OCTO

Extracting Benefits from the Commercial Auto Insurance Claims Value Chain

20 ppt COR gains with a ready to implement end-to-end telematics solution

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IoTinsObs

OCTO

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1. Executive Summary

Telematics has been widely recognized in the insurance sector for its role in personal auto lines and underwriting risk. In this paper, we highlight the overlooked opportunity to enhance claims efficiency and explore its application within commercial auto insurance.

The value generated in claims activity lies in detecting crashes in real-time and providing claim handlers with objective insights into the crash dynamics and its consequences. To better understand the extent of the opportunity, we discuss the potential benefits across three use cases.

- **Crash Management Use Case**

  Crash management that utilizes telematics provides several benefits for insurers. It delivers a better experience with crash assistance, which helps boost policy renewals by enhancing customer satisfaction and loyalty. It enables immediate reporting, ensuring greater accuracy while reducing the risk of inflated or fraudulent claims.

  The potential economic benefit from this solution is a 5-6 percentage point (ppt) improvement on the Loss Ratio and Loss Adjustment Expenses. By leveraging in-network towing and vehicle storage services during the claims process, insurers can streamline operations, reduce costs, and expedite claim resolutions. Further benefits include avoidable litigation, with a 34% reduction in lawsuits, reducing legal expenses as well as other financial and social risks such as brand damage.

- **Accident Reconstruction Use Case**

  Telematics driven, data rich accident reconstructions provides claims handlers a wealth of information that allows insurers to streamline claims, dramatically reducing the settlement time. It also enables early notification of loss, allowing for better management of reserves and more accurate financial planning. In addition, access to unbiased data enhances claim evaluations and contributes to reducing avoidable litigation, ultimately lowering legal costs and associated risks.

  The solution delivers substantial economic benefits, achieving a 6–7 ppt improvement in the Loss Ratio and Loss Adjustment Expenses. Insurers gain a 26% overall improvement in claim management, accompanied by a 20% reduction in claims handling costs. Furthermore, the process becomes significantly more efficient, with claims processing time cut by 50%, ultimately enhancing operational performance and driving meaningful cost savings.

- **Fraud Detection Use Case**

  Telematics delivers meaningful benefits for insurers from the outset, serving as a fraud deterrent from the moment it is activated. With tools presented on a dashboard, insurers can detect fraudulent activity faster using unbiased and indisputable evidence identified by Artificial Intelligence (AI). Ultimately it makes investigations up to 2.5 times more effective by allowing insurers to focus only on cases with a high probability of fraud, reducing wasted time and resources.

  Typically, the solution provides an 8–9 ppt improvement in the Loss Ratio, with telematics doubling fraud detection capabilities and the associated savings. Insurers leveraging OCTO's solution have achieved a 50% reduction in fraud cases and a 40% decrease in whiplash claims, delivering measurable financial and operational advantages.

Each use case delivers groundbreaking improvements with clear economic advantages that insurers can directly leverage. Together, they drive a powerful business impact, slashing loss and loss adjustment expenses by up to 20 ppt - enough to transform an average US commercial auto insurers combined operating ratio (COR) of 107% into solid profitability.

To illustrate the potential return on investment (ROI), applying telematics-driven crash and claim services to a connected fleet of 165,000 vehicles over five years can achieve a full transformation of the claims value chain, delivering an impressive ROI of $3 to $5 for every dollar invested. However, in today's environment, high upfront investments and complex transformation programs can be time-consuming and pose risks to existing operations. Therefore, the solution we present in this paper is an outsourced program that acts as a catalyst for profitable change, delivering a robust proof of ROI before full integration into current operations. This approach minimizes disruption while providing clear financial justification for broader implementation.

2. Introduction

In the early 2000s, telematics technology components were already in use, with industrial applications in telemetry and satellite-based anti-theft security. However, the insurance industry—historically conservative—had yet to fully explore its potential by integrating telematics data into insurance models.

Against this backdrop, Octo Telematics (OCTO) was founded in 2002, introducing Italy's first end-to-end IoT-enabled insurance telematics solution and setting new standards for advanced data-driven insurance solutions. In 2006, Unipol became one of the first insurers to recognize the potential of this innovation, leveraging telematics for automated crash detection, incident alerts and reporting to enhance claims management. By 2008, other insurers followed suit with IoT-based telematics programs: Progressive in the US pioneered dynamic underwriting based on driving behavior, while Discovery in South Africa introduced a behavioral-based model, rewarding policyholders with points for safe driving.

Such examples around the world have one common element, using data to transform and impact the core insurance business. This innovation quickly scaled globally, creating the first interconnected framework that set new industry standards and benchmarks. Within a decade of successful transformational deliveries with advisory and training services, OCTO reached 2.5 million connected users and entered the North American market in 2011.

Today, with more than 6 million connected users, OCTO possesses the world's largest telematics database — boasting over 610 billion kilometers of driving data and 95 billion trips analyzed — delivering insights that are unparalleled in reliability. OCTO stands as the global leader in insurance telematics, specializing in risk assessment, claim analysis, settlement and driver engagement for road safety.

Along the journey, OCTO has developed unique capabilities to support the Insurers' core business across multiple regions. This includes the acquisition of DriveAbility® from Willis Towers Watson, making OCTO among the few able to offer approved scoring in the majority of US states. In the recent years, smartphone-based telematics in personal auto insurance in the US experienced significant growth, overtaking device based solutions like the OBD-II. Even so, DriveAbility® has remained one of the most used driving score by the US insurers.

OCTO has developed unique capabilities to support the Insurers' core business

With no required additional hardware, the smartphone presents a low barrier entry point into starting a Usage-Based Insurance (UBI) program. However, the reliance on customer provided devices face technological constraints related to the make and model of the phone. More importantly, system functions depend on the phone being present in the vehicle and properly configured by the user for access and performance.

These limitations have an even greater impact on crash and claims management services—one of OCTO's core offerings that deliver the greatest impact on the insurers' COR. Such services require a seamlessly integrated device in the vehicle, eliminating any dependency on the driver's smartphone and configuration. This ensures that the sophisticated on-edge algorithms collect the right data from inception, allowing the overall system to be trained effectively and guaranteeing the required accuracy for claims management. Nonetheless, the smartphone even with its inherent compromises for supporting claims management, has found a place and is a popular choice for underwriting in the US market.

Cumulatively, OCTO has registered over 5 million crash events, underpinning ongoing innovation across product lines. Italy, where telematics penetration in motor insurance exceeds 18%, stands as a global benchmark for the integration of data-driven cash and claims services—demonstrating OCTO's foundational influence on industry transformation.

