipated as a transformative development for the industry, and that transformation has now become a reality. Progressive insurers are incorporating telematics into their underwriting and risk management practices as standard procedures today, with the prospect of expanding its use into claims management. Moreover, the advent of incorporating tire data analytics, or "tirematics," represents an emerging area of innovation.

Insurance carriers that have not yet adopted telematics technology are finding themselves at a competitive disadvantage, evidenced by worsening financial performance metrics. It is crucial for these carriers to engage in industry discussions and educational forums to better understand the advantages of telematics for commercial insurance programs. Taking swift and informed action to implement these technologies is essential for staying competitive in the evolving insurance landscape.

Tom Erdman

Executive VP of Indirect Sales and Business Development, Azuga

