



Guidewire Predictive Analytics: Claims Severity Escalation in InsuranceNow

An Early Warning System for Injury Claims at Risk of Adverse Development

Creating a Smart Core System

Many insurers have invested in modern core systems that are flexible and robust to drive transformational change through their operations. Compared to prior legacy mainframe environments, the new systems enable employees to work more efficiently and enjoyably, bring focus to the customer relationship, improve the quality of individual interactions, and enforce process consistency and best practices. Such investments have positioned these insurers to pursue new markets and to leverage new technologies more rapidly.

Significant advancements made in predictive analytics for P&C insurance have now created a unique opportunity for insurers with modern core systems to embed analytic scores within the core decision-making workflow, thereby creating a Smart Core system. Successfully leveraging predictive analytics requires a few key ingredients: A functional design to integrate analytic scores into the core system workflow

- A business problem with a clearly defined target outcome
- A functional design to integrate analytic scores into the core system workflow
- A technical design that includes data acquisition, model building, and core system integration

However, becoming a data- and analytics-driven insurance company requires much more than data and predictive models. It requires a solution that business users can understand and leverage easily so they can make fact-based decisions. You can maximize your technology investment, speed up implementation, and achieve faster ROI by using the Claims Severity Escalation solution described in this document—a solution that integrates Guidewire InsuranceNow™ with Guidewire Predictive Analytics™ and its award-winning machine-learning technology.

Business Problem

Managing large losses effectively is an important priority of every claims department. Seemingly innocuous claims that explode into large losses after first notice are a major pain point for most claims departments. With the benefit of hindsight and closed file reviews, claims leaders understand that there are often multiple opportunities to proactively intervene in slow-developing claims. When integrated into the claims escalation workflow, Predictive Analytics can help to identify these severity escalation claims early, raise them for attention, and route them to the appropriate resources. Earlier warning helps provide faster treatment, avoid unnecessary indemnity, avoid or prepare for potential litigation, reduce expenses, and even mitigate opportunistic fraud.

Functional Design

Typically, supervisors manually review open claims owned by adjusters on their team to identify claims requiring special attention. This is usually done on a periodic basis at specific threshold dates (such as 60 days and 120 days). Because this review is done manually and on every claim, the supervisors may miss some non-obvious cases where a claim is likely to significantly increase in severity. With the Claims Severity Escalation solution, InsuranceNow automatically creates a workflow task to notify the supervisor about exposures where the predictive model has identified the probability of severity escalation. This task appears on the supervisor's existing activity screen, as illustrated in Figure 1.

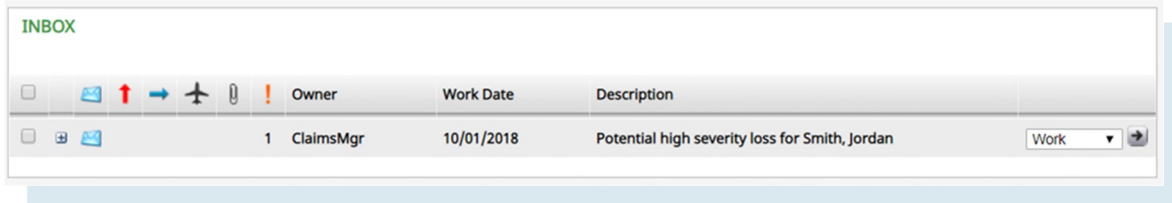


Figure 1: Inbox screen in Guidewire InsuranceNow shows the new task for the claims supervisor to review a potential high-severity claim.

By working the task from the Inbox, the supervisor navigates to the Claim Overview page, as illustrated in Figure 2.

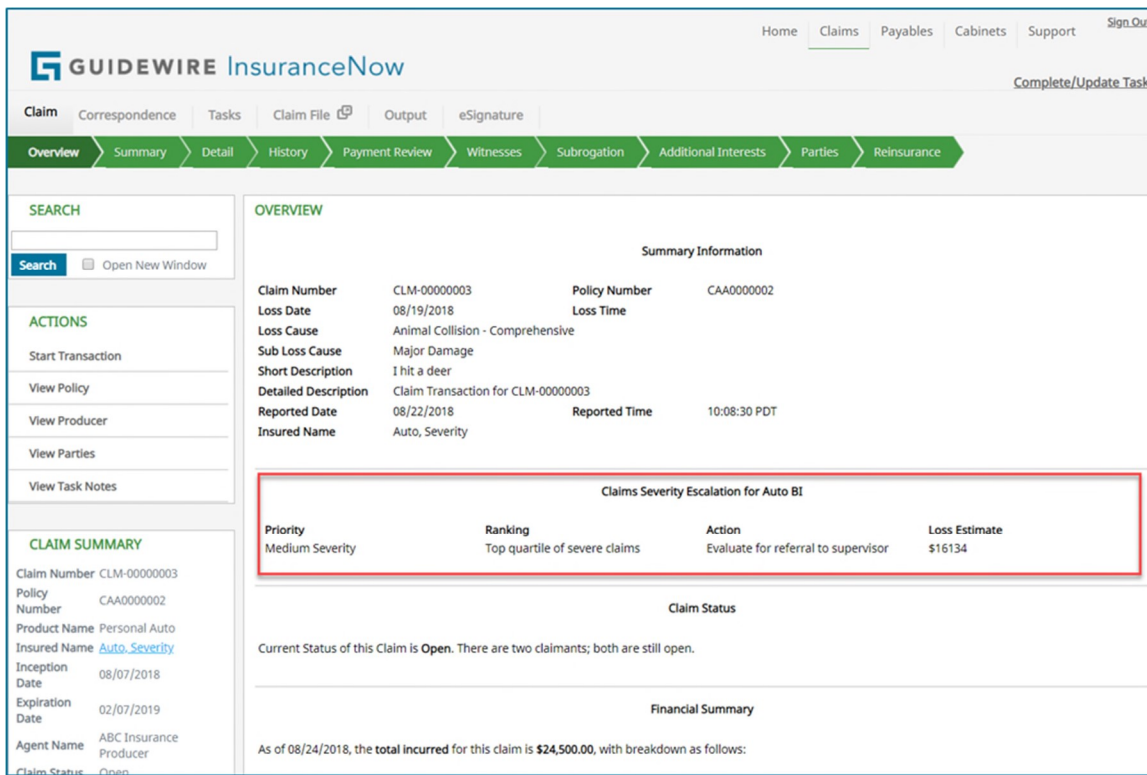


Figure 2: A warning appears on the Claim Overview, along with information about the scoring characteristics