Beyond personal auto lines, shifts in mobility are opening fresh avenues for OCTO: from powering Italy's largest car sharing operator (Enjoy), to enabling Drivalia's adaptable rental platform and Flexcar's US subscription models. Drawing from its commercial fleet experience and best-in-class crash services, OCTO is now forging new ground in the transformation of the Commercial Auto Line insurance sector.

3. Auto Insurance Telematics

Considering the best practices globally, we are still far away from achieving the full potential of insurance telematics. The level of maturity in personal line auto insurance is still not being unlocked by the more telematics mature insurers and even with strong case studies widely discussed by top insurers like Unipol and Progressive, it has not reached mass penetration.

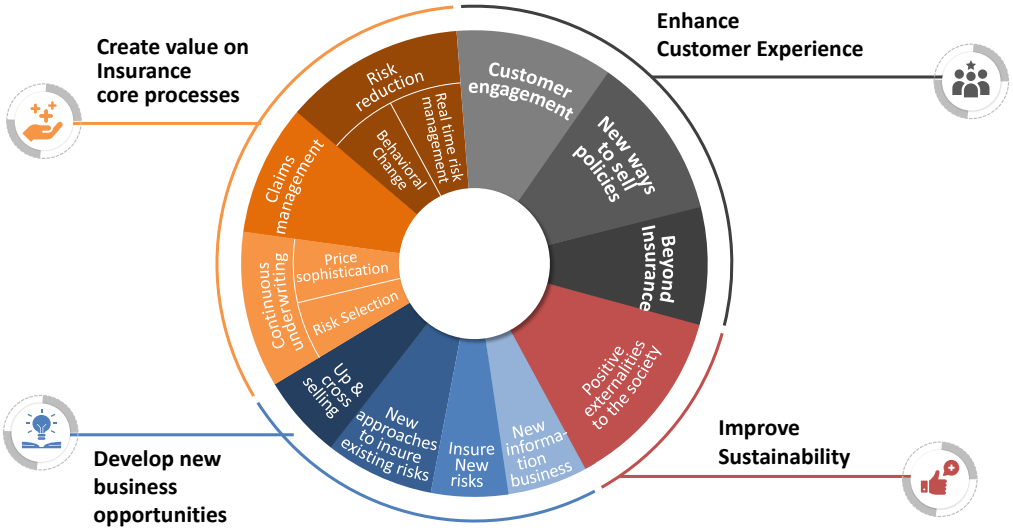
The IoT paradigm, allows organizations to take smarter actions than in the traditional disconnected physical world

However, the insurance sector is increasingly embracing this trend as a transformative mindset rather than being confined to localized, market-specific definitions or competitor-driven initiatives. The IoT paradigm, defined as the telematics paradigm in its application to the auto insurance business, allows organizations to take smarter actions than in the traditional disconnected physical world. This shift demands the seamless integration of IoT data into daily operations, enhancing business impact and driving the realization of the corporate vision.

Based on a decade of research by the IoT Insurance Observatory on the insurance usages of IoT paradigm in the insurance sector - over different insurance business lines and different markets – Insurers identified four main reasons for adopting it, as discussed in Fig.1.

- **Improve Customer Experience:** By creating more personalized, responsive, and valuable interactions, insurers can build stronger relationships with their clients and encourage engagement
- **Create Value on Insurance Core Processes:** By leveraging real-time, accurate data for risk assessment, pricing, claims management, and loss prevention, insurers can achieve greater effectiveness and improve the way they assess, manage, and transfer risks.
- **Deploy New Knowledge-Based Business Opportunities**: IoT data enables insurers to develop new products, services, and business models, such as by understanding more about their clients, to cross-sell or upsell, to insure new risks, and to develop new ways of offering insurance.
- **Improve Sustainability (**generate positive externalities to the society): Insurers using IoT can contribute to sustainable development goals by improving road safety, improving availability and affordability of coverages, increase the transparency and protecting the environment.

Fig.1: Four Main Reasons Insurers Have Adopted IoT



Source: IoT Insurance Observatory

Focusing on the impact on the insurance core processes, there are different scaled success stories that have built a competitive advantage by mastering one or just a handful of use cases.

However, a holistic and integrated adoption of telematics along the organization simultaneously would allow to better match risks to rate, to avoid many incidents from happening, and for unfortunate events, to provide a more accurate, fairer and quicker claim management.

Continuous Underwriting

Telematics data provides a continuous stream of information enabling insurers to perform more accurate risk assessments and selection. Depending on the chosen technology, information is collected and risk evaluated on the driver(s), the vehicle, or a combination of both. Smartphone only based solutions are focused on individual drivers and rely on the user to have the phone present and the app fully functioning. In contrast, fixed vehicle devices are independent of drivers and do not rely on the users once installed.

Insurers can use this data to align rates more closely with actual risks. This allows for more sophisticated pricing, which can lead to better customer retention and acquisition, but also reduces the premium leakage of the riskier drivers subsidized by the safer ones.

Insurers can also use telematics-based data to make policy-level risk selection decisions at the time of renewal, and portfolio-level decisions regarding risk appetite and reinsurance.

Risk Mitigation

Insurers can use telematics to mitigate risks by using both real-time data to identify risky situations and intervene before they escalate into accidents, and behavioral change programs to promote safer behaviors during the coverage period. This can lead to fewer accidents and lower claim frequencies, thus benefiting the insurer, the policyholders, and even the entire society with safer roads.

Claims Management

Insurers can detect accidents in near real-time, providing immediate awareness when a collision occurs. This allows insurers to offer timely assistance or initiate a claim - First Notice of Loss (FNOL). To manage the claim, the insurer is provided with the accident reconstruction from crash data through details like trajectory or damaged parts. When a policyholder files a claim, it is matched to the most likely detected crash, allowing insurers to supplement the policyholder's account with highly detailed telematics insights. The system can also help insurers identify suspicious aspects of a claim by highlighting discrepancies between the policyholder's account and telematics data, as well as providing a history of previous significant crash events. As a result, the benefits are significant, leading to reduced claim payouts, lower handling costs, and faster resolution times.

This full potential in using telematics is today the ambition of top executives at some of the world's most forward-thinking auto insurers.

4. Claims Potential

The value generated in claims activity, as outlined in the previous chapter, lies in detecting crashes in real-time and providing claim handlers with objective insights into the crash dynamics and its consequences. Unlocking this value necessitates a business transformation, which will only occur when the insurance organization achieves the necessary C-level commitment to reform the traditional and reactive claims management practices. At the same time, frontline employees must develop both literacy about the proactive tools and confidence in integrating the telematics paradigm into their daily operations.

