

CLAIMS PROCESSING IN THE 21ST CENTURY

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A highly competitive insurance market... accelerating technological change... ever-increasing customer expectations. Chief claims officers have no time to sit back and relax as the current wave of insurance automation sweeps through their space. If you want to ride the crest of this wave instead of being swept under, now is the time to explore how artificial intelligence can help you deliver on your organization's strategic ambitions. Data, advanced analytics and claims expertise are the key ingredients for success.

The claims tech and analytical scene so far

Over the last decade, many insurers have invested in claims technology through upgrading claims administration platforms, or extending the life of legacy platforms by overlaying new user interfaces. Typical enhancements include deployment of rule-based capabilities, capture of richer structured data, and interfacing with third-party systems and data providers. These changes have improved consistency of claims processing, provided claims managers with greater control and insight, and driven efficiency through reduced rekeying and streamlined processes. With proper implementation, these enhancements help insurers provide better customer service at a lower cost.

And yet, the claims function has remained relatively untouched by the advances in automation and analytics that have transformed actuarial

processes. That is starting to change: leading-edge insurers are building out their claims analytics. By embracing data science, actuarial insights, automation and artificial intelligence, the industry's early adopters are already seeing improved cost control, increased fraud detection, reduced claim life cycles and better customer outcomes.

Benefits aren't limited to the claims function. More granular insight into the drivers of claims propensity and severity also create valuable insights for pricing, underwriting and reserving.

"Process automation" and "smart automation"

The first phase of claims automation targets basic tasks through robotic process automation (RPA). Essentially, RPA means delegating repetitive rules-based tasks to the computer. Such "process automation" applies established methods to handle simple matters more quickly and with fewer errors. For high-volume, low-complexity claims there are opportunities to automate a substantial part of the existing process and obtain meaningful operational savings.

"Smart automation," leveraging artificial intelligence (AI), offers more transformative potential. Here the path to implementation is less straightforward: it is more of an explorative journey, requiring deep claims expertise to interpret the indications of training runs and help the machine "learn" iteratively. This type of automation can play a supporting role to the claims expert across a wide range of activities. For example, AI can identify recently settled claims that are akin to the one currently under consideration to help the claims handler leverage such precedents when establishing an estimate or determining the need for investigation. Based on the claim's characteristics, the AI might automatically suggest relevant case law. Structured data, such as the driver's age and the make and model of the car, can be combined with unstructured data including photos, video, sound files and handwritten notes. Entirely new insights — unrelated to established "rules of thumb" — can emerge as the AI sifts through various combinations of factors.

What's possible?

A number of players in the new ClaimsTech market have made exciting breakthroughs. Examples include Snapsheet, a smartphone app enabling auto insurance customers to handle their claims via smartphone, potentially going from "photo submission to cost estimate in 2.7 hours, with claims closed in 2.5 days and a customer satisfaction rating of 9/10." RightIndem is a customer-oriented claims platform that can be customized by insurers and MGAs; they say this enables their clients to "provide a market-leading claims experience, as the service links all

partners in the claims system and is supported by a series of AIs that can reduce indemnity service cost by 10% while shortening cycle time."

Established insurers may take advantage of these start-up offerings and/or develop in-house capabilities to improve claims processing. Leading multinational insurer Zurich is embracing AI technology in claims. Last year they announced that they are using AI to extract the relevant information from medical reports. Optical character recognition and natural language processing enable the technology to scan and read the documents, and identify pertinent elements. Zurich says this is delivering improved accuracy and has also "saved 40,000 work hours, while speeding up the claims process time to five seconds."

