

# Advanced analytics: Are insurers living the dream?

2019/2020 P&C Insurance Advanced Analytics Survey  
Report (North America)

WillisTowersWatson 

Many North American P&C insurers have indicated they have big aspirations when it comes to using advanced analytics to improve their businesses. By their own admission, most are falling short of those aspirations right now.



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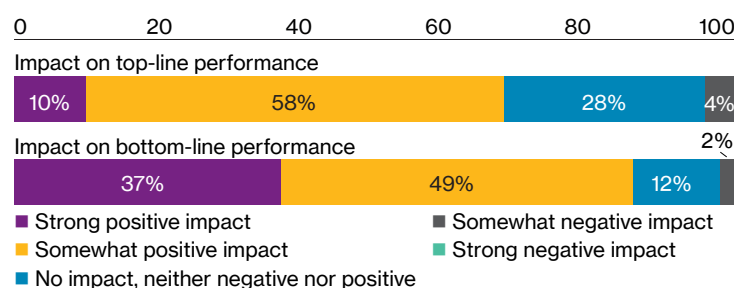


# Executive summary

## Advanced analytics: Are insurers living the dream?

Data and advanced analytics capabilities have become prized currencies for many North American property & casualty (P&C) insurers looking to gain a competitive edge. This is hardly surprising – a large majority of respondents to our latest survey of progress in this area (as was the case two years ago) say their forays into advanced analytics have had a positive effect on the top line and, in particular, the bottom line (*Figure 1*).

Figure 1. **Impact of advanced analytics on top- and bottom-line performance**



Yet the nature of those capabilities – and the potential value and benefits they offer – are constantly changing as new potential sources of data become available and the analytical methods being employed by some competitors to gain an edge become more sophisticated.

The growing opportunities associated with the use of remote visual imagery in claim management offer a prime example, as does the more widespread adoption of artificial intelligence (AI) and machine learning techniques to achieve business efficiencies. The changing nature of relationships with InsurTechs, once seen as a threat to the very existence of some insurers, is also a factor. An altogether more collaborative approach is apparent among the companies that are tapping into this potentially rich seam of technological innovation and quick analytics wins.

From this latest survey, we see that many insurers continue to aspire to build up their advanced analytics reserves, notably in areas highlighted in previous editions – customer experience, claim management and telematics.

But we also see that current reality and rate of progress don't always match the vision, which means that intentions to apply advanced analytics in some other areas, notably in expense management and marketing, are largely taking a back seat.



# Survey highlights

*The latest survey results suggest that many insurers have been either overambitious in stating their goals for advanced analytics or have had their longer-term vision blurred by the reality of the day-to-day business and market challenges. But pockets of significant market progress still exist.*

## Insurers expected to be farther along in using advanced analytics

Almost across the board of potential insurance function applications, progress with implementing advanced analytics has been slower than anticipated when we last conducted the survey two years ago, including in the key areas of customer centricity, claim management and telematics.

## Big plans remain for customer centricity, but there's a lot left to do

Insurers typically have even broader ambitions for using data to improve their customer focus in the short term than two years ago. Plans to expand the use of internal customer data (77% to 79%), social media (46% to 49%) and home telematics (27% to 37%) in the next two years illustrate that ambition. Progress since 2017, however, suggests they have a long way to go.

## Claim management applications take priority

Insurers have tempered their longer-term expectations for using advanced analytics in areas such as claim triage and fraud identification. But while progress since 2017 has still been slower than envisioned, comparatively speaking, the claim function has received some priority. Notable increases are apparent in the use of some data sources that can be seen as fueling claim management innovation, such as social media (now 38%) and images (now 24%) in personal lines, and unstructured internal data (now 53%) in commercial lines.



## Telematics – a mixed bag

While concerns about the challenges of handling and analyzing mass volumes of telematics data have reduced in the last two years, a critical mass of companies that see a benefit from taking on these challenges may be reached, at least in personal automobile. However, companies see growth opportunities in commercial auto, homeowners and crop insurance.

## AI and machine learning on the rise

Both in terms of aspirations and progress to date, insurers' use of AI and machine learning are trending upward. The percentage of respondents saying they use both to build risk models for decision making (26%) and to reduce manual input (22%) have doubled in the last two years. Sixty percent of companies are targeting such capabilities by 2021.