The first step in building this literacy is to define which events can realistically be detected. Decades of telematics experience have shown that not all driving events are identifiable in practice. Programs that are well structured—emphasizing policyholder engagement, compliance, and clear escalation processes—tend to achieve near-universal connectivity across their policyholder base. In such cases, installed devices transmit data consistently and trigger the appropriate workflows when events occur. By contrast, programs lacking these foundational controls often see a significant portion of their telematics portfolio failing to transmit data, particularly when relying solely on smartphone technology and user-managed settings. This becomes a critical issue when crashes involving disconnected policyholders go undetected, leaving claims teams without critical insights.

Telematics crash detection relies on a multitude of sensors that measure the crash intensity, speed, location and timeframe before/after an event. In certain cases, such as damage sustained while parked or low speed and very low intensity impacts that might occur in slow moving traffic, the crash event may not be detected. However, it still generates an insurance claim. Frontline employees must be trained not to expect telematics support for such claims. According to OCTO's experience, these undetectable events account for approximately 25% of claims within an insurer's portfolio.

The goal of the telematics solution is to deliver insights for every event involving a telematics policy with crash dynamics detectable by telematics sensors. In this paper, we will refer to such incidents as "detectable events."

Different telematics solutions and providers demonstrate varying levels of performance in detecting and delivering insights on detectable claims. This performance is evaluated using two key parameters: “recall”, defined as the percentage of detectable claims successfully identified by the telematics solution and represented in a telematics crash dossier to the responsible claim handler, and “incidence of false positives”, defined as the percentage of events erroneously classified as crashes by the telematics solution out of the total detected events.

Around these performances, there is a further need to build literacy among the frontline employees who are involved in the business transformation. Within any claims portfolio, some reported claims describe dynamics that should be detectable but never occurred—these constitute fraud. Such events are not captured by telematics sensors, not because they were missed, but because they never happened. The absence of recorded data is invaluable, and the corresponding anti-fraud alerts are a key business application provided by OCTO. Fraud incidence varies widely by market with telematics typically identifying claim inconsistencies in 13% of cases.

Careful attention must be given to events that appear to be false positives. Not all incidents detected that are absent from the claim portfolio are genuine false positives, the policyholder may have decided not to report a legitimate crash. OCTO’s robust telematics solution built on reliable sensors and an optimized crash detection algorithm can limit false positives to just 8%.

These telematics insights are the output of provided tools and serve as the business transformation of the Claims Department, changing the way claim handlers conduct their activity with high quality data and insights, in near real-time. This allows them to anticipate, streamline, enhance the accuracy and reliability of the entire claim value chain from opening to settlement.

As a direct outcome, a number of additional business benefits emerge, including enhanced customer service through the proactive deployment of roadside assistance and emergency support. Opening a claim immediately at the accident scene accelerates vehicle repair processes, returning the vehicle to service faster while reducing opportunities for fraud or speculative reporting. By reconstructing accident dynamics and establishing responsibility quickly, insurers can minimize fraudulent claims and mitigate potential litigation from third parties. Accurate assessment of material damage and bodily injury costs also limits fraud risks across expert networks, repairers, legal, and medical partners while improving cost estimation accuracy. Moreover, by reducing Incurred But Not Reported (IBNR) claims, insurers can allocate reserves with greater precision, supporting more competitive and sustainable pricing strategies.

Traditionally, insurers have relied primarily on policyholders' accounts to open a claim, dispatch assistance, and gather accident details. Fraud detection in this context involves identifying inconsistencies between the declared version of events, the accident dynamics, and the damage appraisal. Telematics transforms this process by providing an objective record of the accident's circumstances and dynamics, which can be applied across three key use cases. Crash management enables insurers to take immediate action at the moment of impact—such as initiating an early FNOL or sending assistance—helping to prevent delays that could lead to lost details or altered facts, and ensuring timely support that may reduce further damage. Accident reconstruction supplements the policyholder's subjective account with fact-based, granular data on how the incident occurred. Fraud detection leverages this processed telematics data to identify discrepancies between the reported and actual dynamics of the event, exposing potential fraudulent claims.

OCTO's track record in business advisory and in transferring knowledge to key claims personnel—such as handlers, loss adjusters, and investigators—has proven highly effective. The seamless integration of telematics-based tools into insurance workflows has enabled Claims Departments to gain confidence in the quality and reliability of telematics data. Leveraging this experience, OCTO showcases the transformative impact and tangible benefits across the three use cases:

4.1 Crash Management Use Case

The solution detects accidents in near real-time, providing immediate awareness when a collision occurs. Using advanced sensors, the system identifies potential crash moments, records relevant sensor data, calculates the probability of an actual collision, and swiftly notifies the insurer. This allows insurers to offer timely assistance or open a claim. If the policyholder or driver does not respond to a call, the system can trigger an assistance model - such as dispatching an ambulance or tow truck – all based on data received such as crash severity and road circumstances.

The benefits for insurers:

- Better experience with crash assistance boosting policy renewals.
- Immediate reporting for greater accuracy and reducing inflated or fraudulent claims.
- Minimizes the risk of severe injuries and related costs.

Process Enrichment

Claims handlers are automatically notified near real-time of verified accidents.

- 24-7 notification and management system integrated with the in-house or third-party claims center.

- The existing reactive intake of claims can be redesigned to be more proactive, resulting in greater customer satisfaction and net promoter score (NPS).
- Simple, low value claims that have been matched with telematics data and without any potential fraud alerts are fast tracked and settled with the agreed method.
- Complex claims are passed to trained claims handlers that are presented with a comprehensive summary of the incident that has been built from telematics information. From this they can quickly conduct the triage using in-network providers based on the type of policy held by the insured.

Economic Benefit

The potential economic benefit from this solution is a 5-6 percentage point (ppt) improvement on the Loss Ratio and Loss Adjustment Expenses. By leveraging in-network towing and vehicle storage services during the claims process, insurers can streamline operations, reduce costs, and expedite claim resolutions. Further benefits include avoidable litigation, with a 34% reduction in lawsuits, reducing legal expenses as well as other financial and social risks such as brand damage.

Telematics Enablement

Using proprietary algorithms for detecting and validating crash events, providing near real- time crash notifications. For each notified crash:

- The claims handler can see relevant information about the policyholder (vehicle model) and the notified crash, like the position (latitude and longitude) at the moment of the suspected accident and the current position.
- The claims handler can being the triage with the policyholder's declaration on the details of the accident (involved vehicles, injured people, witnesses, damaged parts of the vehicle) and the need for any assistance.

Validated Experience of OCTO

OCTO has demonstrated proven expertise in crash detection and claims optimization, detecting and supporting the settlement of over 13 million validated crash events. Unlike companies who rely on limited test scenarios to build their algorithms, OCTO continuously refines its algorithms using real-world accident data. This unique advantage, combined with ongoing feedback from insurers and notified crash calls, ensures continuous performance improvement.