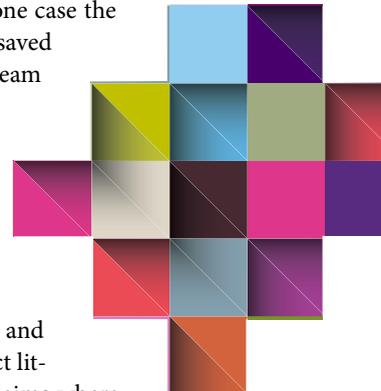
The Internet of Things also can help improve claims service. Insure the Box, a provider of telematics-based auto insurance in the U.K., has used the technology and data supplied by their partner Octo Telematics to develop an accident alert system. If the "box" in their customer's vehicle records a certain G-force, claims handlers are alerted to call the customer — often at the scene of the accident — to help with the vehicle recovery and claim process. In one case the solution is even thought to have saved an 18-year old's life, as the claims team guided emergency services to the exact location where he lay unconscious in a field out of sight of the road.

Predictive modeling tools can help drive proactivity across the claims process. Traditionally these tools have been used in reserving and fraud detection; they can also predict litigation probabilities, and identify claims where the customer experience is at risk of falling below the expected standard.

Recently the team at Willis Towers Watson developed such models for workers' compensation carriers, using both structured and unstructured data to identify problem claims. Attempting to identify these cases manually is like trying to find a needle in a haystack, but with this solution clients can take action much earlier — providing a better customer experience and managing costs.

Data fuels the engine

A major advantage that established insurers enjoy over InsurTech start-ups is their historical data. However, in many cases such data has been captured in legacy systems with variable degrees



of consistency and quality. This “weak” data is often the first target for taking advantage of advanced modeling techniques. For example, unstructured text or voice data can be used to augment historic structured data; given the level of insight that can be gained from even a limited amount of voice or text information, this kind of data augmentation can bring exceptional value.

Insurers gain immediate benefits from this enhanced data set as it shines a new light on their claims history and trends. It can also be a foundational element of “smart” automation, as supervised machine learning models can be directed with greater confidence, given the additional context, to develop learnings from the relevant claims.

Real-time decision engine

The “need for speed” will be a cry from claims teams working with integrated automated solutions, particularly those operating in classes such as auto or homeowners where service and cost control are time critical. To support or fully automate decision-making requires a sophisticated and powerful engine which can run complex models and deliver the analyses in real-time.

Increasingly, insurers find that actuarial software originally developed for pricing decision support can provide decision support for claims as well. This sophisticated software is a great fit as it was designed to integrate with other systems (such as claims handling systems) and process complex models (such as predictive claims models) within sub-second response times to support or automate decisions. Crucially for claims it is scalable, having already been built to cope with millions of quotes per day.

A case in point

One insurer in Europe is pursuing this path. Working with claims experts at Willis Towers Watson, analysts and data scientists, their focus is on developing machine learning methods to improve fraud detection.

These models are then deployed into the claims operation via a real-time decision engine. With an increasing proportion of the insurer’s customers reporting their claims on-line, this approach allows the models to run and flag in real-time any cases in need of investigation.

Because this client was already using an existing engine for pricing decision support, they could simply broaden the application of a familiar platform — which not only reduced time to

TYPICAL ENHANCEMENTS INCLUDE DEPLOYMENT OF RULE-BASED CAPABILITIES, CAPTURE OF RICHER STRUCTURED DATA, AND INTERFACING WITH THIRD-PARTY SYSTEMS AND DATA PROVIDERS.

deployment but also provided meaningful cost savings. And, given their significant advanced analytics capability in house, this insurer can control and update the claims models themselves.

There is no need to pass their data out to an external provider for scoring, and no need to rely on or wait for an external vendor to update the algorithms. By taking on management of the models the insurer can drive through continuous improvement and respond quickly to new emerging threats.

Using actuarial software they already know, this company is able to realize significant advances in fraud detection while paving the way for a much wider claims transformation.

Mastering the balancing act

Automating claims decisions is not easy. There are often complex considerations that require an element of human judgment. When helping clients through implementation, it is important to remain vigilant to unintended consequences. For example, improved efficiency and faster claims paying must be considered when setting reserves and updating rates; and such improvements should not come at the expense of weakening fraud control.

Executed well, this wave of AI and automation sweeping through the claims space offers insurers the opportunity to transform all aspects of their operations, delivering a service that delights their customers, while also optimizing claims costs. 🍷

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