## InsurTech – dare to dream

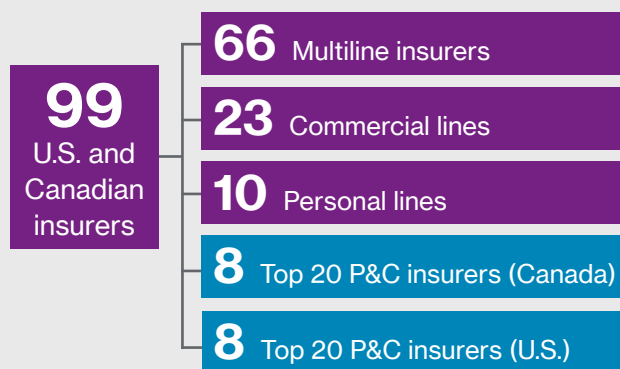
Over two-thirds of survey respondents characterize their current state of InsurTech integration as early stage. Further, 22% say they're not doing anything in that arena. Given that many InsurTech businesses are now looking to collaborate rather than compete with incumbent insurers, this seems like a void waiting to be filled.

## Organizational challenges – same tunes, different words

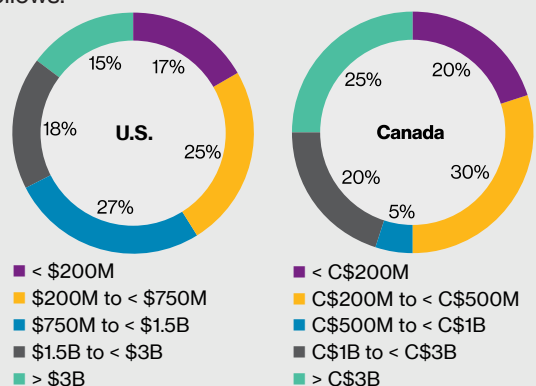
Dreams of becoming more data-driven elude some companies because of three main obstacles: IT and organizational bottlenecks, data infrastructure, and lack of expertise and staff to analyze data. But North American insurers' perceptions of these obstacles have changed over the last few years based on market trends and how companies choose to prioritize their efforts.

## About the survey

Willis Towers Watson's 2019/2020 Advanced Analytics Survey asked P&C insurers in the U.S. and Canada for their insights on the future of advanced analytics. Two distinct web-based surveys – one targeting technical managers, the other senior executives – were fielded in mid-2019. A total of 122 representatives (77 technical, 45 executive) from 99 P&C insurers participated, comprising 66 multiline carriers, 23 commercial lines carriers and 10 exclusively personal lines carriers. Respondents included eight of the top 20 P&C insurers from both the U.S. and Canada.



Participants reported annual direct written premium as follows:



# Fields of dreams

Three main areas dominate the field of insurers' aspirations for advanced analytics: the customer experience (incorporating underwriting and pricing), claim management and applications of telematics. AI and machine learning techniques are also starting to gain more adherents.

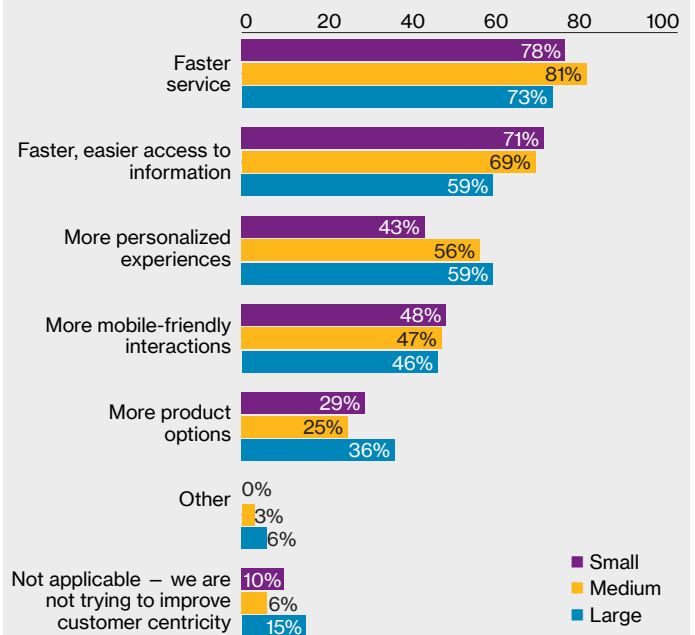
## Customer focus

Competition for customers' time and attention – both private and commercial – is only getting more acute. Engagement, and speed and efficiency of service are arguably becoming virtual hygiene factors for commercial success.