The system excels in crash detection with 75% of valid claims successfully matched to recorded crashes in the whole portfolio. In the case of high severity crashes, defined as impacts over 15 kmph that are more prevalent to detection, 90% of claims are successfully matched.

OCTO's crash notification system delivers a high level of precision and recall:

- **Precision** is a measure of how accurate the notification system is, in other words how often a crash notification corresponds to a real accident. In OCTO's experience, when a potential crash triggers a notification and the insurer contacts customers, 77% of those who answer confirm an actual accident during the call. However, after more detailed

investigation, 15 % of notifications where the customers denied having had an accident turn out to correspond to genuine accidents. With 92% of notifications being true positives and only the remaining 8 % are false positives. Therefore Precision, defined as the proportion of detected crashes that are confirmed as real accidents, is calculated to be 92%. This high level of precision is significant for insurers as it ensures that most alerts generated by the crash detection system genuinely indicate actual accidents, thereby minimizing unnecessary follow-ups and improving the efficiency of claims handling.

- **Recall** refers to the percentage of detectable claims that the telematics solution successfully identifies and reports to the claim handler near real-time. In OCTO's experience, from 75% of the validated claims successfully were matched to recorded crashes in the whole portfolio, as stated before, 90% is matched to recorded crashes and notified to the claims handler minutes after the accident. This means the system has effectively captured a large portion of real accidents, correctly identifying and recalling 90% of all detectable events, demonstrating its ability to find the most genuine incidents. Different telematics providers may show varying recall performances, and recall is a critical metric for assessing how well these technologies detect and deliver insights on crash events for accurate claims processing.

4.2 Accident Reconstruction Use Case

The solution provides the insurer with an accident reconstruction generated from crash data collected from sensors. Based on the speed and trajectory of the vehicle, the extent of the damage sustained can be estimated. When a policyholder files a claim, it is matched to the most likely detected crash, allowing insurers to supplement the policyholder's account with highly detailed telematics insights. Some claims involve damages from minor impacts that don't trigger the high frequency recording in the telematics device, therefore limiting the available telematics data but still offering useful context. Even when no matching crash is found, insurers receive valuable information, such as the vehicle's trajectory on that day or potential fraud indicators.

The benefits for insurers:

- Streamlining of the claims handling, reducing the settlement time.
- Early FNOL for better management of reserves.
- Improved avoidable litigation with access to accurate and unbiased data.

Process Enrichment

- Claims handlers are equipped with a comprehensive dashboard that indicates which claims include reliable telematics insights and which do not—either due to undetected events or low-quality data. This enables them to determine when telematics information should be incorporated into the decision-making process.
- Change in the traditional process increases the speed of settlement and the average cost of the claim. For faster and more accurate triage, a material damage preview delivers an early loss estimate, enabling the claim to be routed promptly to in-network repair providers. At the same time, the telematics dossier provides an assessment of the likelihood of bodily injury,

allowing claims handlers to engage emergency assistance and proactively contact the policyholder or medical facilities when necessary.

Economic Benefit

The solution delivers substantial economic benefits, achieving a 6–7 ppt improvement in the Loss Ratio and Loss Adjustment Expenses. Insurers gain a 26% overall improvement in claim management, accompanied by a 20% reduction in claims handling costs. Furthermore, the process becomes significantly more efficient, with claims processing time cut by 50%, ultimately enhancing operational performance and driving meaningful cost savings.

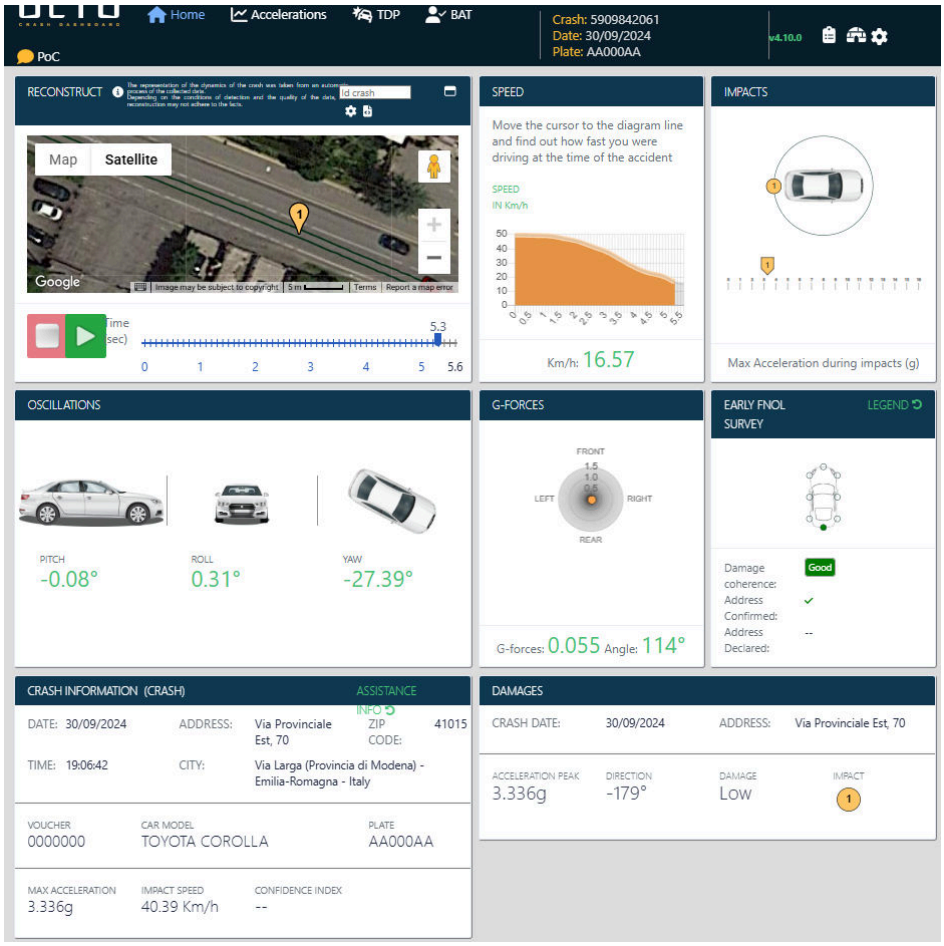
Telematics Enablement

Processed telematics data, providing a crash reconstruction with material damage estimation, probability of bodily injury and fraud. Made available via:

- Crash dashboard which provides dynamic access to the processed telematics data, notified or not. If it was notified, the information gathered by the claims handler during the call is included. This processed data includes: speed over time, oscillations / angles over time, trajectory around the impact moment, graphs on acceleration, impact(s) direction, and suspected damaged parts of the car.
    - When no crash matching occurs for a reported claim, telematics data is limited but still offers useful context, such as the vehicle's trajectory on the day. This can support claim handlers process the FNOL as well as highlight any inconsistencies that might indicate fraud.

