

**Mid-West U.S.
Commercial
Insurance Carrier**

Operations
United States

Business Lines
Commercial Auto

Product(s)
Guidewire Claim Center

Guidewire Predictive Analytics
for Claims

Guidewire Predictive Analytics
for Profitability

Benefits

- Identified 66% additional large loss claims at 45 days
- 30-day decrease in average age of bodily injury claims
- 7-11% reduction in overall loss severity through the early identification and proper adjudication of complicated claims

Smart Core

> Commercial Auto Carrier Manages Bodily Injury Claim Costs with Guidewire Predictive Analytics

The insurance carrier is a commercial automobile insurer with a niche-market orientation. The company focuses on insurance for the “light” commercial automobile sector, including taxis, non-emergency paratransit, limousine, livery (including commercially licensed TNC drivers), and business auto.

The carrier is now an industry leader when it comes to realizing value from predictive analytics. They deployed a strategy to address adverse developments in its Commercial Auto business by using **Guidewire Predictive Analytics**, focusing on escalating claims that signal bodily injury severity and straight-through processing of low-severity claims.

Business Problem

For many years, the P&C Commercial Auto line was more profitable than average. Like many other insurers, however, this carrier was facing increased loss ratio, especially after acquiring a number of specialty insurance companies. They wanted to make sure that it could implement a data-driven approach to manage the frequency and severity of bodily injury claims and associated litigation costs.

The carrier knew that early identification of large losses has a material impact on the outcomes. However, only 9% of large losses were identified within the first 45 days of notice of loss, which affected claim settlement strategies and reserving. They were also experiencing considerable growth of more than 30% in some years. This growth led to greater claim volumes, causing an increase in open file inventory and demand for increased workflow efficiencies.

The primary objective was to ensure that claim files were routed to an adjuster with the appropriate skill level and focus as quickly as possible instead of multiple reassignments, which affected settlement strategies, created processing delays, and increased loss-adjustment expense.

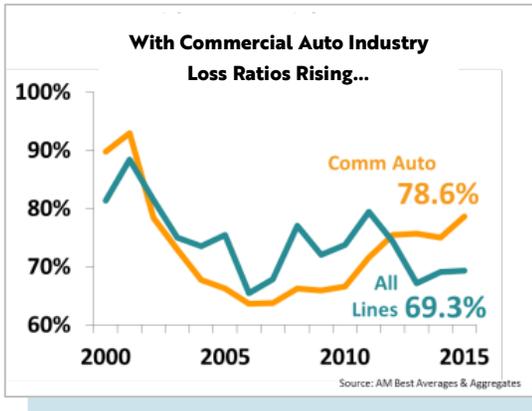


Figure 1: Rising Commercial Auto Industry Loss Ratios

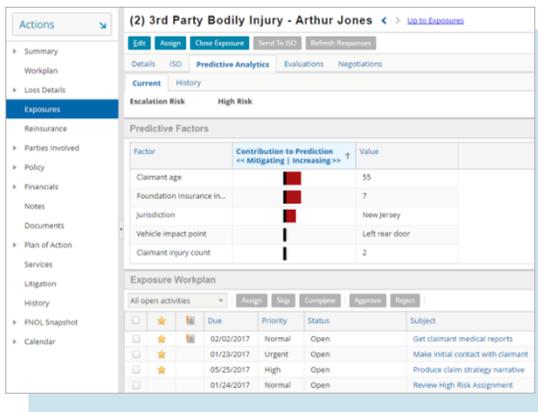


Figure 2: Embedding Predictive Insights in ClaimCenter

Business Strategy

Facing these many challenges, the carrier quickly dismissed traditional approaches as ineffective and costly. Management knew that any manual process to review each claim file for large loss potential was going to deliver inconsistent results due to human bias. Furthermore, having supervisors review each file would add more cost and increase the delays already occurring in their stressed claims process. The company also believed that machine learning could uncover data elements with signal that might not be obvious based on human review alone.

Fortunately, they had a history of leveraging technology and applying advanced analytics to solve business problems. With limited time and budget, leadership turned to predictive analytics with the goal of not only solving the insurer's current business challenges but also creating competitive advantages.

After reviewing its options, the carrier selected **Guidewire Predictive Analytics for Claims** as its solution based on the capabilities of the machine-learning engine, the ability of integrating models into their claims' workflow, and the expertise of Guidewire Professional Services.