That said, a small core of just over 10% of respondents maintain they are not trying to improve customer centricity. However, of the large majority that are, the main priority, regardless of the size of the carrier, remains speed – of both service and access to information (*Figure 2*). This is further reinforced by how insurers are currently using advanced analytics in underwriting and pricing, and their future plans in these areas. Over three-quarters in pricing, and half in underwriting/risk selection already use advanced analytics, and about 90% expect to be using them in both areas in two years. Furthermore, companies are targeting straight-through processing for the biggest jump in activity in the near term.

The fact that many insurers haven't met their previous targets for enhancing customer centricity may principally be a result of relatively slow progress in diversifying the range of data available for analysis. For example, 77% expected to be using internal customer data by now, but only 54% are. Similar gaps in expected versus actual usage have developed for social media (46% versus 26%) and clickstream data (34% versus 14%). Such results haven't, however, dented ambitions. In all data categories except customer surveys, carriers project wider usage in 2021 than they had forecast for 2019.

Figure 2. **Areas of customer experience targeted for improvement by carrier size**





## Claim management

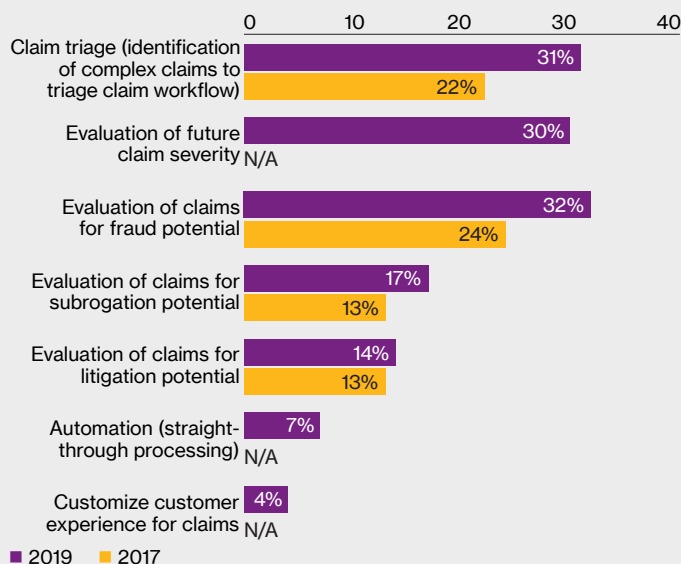
In comparison with progress in other areas of their businesses, many insurers have gone the extra yard with integrating advanced analytics into the claim process. This is likely stemming from early adopters that primarily targeted improvements in pricing and underwriting, and now see claims as the next big thing. This certainly seems to be the case for Canadian insurers in the survey, judging by their enthusiastic response to a question about short-term intentions, albeit not according to their progress to date.

Although the enthusiasm hasn't translated into substantial increases in the use of advanced analytics in different aspects of claim management since 2017 (Figure 3), there has been appreciable growth in the use of certain types of related data.

Unstructured internal claim information is the primary targeted source. Over half of commercial lines insurers say they are now using such information, up from 41% two years ago. In personal lines, the use of images (most typically used to verify and expedite claims) has more than doubled to 24% of respondents — nearly on par with where respondents expected it to be two years ago.

The current situation in claims also varies quite markedly by business line. For example, more than half (54%) of workers compensation writers say they are using advanced analytics in claims, compared with 10% in commercial property. Without exception though, all lines of business are behind the schedule they anticipated for claim analytics.

Figure 3. **Aspects of claims for which companies use advanced analytics – 2017/2019**



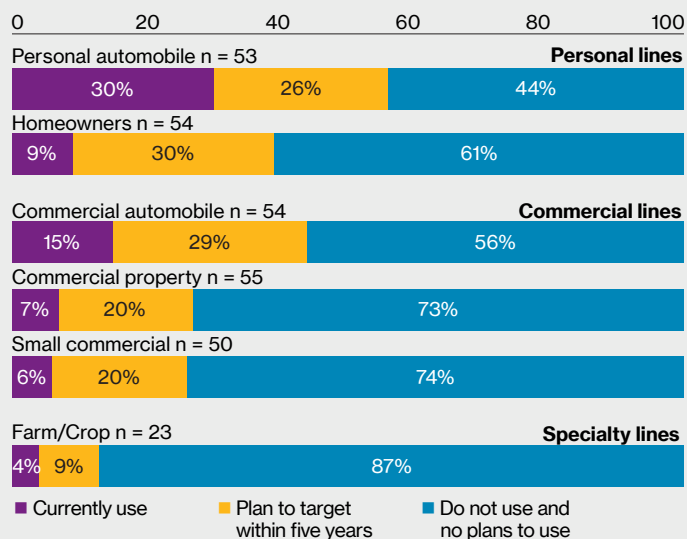
## Telematics

Because of the volumes of data and the number of data points associated with telematics, creating actionable analysis from it is complicated and a significant undertaking. The latest survey results suggest that personal lines carriers (and some commercial carriers) will continue to push forward with telematics, while others are turning to lower-hanging fruit in the area of analytics.