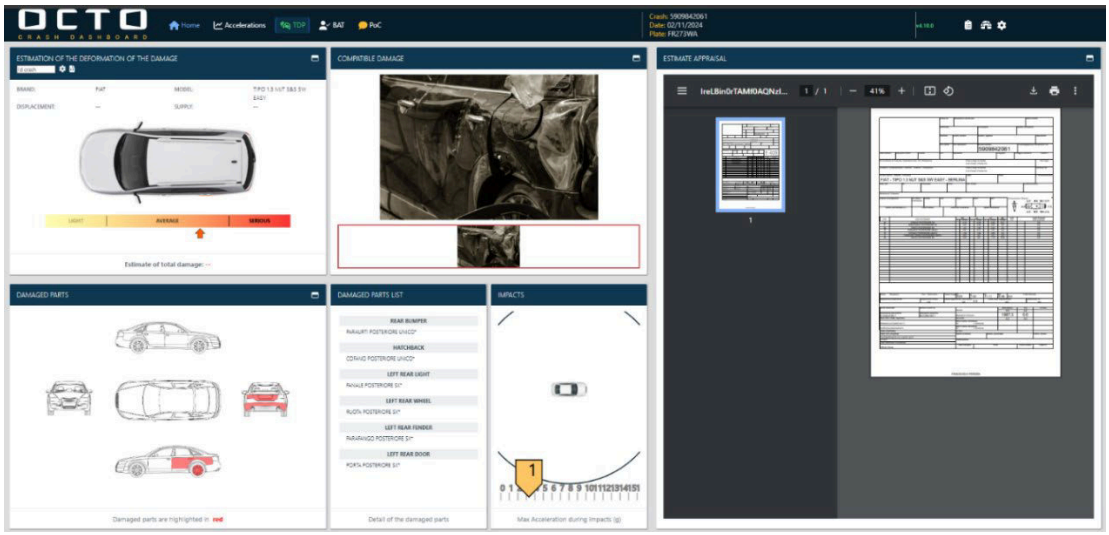
- Crash dossier provides a static representation of the processed telematics data if the claim is matched to a crash, and car trajectory and antifraud information (discussed in the following case) for every claim, independently of the presence of a matched crash.

- Example crash dashboard and view of damage estimation:



Source: OCTO Telematics

Example crash dashboard allows the user to view the crash event over the period of time it took place, allowing the user to navigate the scene while providing a comprehensive set of vehicle data points. This includes the position of the vehicle overlaid on the map speed, oscillations, direction of acceleration, suspected level and position of damage. The exact address of incident is also captured as well as the coherence between what has been declared by the user during notification call and the predicted damage from telematics data. In this case, a single 3.3g rear impact took place at 40 km/h at 19:06 hours on the 30th September at Via Provinciale. The damage sustained by the vehicle is classified as 'LOW' meaning the potential of bodily injury is low and the likelihood the vehicle can still be driven is high, negating the need for towing.



Source: OCTO Telematics

Damage estimation provides a clear representation of the areas of the vehicles affected based on the impact, highlighting the individual damaged parts and generating a parts list to streamline the repairs. As the property damage claim is based on telematics data acquired for this specific incident, any acts of opportunistic fraud with inflated claims on repairing other areas of vehicles damage is negated.

Validated Experience of OCTO

A survey conducted by OCTO among claim handlers already using OCTO solutions revealed that 81% of respondents consider OCTO's data essential for making informed decisions. The system demonstrates exceptional accuracy by successfully matching 75% of valid claims with recorded crashes across the portfolio, with claim handlers reporting mismatches in less than 0.1% of cases.

4.3 Fraud Detection Use Case

The adoption of telematics itself acts as a deterrent towards fraudulent behavior, encouraging policyholders to give a true and accurate account of events that lead to opening a claim. OCTO's system helps insurers identify suspicious aspects of a claim by highlighting discrepancies between the policyholder's account and telematics data, as well as providing a history of previous significant crash events.

Antifraud alerts, customized for each insurer, are triggered when inconsistencies arise between the claim details and telematics insights. These alerts analyze key factors such as location, date and time, accident dynamics, impacted areas, and weather conditions.

Additionally, insurers can review a list of prior significant crashes to detect whether damages claimed in a recent accident may have actually resulted from an earlier event. Each claim is assigned a fraud risk score based on the number and severity of inconsistencies between the claim information and processed telematics data, enabling insurers to prioritize the investigation of the most suspicious claims to save time and resources.

The benefits for insurers:

- Telematics as a fraud deterrent from the day of activation.
- Faster fraud detection with unbiased, undisputable evidence discovered by AI.
- 2.5 times more effective investigations by focusing only on cases with a high probability of fraud.

Process Enrichment

Robust tracking and governance of fraud activity, protecting profitability and building best practices for continuous improvement. This includes:

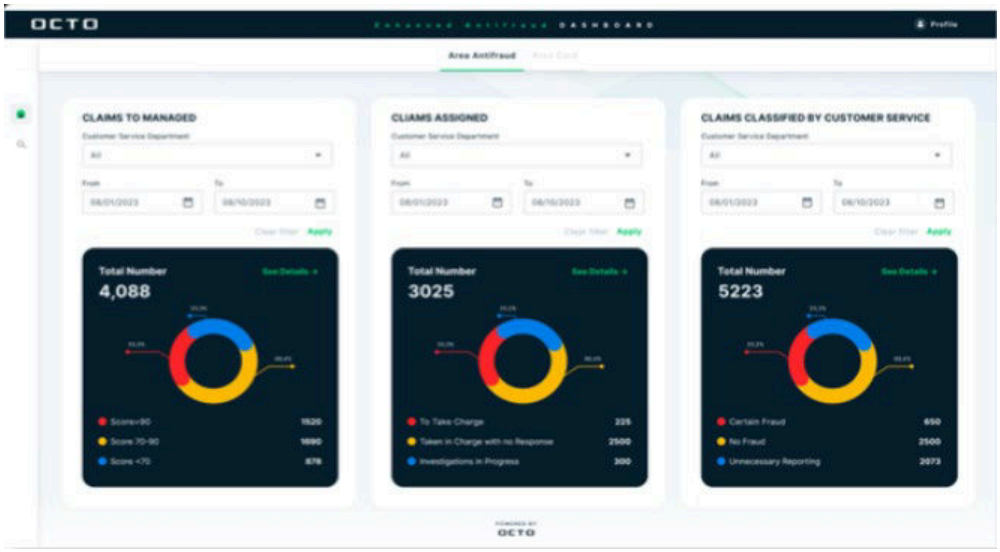
- Antifraud Claim Selection: Rather than focusing on claims based solely on specific policyholder profiles, the system provides a dashboard that allows insurers to filter and prioritize claims with the highest inconsistencies between claim information and telematics data, ensuring a more targeted and efficient process.
- Claim-Specific Insights: Claim handlers can directly review automated antifraud alerts for a specific claim, identifying inconsistencies and detecting significant past crashes that may indicate an attempt to inflate the current claim.