The team first developed the Guidewire Claims Escalation model, which applies machine-learning algorithms to identify seemingly innocuous claims that are likely to escalate into moderate to severe bodily injury claims. Next-best actions can then be integrated into **Guidewire ClaimCenter** as part of a user's natural workflow. This results in increased claim visibility, better settlement and defense strategies, reduced hand-offs, and improved overall file quality.

Model Development

To achieve these objectives, the carrier partnered with Guidewire Professional Services to develop a combination of primary and secondary models targeted to each business problem. The first step was determining how early in a claim's lifecycle the expected severity could be credibly predicted.

- Based on historical claim development, it was determined that a 45-day model would be most effective for initially scoring potential large losses. At 45 days, the claim file would have sufficient information to enable predictive models to produce an accurate determination of the exposure.



“We are now better prepared to outperform our peers at a time when this may be the difference between underwriting profit and loss.”

–Founder and CEO

- Because claims can change fast, the Claims Escalation Model is designed to rescore the claim as new information is added to the claim file, providing new insights and guidance to the adjuster.

time a claim is open is correlated with ultimate severity, a model was created to provide an estimate of the days to close. In addition, it's often not known at 45 days if the claim will be litigated. A model was built to calculate the likelihood of this happening, and both of these models were used to enhance the data for predicting ultimate severity. The task of predicting ultimate severity to identify large claims was split into two pieces: the likelihood of the claim closing with a payment and the ultimate severity based on a specific payment. The model prediction was the combination of these two estimates.

Results

The carrier began using Guidewire Predictive Analytics for Claims in 2016. The effectiveness of the models developed for complex long-tail claims can be measured in part by the company's ability to close claims earlier. Because all post-deployment claims are not fully mature, actuarial techniques were applied to fit curves along various severity and file age segments for claims that occurred before the use of the predictive model (the "before" group) and claims that occurred after using the model (the "after" group).

The results reflect an increase in the number of claims that are now settled earlier compared to the "before" group. The severity for these claims has increased, which was expected because claims that otherwise would have taken longer (and would have likely been more expensive) to settle are now being closed sooner. They are also experiencing a significant decrease in average severity on those claims that are taking longer to settle (see Figure 3), which is likely due to improved settlement strategies by knowing of these losses sooner as well as the resulting workflow. The expectation now is that a larger percentage of claims that remain in inventory longer are less likely to be severe than in the past. The reason is that, if the claim was not settled relatively quickly, facts suggest that the information presented should be disputed or appropriately negotiated.

From an operational perspective, the carrier is identifying 66% more large-loss claims at 45 days compared to prior to deployment, and is seeing a 30-day decrease in the average age of bodily injury claims. In addition, the company is experiencing a 7%-11% reduction in overall large-loss claim severity.

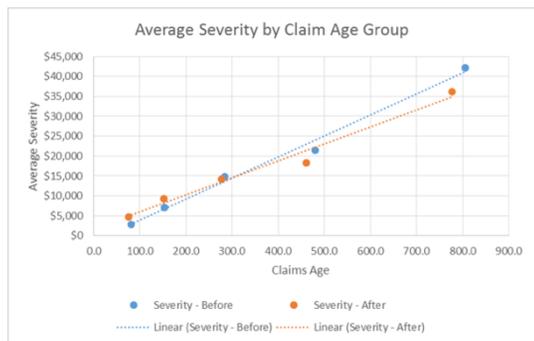


Figure 3: Average Severity by Claim Age Group



Navigate what's next.

Smart Core

Conclusion

This carrier was an early adopter of advanced predictive analytics techniques, and the benefits have been recognized by senior management throughout the organization. By harnessing the value of Guidewire Predictive Analytics solutions in claims, they have achieved:

- A 7%-11% reduction in bodily injury loss costs
- Improved reserving accuracy
- A greater sense of value for employees, who now spend less time on non-value-add activities
- Improved customer service through faster and more accurate claims settlement

The carrier is well positioned to benefit from a true **Smart Core** system by applying advanced analytics aimed at solving specific business problems and then integrating those results into its core processes.

Guidewire is the platform P&C insurers trust to engage, innovate, and grow efficiently. We combine digital, core, analytics, and AI to deliver our platform as a cloud service. More than 380 insurers, from new ventures to the largest and most complex in the world, run on Guidewire. For more information, contact us at info@guidewire.com.