

# Insurers testing new analytics frontiers face meaningful change

## What does this mean for the industry and its customers?

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Data and advanced analytics are the new frontiers of change, transforming insurance company operations and the customer experience.

The promise of valuable new customer and risk insights yielding competitive advantage is becoming more of a reality because of multiple new data sources, including unstructured internal information, the Internet of Things (IoT), driver and home telematics, social media, wearables and open source web data. In tandem, evolving analytics techniques – web scraping, artificial intelligence (AI), machine learning, intelligent automation and InsurTech innovation – that examine data culled from these rich new information sources are drawing insurers’ interest.

The recent Willis Towers Watson advanced analytics survey of U.S. P&C insurers’ attitudes\* confirmed that many are actively participating in these new data sources and others plan to explore these new frontiers. So where are they headed?

### Insurers’ priorities

In the near term, three areas dominate insurers’ thinking: the customer experience; claim management; and applications of telematics data in pricing, customer selection and product design. That said, many companies are also targeting improvements in reserving, expense management and agency/broker management.

\*See <https://www.willistowerswatson.com/aasurvey2018>

Emerging data sources and advanced analytics offer insurers the promise of unimagined value creation for those who navigate this new universe effectively.

### Customer experience

Online retail is setting the bar for customer expectations, so better customer centricity is a major focus. More than half of survey respondents aim for faster service (67%), faster and easier information access (65%), more personalized experiences (61%) and more mobile-friendly applications (53%), with relatively minor differences in priorities among small, medium and larger carriers. Big leaps in how insurers plan to use customer data (from 49% to 76%), surveys (from 43% to 69%) and auto telematics (from 24% to 57%) are seen as the main facilitators of these goals over the next two years.

### Claim management

Insurers also see huge unexplored potential for advanced analytics in claims. Key growth applications over the next two years are expected to be fraud prevention (82%) and triage to identify complex claims (80%), together with the evaluation of claims for both litigation and subrogation potential (*Figure 1*).

Figure 1. **How advanced analytics will transform claim management**

	Now	Two years
Evaluation of claims for fraud potential	26%	82%
Claim triage (identification of complex claims to triage workflow)	26%	80%
Evaluation of claims for litigation potential	15%	74%
Evaluation of claims for subrogation potential	13%	62%

Source: Willis Towers Watson 2017/2018 P&C Insurance Advanced Analytics Survey Report

Figure 2. Top-growing new data sources U.S. P&C insurers plan to use two years from now

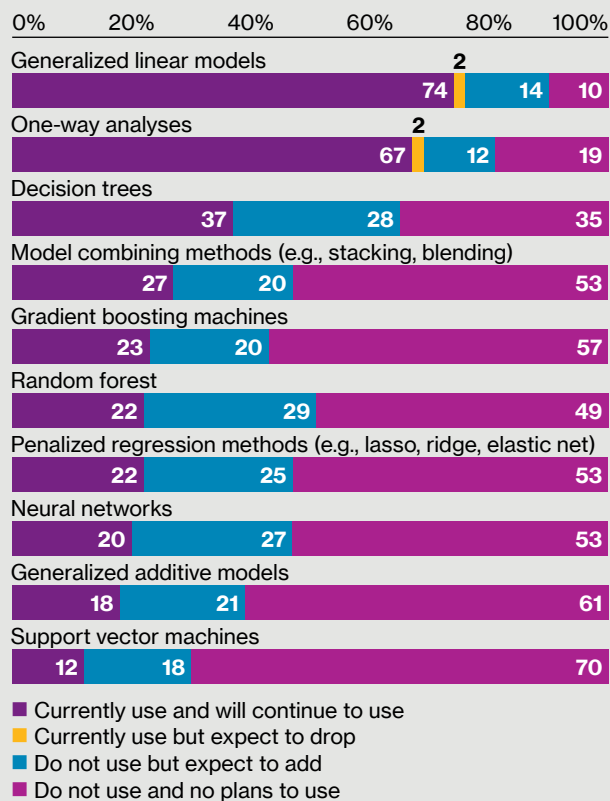
Personal lines	Now	Two years
Smart home/Smart building data	0%	52%
Usage-based insurance/Telematics	26%	70%
Social media	26%	52%
Unstructured internal claim information	39%	61%
Unstructured internal underwriting information	30%	52%
Images	13%	35%