Economic Benefit

Typically, the solution provides an 8–9 ppt improvement in the Loss Ratio, with telematics doubling fraud detection capabilities and the associated savings. Insurers leveraging OCTO's solution have achieved a 50% reduction in fraud cases and a 40% decrease in whiplash claims, delivering measurable financial and operational advantages.

Telematics Enablement

- Report of previous significant crashes and antifraud alerts can be integrated into the claims workflow, such as a section in the crash dossier. Any discrepancies detected between claim details and telematics data raise the likelihood of fraud, providing the investigator with crucial evidence to build and formalize a fraud case.
- Web dashboard dedicated to the claim handlers in which they can directly visualize the list of most suspicious claims. Example dashboard:



Source: OCTO Telematics

Using AI, the solution assesses the likelihood of fraud by comparing claim report information with OCTO telematics data and highlights the following aspects: date coherence, damage coherence, suspicious previous significant crash, off engine, responsibility and accident dynamics coherence, no crash for considerable damage.

Validated Experience of OCTO

OCTO's fraud score allows the ranking of claims according to their probability to be fraudulent. This approach has been well proven across a number of insurers, typically identifying claim inconsistencies in 13% of cases that result in 5% confirmed cases of fraud.

Individually, the discussed cases provide transformative improvements in crash management, accident reconstruction and fraud detection, each with clear economic benefits that can be directly applied to the insurers' business. Moreover, in OCTO's experience, the combined benefits present a direct and compelling business return with loss and loss adjustment expense benefits reaching 20 ppt.

Transformative improvements in crash management, accident reconstruction and fraud detection

In addition to this underlining improvement, further benefits such as better predicting underwriting risk, data to support portfolio management and business models, and an elevated claims experience for improving customer retention are available for insurers that have fully integrated telematics into their business operations.

To implement telematics solutions effectively, the hardware must be installed and activated, which is easily done with a plug-in design that takes only a few minutes. To optimize performance based on each insurance company's business case, logic and thresholds must be customized, such as setting crash notification thresholds and assistance model logic or defining antifraud alerts and fraud score thresholds for claim analysis.

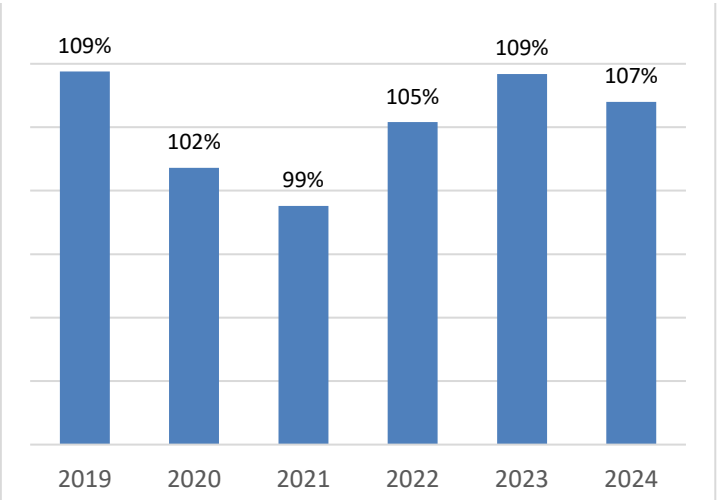
Furthermore, services should be exposed via the web for easy access and through APIs for seamless integration with the insurer's claims management system, particularly for antifraud services that require insurers to share policyholder claim information. The final product layout is then tailored to the specific need of the insurer, including platforms for crash management, accident reconstruction, and fraud detection.

Investments in training are crucial to handle new tasks, such as FNOL and assistance calls for crash management and fraud detection. Insurers should also allocate resources to enable new services like 24/7 notifications, enhancing efficiency and responsiveness. Working with the insurers existing partners or helping to develop in-house capabilities, OCTO can support with training and providing qualified personnel, allowing insurers to focus on their core processes and seamlessly integrate telematics into their operations.

5. Telematics for Commercial Auto Insurance

The overall US commercial line insurance sector has had a long period of success, with many commercial insurance segments such as workers' compensation and surety experiencing strong results with solid underwriting performance. However, commercial auto has been the glaring exception, consistently underperforming with a statutory combined ratio above 100% in recent years, with just a brief respite in 2021 (Fig.3) due to a sharp decline in driving activity and judicial activity during the pandemic. In 2024, according to JPMorgan Research, commercial auto renewal premiums increased by 8% in the US. Despite consistent premium growth, the aggregated commercial auto line achieved a combined ratio of 107.2%. While this does represent an improvement of 2.1 ppt over 2023 results, the profitability challenge remains.

Fig.3: **US Commercial Auto Insurance COR Results (2019-2024)**



Source: S&P Global Market Intelligence

Several factors are impacting performance.

- **Nuclear verdicts** or runaway verdicts, has become a major contributor to increased loss severity. The lawsuit abuse from third-party liability losses has become a major issue for the industry, with legal outcomes resulting in juries awarding in excess of $10 million to plaintiffs.
- **Rising loss severity**, property damage has more than doubled over the past decade, far outpacing economic inflation. Increased losses are attributed to the inflated cost of repair labor and replacement auto parts, especially newer vehicles equipped with advanced technologies.
- **Adverse reserves** with loss and loss adjustment expense ratios consistently higher than original estimates. In 2023 alone, insurers faced over $3 billion in adverse development, hampering the ability to accurately price products and maintain profitability.
- **Increased litigation** fueled by a rise in attorney involvement even in relatively simple cases and social inflation, characterized by larger jury awards and settlements, particularly involving commercial vehicles. Furthermore, the emergence of third-party litigation funding, where third parties finance lawsuits in exchange for a share of the settlement, has become more prevalent. As a result, insurers face prolonged litigation and higher defense-related expenses.
- **Growing risk factors** among commercial fleets are increasing the likelihood of accidents. Tied to expanding transportation activity, shortages of drivers resulting in less experienced drivers joining the insured workforce, and the continued challenge of managing distracted driving.