On the Claim Overview page, the warning from Predictive Analytics is included below the claims Summary Information. Any of this information can be suppressed (or shown to only those users with certain permissions) if you consider it to be overly specific or prescriptive.

Technical Design

The functional solution described above leverages Guidewire InsuranceNow for core operational workflow and Guidewire Predictive Analytics to build models and deploy them as real-time scores. The technical design must consider three key components: data acquisition and preparation, model building and scoring deployment, and core system integration..

Data Acquisition and Preparation

An initial modeling data set is prepared with sufficient target observations to build credible models. Based on our experience, Guidewire can identify the relevant fields and extract this historical information from InsuranceNow. Typical data elements for a claims severity escalation model are derived from information about the claimant, policy, accident details and location, vehicles, injuries, treatment, and claim adjudication history. Depending on the quantity of historical data available in InsuranceNow, some projects will require additional data from legacy system environments.

Model Building and Scoring Deployment

Guidewire then builds and refines customized predictive models using a full range of statistical and machine-learning techniques designed specifically for the insurance industry. These models are compared to holdout data and to one another to determine the most trustworthy predictors of future claim behavior. Working with claims department leaders and experts, one or more models are chosen to introduce into the claims process.

The scores from such models depend on business context for significance. Claims department leaders must first determine the target definition of escalation that they consider worthy of attention, and then decide what action to take in InsuranceNow for a score. Model scores are sorted into bands that trigger different responses by the claims organization, as illustrated in Figure 3.

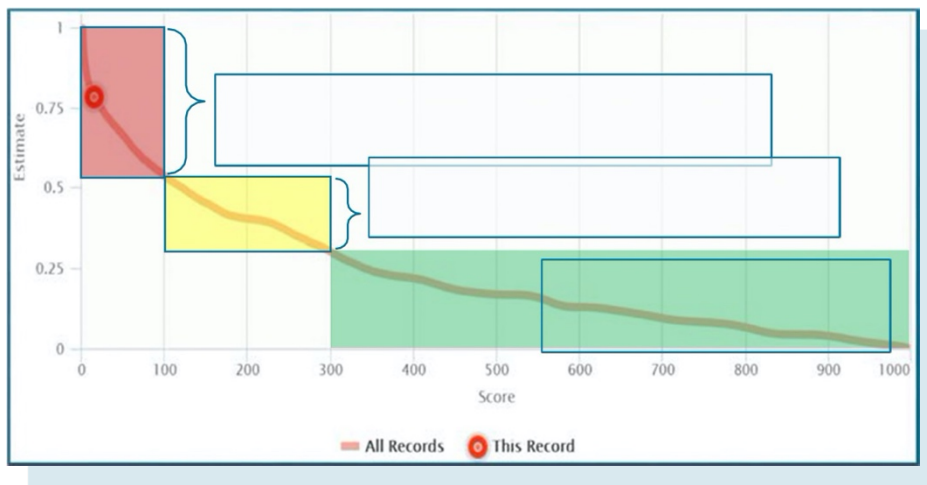


Figure 3: Sample InsuranceNow rules based on likelihood that scored claim will increase in severity(as defined to be worthy of business attention)

Integration with Guidewire InsuranceNow

Because this solution pack is pre-integrated with InsuranceNow, only the following configuration points must be considered during your implementation:

- Authority attributes to allow access to view scores: You can configure authority for various roles to control access to the Predictive Analytics information in InsuranceNow.

- Predictive Analytics modeling interface: Because the data passed in the scoring API to Predictive Analytics depends on your particular claims history, the InsuranceNow workflow that calls the API is adjusted to score against your particular data characteristics.

In addition, you can tailor your workflow with the following options during implementation:

- User interface: You can configure the Claims Overview screen to adjust the display of Predictive Analytics scoring information based on your business requirements.
- Workflow rules: You can configure different workflow rules in InsuranceNow based on scoring values returned from Predictive Analytics. For example, you could require a claim transaction to be submitted for approval based on scoring values, or you could automatically assign a specific Examiner to a claim.

Solution Delivery and Value Realization

Leveraging Guidewire Predictive Analytics, the Claims Severity Escalation solution can be delivered in a relatively short time period with the following high-level delivery phases:

- Inception workshop (1–2 days)
- Data acquisition and preparation, followed by model building and results presentation (2–3 months)
- Core system integration and implementation (1–2 months)

Guidewire can provide customers with consulting services to handle each of these phases, typically requiring only a few hundred hours of work. Customers can also use Guidewire software products independently and self-sufficiently, leverage one of our implementation partners, or use any combination of approaches.

In addition, customers have the option to leverage Guidewire Professional Services to help identify key performance indicators (KPIs) to measure the business benefit and validate ROI. Because predictive models can grow outdated as external business conditions and internal claim processes continue to change, Guidewire can also provide a complete lifecycle service that includes an annual model refresh to review and optimize model performance and then promptly deploy the revised model to production.

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.



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