Commercial lines	Now	Two years
Unstructured internal claim information	46%	92%
Other unstructured customer information	11%	54%
Unstructured internal underwriting information	25%	39%
Usage-based insurance/Telematics	11%	47%
Web/Clickstream/Phone/Email customer interactions	11%	36%
Images	3%	39%

Source: Willis Towers Watson 2017/2018 P&C Insurance Advanced Analytics Survey Report

Figure 3. Advanced analytical modeling techniques companies use now and plan to use in the next two years



Source: Willis Towers Watson 2017/2018 P&C Insurance Advanced Analytics Survey Report

Enthusiasm for progress in these areas is not confined, however, to higher policy volume personal lines auto and home carriers. In commercial and specialty lines, claim analytics adoption is expected to increase rapidly in the workers compensation class in the next two years (from 27% to 65%) and also rise significantly in other areas (e.g., commercial auto, accident and health, and medical malpractice).

### Telematics applications

Expectations for the wider use of telematics data are similarly very high, mainly in pricing and underwriting, but expanding also into customer management, claims and loss control over the next five years. Beyond the auto market, where 78% of respondents expect usage-based insurance to be an important or primary factor in rating plans, 43% of respondents see a significant role for telematics in homeowners insurance within this time frame. Assessment of farm and crop insurance risks is also expected to receive a boost from telematics data and analysis.

*The customer experience; claims management; and applications of telematics data in pricing, customer selection and product design dominate insurers' near-term thinking.*

### The leap from ambition to reality

Carriers acknowledge that they still have much work ahead if they are to turn these wide-ranging ambitions into reality.

This is evident in the wide variety of data sources that insurers see as useful and the extent to which they believe they will need to increase their ability to interrogate them over the next two years (Figure 2).

The challenge of generating value from these data sources is also reflected in the way attitudes toward modeling techniques are evolving. While the generalized linear models already being used by around three-quarters of companies are still seen as the primary method that will carry them forward, around a quarter of companies surveyed are looking to add AI and machine learning capabilities over the next two years (Figure 3). These are also seen as important for streamlining operations and making cost savings. As an indication, between 40% and 50% of insurers surveyed expect to be using AI to reduce time spent by employees on repetitive tasks (49%), to identify high-risk cases (45%) and to build better risk models for decision making (45%).

Figure 4. What are the three biggest challenges preventing your company from becoming more data-driven?



Source: Willis Towers Watson 2017/2018 P&C Insurance Advanced Analytics Survey Report

Many companies are also focused on improving what 83% of carriers categorize as “moderate” or “limited” levels of understanding of advanced analytics outputs within the business. That is consistent with our view that superior analytics depend as much on a company’s culture and strategy as having the tools and people to make them possible. An organization’s will and ability to be data-driven are important considerations.

Nonetheless, as shown in *Figure 4*, IT networks and the (lack of) digital plumbing that enables information to be shared and used across diverse company systems are typically seen as the biggest obstacles to overcome.

Consequently, many companies are scrutinizing the nature of the analytics. This is hardly surprising when the volume, variability and lack of structure associated with new data types will almost inevitably put most companies’ internal capacity, networks and processing systems under pressure. So insurers are actively exploring technologies that will help them find more effective ways to store and process big data – principally the cloud and Hadoop, but also systems such as BrovadaOne (see box: “Awaken your IT monster,” next page) – and help move the data and subsequent analysis among systems as needed.