The US commercial auto insurance landscape is marked by varying degrees of success. The playbook includes price increases of 10 – 25%, increased deductibles to combat the rising repair and replacement costs - with a decrease in available limits, tightening of underwriting guidelines, surcharges for new or underqualified drivers, to dropping complete lines of business. For the insured, in some cases they are no longer purchasing coverage to suit their operations, instead they are changing their scope of operation such as their geographical radius or class of vehicles to make insurance more affordable.

Notably, according to AM Best[1], insurers that specialize in commercial auto coverage appear to be outperforming the broader market and analysis conducted by Munich RE[2] reported that top performers averaged a combined ratio of 93%, compared to the rest of the industry at 110%.

[1]https://riskandinsurance.com/commercial-auto-insurance-struggles-persist-in-2023/)

[2]https://www.munichre.com/en/solutions/reinsurance-property-casualty/insurance-consulting/commercial-motor.html

State of the US Commercial Auto Telematics Market

Given the adverse challenges faced by the commercial auto line and learnings from personal auto insurers already using telematics, the case for adopting telematics should be resounding. However, to date no large scale industrialized and insurance focused solution has been established on the market. With isolated success stories, no market wide benchmark or available 'go-to' solution has been presented.

Telematics insurance products are also complex to navigate for the insured, with some insurers only recognizing data from chosen telematics suppliers, some providing their own proprietary solution and some accepting data from solutions already used by the policyholder.

Everyone in the value chain has a role and the potential to benefit from the shared analytical value derived from telematics data, but insurers need to build the ecosystem to fully realize the benefits. They have an opportunity for better underwriting the risk and predicting potential losses, helping to address adverse reserves that have plagued the industry for years. Telematics services like crash management, accident reconstruction, and fraud detection will reduce loss severity and mitigate the impact of litigation with data driven evidence. With these three services alone, the incremental cost of adopting telematics is shadowed by the multiples of ROI that result in a net COR improvement.

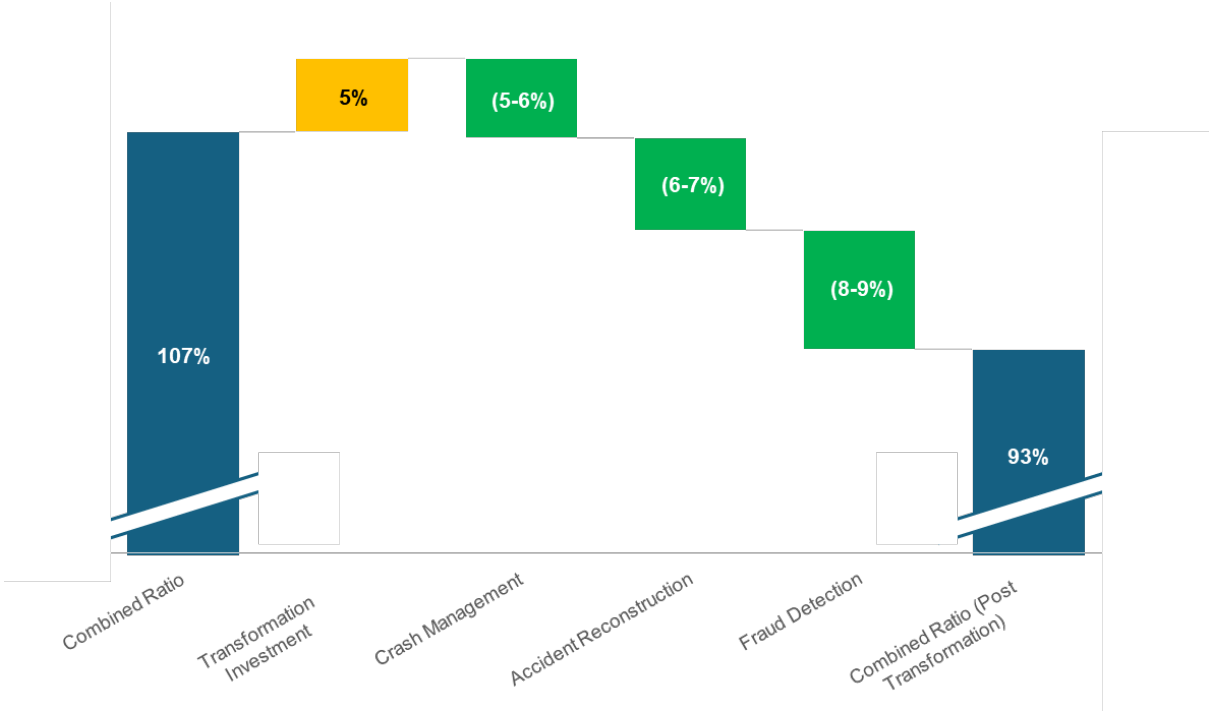
The Crash and Claims Business Case

Drawing on more than 22 years of experience and successfully deploying over 150 projects with a number of international insurers, OCTO applies its expertise to commercial auto line claims. Excluding potential returns from using telematics data for segmentation, risk selection and pricing sophistication, tangible returns can be achieved from the efficient and effective handing of claims.

22 years of experience and successfully deploying over 150 projects worldwide

As a complete business transformation of the claims value chain, including the provision of services, technology, infrastructure, system integration, setup and advisory support, the total improvement of between 19 and 22 percent is achievable. The sum of percentage-point improvements in the loss ratio and loss adjustment expense across the discussed use cases; Crash Management (5-6 ppt), Accident Reconstruction (6-7 ppt) and Fraud Detection (8-9 ppt). As a result and after considering the transformational investment, a 107% combined ratio becomes profitable at 93% post business transformation (Fig. 4).

Fig.4: **Enhanced Claims Impact on Commercial Auto COR**



Source: OCTO ROI Calculator, S&P Global Market Intelligence

This transformation requires a substantial investment but offers a strong return, enabling an insurance carrier with a connected portfolio of 165,000 vehicles over five years to achieve an ROI of $3 for every $1 invested through claims improvement. If taking into account existing telematics programs or commercial customers already using telematics for fleet management, the ROI of $5 for every dollar invested is achievable.