Evidence to support this hypothesis includes the relatively slow volume growth in carriers using telematics in both personal auto (from 28% to 30%) and homeowners (from 2% to 9%) in the last two years and, related to that, the relatively high percentages of carriers that say they have no plans to use telematics in these and other lines of business (Figure 4).

Similarly, when compared with results from two years ago in pricing, underwriting and claim triage, respondents currently see the impact of telematics on various functions as diminishing over the next five years. Indeed, executives questioned for the survey see it falling in virtually all business areas, including loss control and customer behavior modification (e.g., distracted driving).

Figure 4. **Current usage and future plans for use of telematics by line of business**





## Fresh fields – AI, machine learning and InsurTech

By any measure, the volume of industry discussion about the value of AI and machine learning to insurers has increased significantly in the two years since our last survey. This is reflected in how insurers say they expect to develop analytics techniques in the future, with quite significant jumps forecast in the use of techniques such as decision trees, text mining and natural language processing, and gradient boosting machines.

Nonetheless, the progress reported by insurers since 2017 falls well short of expectations and has mainly taken place in three business applications – building risk models for decision making, reducing the time spent by humans on repetitive tasks and gaining a better understanding of risk drivers (*Figure 5*).

The intentions are clear: Expectations for 2021 leave a lot of work to bridge the gap between where 30% to 40% of companies say they are today and where they want to be in two years' time.

One potential shortcut to progress in this and other areas is closer collaboration with InsurTech businesses, where the focus seems to have recently shifted from the end customer to improving insurance back office efficiency. This remains pretty much virgin territory for the majority of insurers, with 91% characterizing their involvement with InsurTech as nonexistent or early stage. Just 1% of survey respondents have what they describe as a fully integrated and resourced InsurTech strategy.

**Figure 5. How insurers are using and plan to use AI and machine learning**

	Actual for 2017	Expected for 2019 (in 2017)	Actual for 2019	Expected for 2021
Build risk models for better decision making	13%	44%	26%	60%
Reduce time spent by humans	11%	49%	22%	60%
Better understand risk drivers	21%	44%	20%	56%
Identify cases that pose higher risk	11%	46%	14%	50%
Augment human-performed underwriting	7%	37%	7%	47%
Identify patterns of fraudulent claims	9%	39%	17%	47%
Identify bottlenecks in claim processes/process claims more efficiently	3%	30%	7%	43%



# Believers or day dreamers?

This year's survey responses illustrate that many North American insurers aren't as advanced with their use of data and analytics as they wanted to be. What is typically holding them back?

Interestingly, there is something of a divergence in responses between technical and executive respondents. Notably, technical employees put far greater weight on issues with resources and resource coordination than executives, who are more likely to assess the primary obstacles as being more associated with data handling and system infrastructure.

Considering overall responses, the prime culprits haven't changed since our 2017 survey, although the balance between them has. Whereas physical IT and data handling infrastructure factors were often seen as the main obstacles by many companies two years ago, and certainly haven't gone away completely, insurers now typically cite relatively bigger concerns about resources and coordination (*Figure 6*). Nearly half (45%) of insurers say they suffer from problems with information bottlenecks where people and systems typically need to interact, and there has also been a notable rise in the percentage of companies reporting issues with a lack of sufficient staff to analyze data.

As to who does the work, most companies rely predominantly on their actuaries for advanced analytics (*Figure 7*), outnumbering data analysts in overall headcount by a ratio of 2:1.

A related organizational issue that insurers still need to resolve is the understanding and use of models and analytics in the wider business. The latest survey results suggest that a widely shared, data-driven business culture is still a hazy dream for many. In fact, the share of companies that rate understanding of predictive models outside their modeling team as "very strong" or "strong" has reduced since 2017 from 17% to 12%.