## Encouraging results

Many insurers say they already see benefits, even if they are still finding their way on data and advanced analytics. Driven, in particular, by a quest to improve loss ratios (*Figure 5*), over a third of companies surveyed say that advanced analytics have already had a strong positive impact on the bottom line, with a further 54% citing a positive impact. Nearly three-quarters say advanced analytics have also positively supported top-line growth through stronger renewals, expansion of underwriting appetite and improved market share.

## Staying on course

Bolstered by these early successes and the widely positive attitudes recorded in our survey, the course seems set for a future where more insurers will seek a competitive edge from their use of data and advanced analytics to:

- Better quantify risk (e.g., use of imagery of insured properties/surroundings)
- Streamline processes (e.g., use of automated claim triage)
- Improve customer experience (e.g., use of home sensors that inform and support claims, or use of data to identify key customer satisfaction “moments of truth”)

Figure 5. Top metrics used by U.S. P&C insurers to evaluate model results



Source: Willis Towers Watson 2017/2018 P&C Insurance Advanced Analytics Survey Report

*Around a quarter of companies surveyed are looking to add AI and machine learning techniques over the next two years.*

*Many companies are focusing on improving what 83% of carriers categorize as “moderate” or “limited” understanding of advanced analytics outputs.*

Or, more likely, it could be a combination of them all.

Each company’s journey will be different, but our experience points to the benefits of three guiding principles.

1. **Concentrate on data first.** New analytical methods, including AI and machine learning, are justifiably getting a lot of attention in quantitative circles right now, but we believe insurers should focus the most significant initial effort on their sources of data. Why? Because new (or better) experience data, predictors and customer response information will always trump new methods being thrown at the same data.
2. **More data, in-depth analysis and new insights aren’t the end game.** They have to be translatable into something the business can understand, implement and monitor, and from which it can derive and offer value. Otherwise, the work done is simply a technical modeling exercise.
3. **Stay on top of technology.** Legacy company systems and networks will make it increasingly difficult to conduct business effectively in an age of advanced analytics. At the extreme, the way some companies have done business will become more challenging in the near future, so new technologies that enhance analytical capability and system connectivity will have a greater role to play. That includes improvements coming out of the InsurTech movement, where recent trends show more start-ups and early-stage businesses switching their focuses to back-office insurance operations from more obstacle-strewn frontline customer applications.\*

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\*Willis Towers Watson, Q4 2017 Quarterly InsurTech Briefing,  
<https://www.willistowerswatson.com/InsurTechQ42017>

## Awaken your IT monster

For many insurers, a key challenge is to migrate to the connected, flexible and agile systems that will enable them to use data and advanced analytics more effectively.

This can be a daunting prospect, particularly when organic expansion and acquisitions may have left many companies with a Frankenstein of an IT infrastructure.

The natural inclination is for companies to think that they have to replace systems – an option that is both cost prohibitive and full of project risk.

Digital transformation doesn’t have to be a case of “make do and mend.” New options for retaining and optimizing systems via an integration platform are emerging, as Willis Towers Watson’s BrovadaOne software is showing major international insurers.

We’ve seen that insurers’ commercial underwriters are often using literally hundreds of rating tools to quote policy prices. Ignoring the obvious inefficiencies inherent in this approach, the lack of transparency in systems leaves insurers unable to question and negotiate a price. Moreover, it makes it extremely difficult to view multiple policies at a customer or portfolio level that would support strategic decisions about risk acceptance and pricing.

BrovadaOne serves two main functions in this kind of scenario: 1) to create a modern front-end web interface to support more efficient underwriting, and 2) to manage the data flows and rating integration necessary to provide accurate, real-time rating and reporting. Deployed in combination with Willis Towers Watson’s Radar Live pricing software, the fully hosted solution leverages the Microsoft Azure cloud platform to provide flexibility and scale in a centrally managed environment.

Crucially, while it may be the first step on a transformational journey, the software helps create more cohesive systems without the culture shock and investment that accompanies a fresh start.