5.1 Ready to implement end-to-end solution

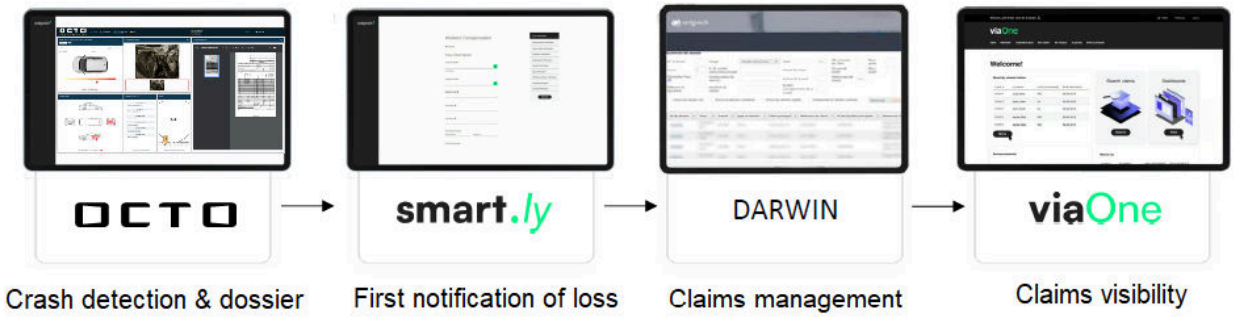
While we discussed how a complete business transformation of the claims value chain is achievable within a five-year period with a ROI between $3 to $5 for every dollar invested, in today's environment, high upfront investments and complex transformation programs can be time-consuming and pose risks to existing operations. Therefore, we propose a small-scale outsourced program that acts as a catalyst for profitable change, delivering a robust proof of ROI before full integration into current operations.

Small scale outsourced program that acts as a catalyst for profitable change

This approach requires a part of the portfolio, existing or new, to adopt telematics for the purposes of crash and claims services, be it newly connected vehicles or those already fitted with telematics. Once a fund for payouts is established, these vehicles will then follow an outsource claims workflow and settlement process based on agreed parameters should any accidents occur.

For a turnkey solution that reduces upfront investment and complexity, OCTO has partnered with Sedgwick, the global leader in claims administration and loss adjusting. The combined best-in-class solution from established and experienced partners, uses a technology-led approach to solving profitability challenges (Fig. 5).

Fig.5: **Technology Overview**



Source: OCTO, Sedgwick

This partnership yields significant cost savings with an improved customer and client experience.

- OCTO's crash notifications are directly ingested into Sedgwick's Smart.ly intake solution for an automated claims workflow. This dramatically reduces FNOL (First Notification Of Loss) time from days or weeks to minutes, while also capturing the data required for quick and efficient claims handling.
- OCTO's telematics data and Sedgwick's end-to-end claims management allow incidents identified as at-fault and lower value to be streamlined with little or no intervention, while disputed and more serious events can easily be assessed by Sedgwick's claim handlers using OCTO's crash dossier. In situations where crash events are not automatically captured due to no telematics or low energy incidents, manual multi-platform FNOL reporting is possible with Smart.ly.
- Sedgwick's bespoke dashboards provide insights into the claims portfolio to allow clients to access as much or as little information as needed to support decisions and actions.

Initiating a program with OCTO and Sedgwick begins with a discovery workshop to set key parameters that will highlight potential savings across the claims workflow. Once the Service Level Agreements (SLA) are agreed, the pilot can be live within months.

6. Conclusion

The use of telematics in the US insurance sector has traditionally focused on personal auto underwriting, but its potential for transforming claims efficiency in commercial auto insurance is substantial and largely underexploited. This paper highlights three key use cases—Crash Management, Accident Reconstruction, and Fraud Detection—each delivering considerable benefits. Collectively, these improvements can reduce loss and loss adjustment expenses by up to 20 ppt, turning an average commercial auto combined operating ratio from loss to profitability.

Implementing telematics-driven claims services across a large connected fleet can yield a remarkable ROI of $3 to $5 per dollar invested over five years. Recognizing the challenges posed by high upfront costs and complex transformations, a small-scale outsourced approach is recommended to validate ROI and mitigate operational risks before widespread adoption.

The OCTO and Sedgwick partnership unites deep industry expertise with a technology-driven, turnkey solution engineered for simplicity, scalability, and quick wins through small-scale projects. This future-proof alliance tackles profitability challenges directly while minimizing operational complexity, enabling insurers to sharpen claims efficiency, reduce costs, and gain a competitive advantage in an evolving market. Together, they deliver proven, ready-to-deploy solutions that accelerate value and drive sustainable results.

If you want to learn more and effectively address your profitability challenges, get in touch today to discover how the OCTO and Sedgwick partnership can transform your claims operations and deliver a measurable financial impact.

About OCTO

For over 20 years, we have been developing integrated solutions that enable us to support our clients in seizing the opportunities offered by smart mobility and digital transformation. Thanks to an innovative approach based on Artificial Intelligence, we have developed advanced algorithms for accident detection, driving behavior analysis, claims management, and consumption optimization. These solutions allow us to meet the needs of key markets, such as insurance and mobility, with a strong focus on modularity and customization. Our scalable and modular data analytics platform delivers solutions for the Insurtech and mobility markets, helping partner companies transform the way they manage and grow their business.
A robust and purpose-driven ESG strategy ultimately guides our market proposition, focusing on the development of solutions that support the energy transition and data-driven urban planning.
OCTO has profiled 20 million drivers and holds the world's largest telematics database, based on 610 billion kilometers of driving and over 13 million crashes detected.

For more information, visit octotelematics.com

About Sedgwick

Sedgwick is the global leader in risk and claims administration, transforming TPA motor claims through market-leading technology and deep expertise. With a presence in over 80 countries and a team of 33,000 professionals, Sedgwick sets the benchmark for efficient, technology-driven motor claims solutions across sectors including fleet operators, food delivery services, electric vehicles, and traditional motor insurance.

For organizations seeking to optimize their motor claims process, Sedgwick's integrated approach stands out. Their advanced technology and seamless partnerships with carriers, telematics providers, embedded insurance, and affinity partners enable efficient, end-to-end claims management. Whether you're managing a small pilot or a large-scale portfolio, Sedgwick's solutions are designed to reduce complexity, accelerate claims resolution, and deliver measurable ROI making them the partner of choice for forward-thinking motor TPA programs.

For more information, visit sedgwick.com

About IoT insurance Observatory

The IoT Insurance Observatory is a membership-based think tank uniting insurers, reinsurers, and technology leaders to advance evidence-driven innovation in insurance. Founded by Matteo Carbone, it explores how connected devices—telematics, smart-home and building sensors, industrial IoT, smartphone sensors, and wearables—can reduce risk, sharpen underwriting and pricing, streamline claims, and deepen customer engagement.

The Observatory generates and promotes innovation in the insurance sector: representing the cutting edge of global innovation, offering a strategic vision to exploit the insurance IoT's full potential, and stimulating research and debate among the participants.

For more information, visit iotinsobs.com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