Figure 6. **What are the three biggest challenges preventing your company from becoming more data-driven (2017/2019)?**

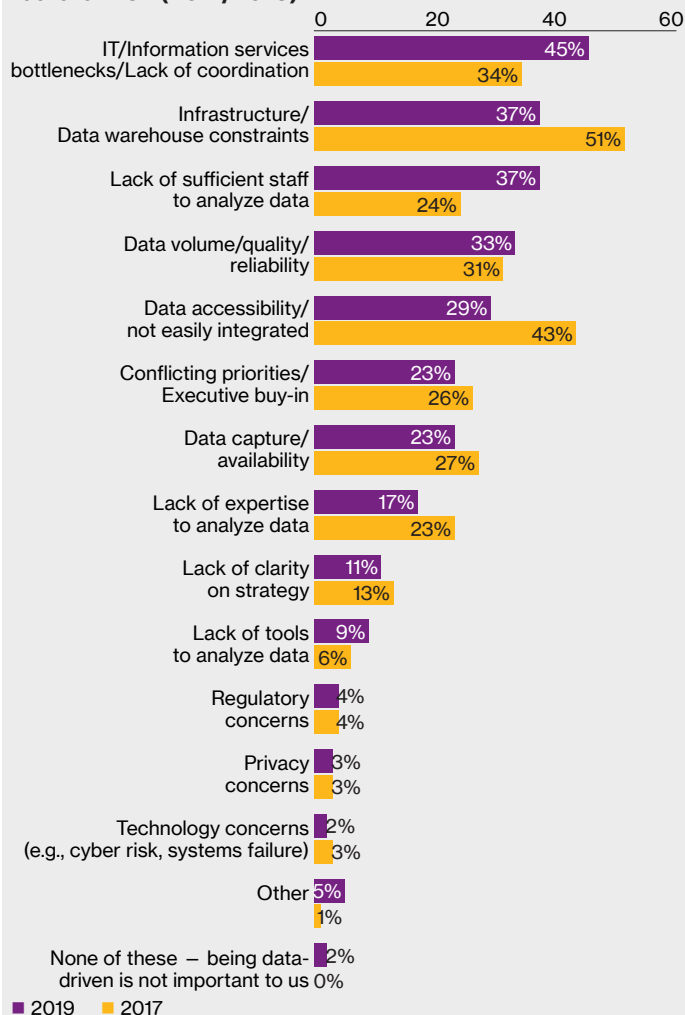
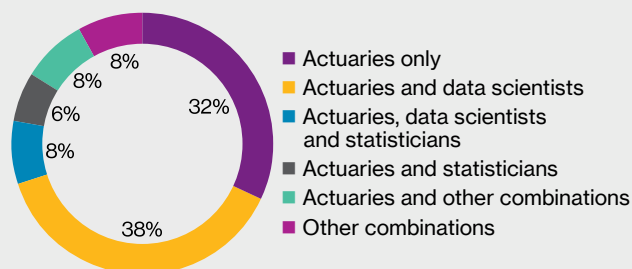


Figure 7. **Current staffing mix for advanced analytics work**





# Next steps

## Turning dreams into reality

As our latest survey reaffirms, one thing that cannot be leveled at North American insurers is a lack of vision or ambition when it comes to using data and advanced analytics in their businesses. “Dream big or go home” seems to be the dominant mantra. Although, perhaps the last two years have been something of a reality check when it comes to the challenges associated with the scale and scope of previously stated ambitions.

Nonetheless, North American insurers’ expansion and ambitions are valid, particularly when considering the substantial increase in the focus on data and advanced analytics implementation. But they will need to freshen their resolve to get the competitive benefits most are seeking. Some options that may potentially help companies to sharpen their focus include:

- **Maximize internal data utilization.** Many P&C insurers routinely collect customer data as part of an application or claim process, which can be of wider value to the business when suitable analytics are run on them. Companies shouldn’t overlook what is readily available.
- **Explore what external data has to offer.** Internal data are certainly a potentially rich vein to explore, but consider supplementing it selectively with external data sets to improve results and achieve objectives.
- **Align strategy and analytics.** Companies should identify what they believe is core to achieving a competitive edge and steer their efforts and resources accordingly. Avoid getting carried away with analytics for analytics’ sake.
- **Match tools to the job at hand.** Tap into the technology that is constantly evolving to enable companies to leverage analytics capabilities in a controlled environment.
- **Review staffing allocation.** Companies will get the most from data and advanced analytics with employees who can devote sufficient time to them and develop their skills in the process.
- **Create a flexible road map.** Companies should plot a course for how they want to apply data and analytics but remain flexible enough to take advantage of market and technical developments as they arise. Insurers should think of the whole process of enhancing analytics capability as a journey, not a destination.



### Further information

For more information about survey results, or to discuss the findings and our observations, contact:

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