

Advanced analytics and the future: Insurers boldly explore new frontiers

2017/2018 P&C Insurance Advanced Analytics Survey Results Summary (Canada)



Introduction: Insurers boldly explore new analytics frontiers

In a short space of time, emerging data sources and advanced analytics have become new frontiers for transforming insurance company operations and customer experiences. Insurers can interrogate an expanding data galaxy full of promise, including unstructured internal data, the Internet of Things (IoT), driver and home telematics, social media, wearables and open-source web data. Analytics techniques are moving into a new orbit to explore them.

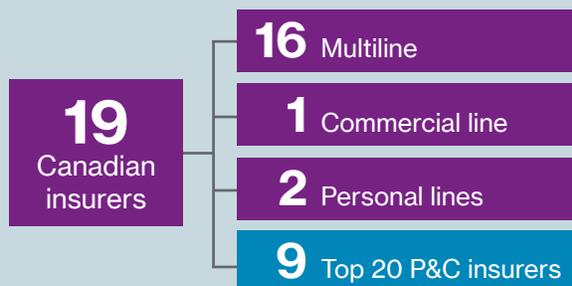
Our latest survey of Canadian P&C insurers shows that many insurers, like their U.S. counterparts, are committed to stepping up exploration of this exciting analytics universe as an essential step to advance their business. As they look to give customers faster and easier access to products by developing digital platforms and apps, and use information better to create more personalized user experiences, they are broadening their data horizons and setting new analytical priorities (*Figure 1*).

Figure 1. Top-growing new data sources Canadian insurers plan to use two years from now

	Now	Two years
Speech recognition	0%	26%
Health information	0%	11%
Smart home/Smart building data	5%	32%
Other unstructured internal customer information	10%	42%
Unstructured internal claim information	21%	74%
Web/Clickstream/Phone/Email customer interactions	11%	37%
Unstructured internal underwriting information	16%	48%
Images	11%	32%

About the survey

Willis Towers Watson's 2017/2018 Advanced Analytics Survey asked Canadian P&C insurance executives for their insights on the future of advanced analytics. Nineteen insurers participated in the web-based survey, fielded in fourth quarter 2017: 16 multiline carriers, one commercial lines carrier and two personal lines carriers. Respondents included nine of the top 20 Canadian P&C insurers.



Survey highlights

A focus on elevating the customer experience

Canadian insurers have generally moved quicker than U.S. companies to replicate the more rapid and personalized user experience implemented by retail and other online environments and apps, although U.S. companies say they plan to accelerate their plans quicker. In Canada, big leaps in how insurers plan to use customer data (from 63% to 79%), surveys (from 58% to 74%) and social media (from 26% to 47%) are seen as the main facilitators of improvements over the next two years (Figure 2). A growing number are also targeting the use of home telematics data to enhance customer centricity.

Wider applications of artificial intelligence (AI) and machine learning

Relatively few insurers have launched into the adoption of AI and machine learning so far, with the biggest applications to date being to better understand risk drivers and build risk models for better decision making (26% each). Within two years though, many more insurers plan to use these techniques to enhance business models while making substantial cost savings across product portfolios by identifying high-risk cases (48%), reducing time spent on tasks by employees (47%) and identifying consumer patterns to reduce risk (42%) (Figure 3).

Figure 2. Top data sources that insurers plan to use two years from now for customer centricity

	Now		Two years	
	Canada	U.S.	Canada	U.S.
Internal customer data	63%	49%	79%	76%
Customer interactions/surveys	58%	43%	74%	69%
Social media	26%	18%	47%	45%
Clickstream data	26%	14%	31%	35%
Auto telematics	21%	24%	26%	57%
Web scraping	21%	6%	26%	37%
Home telematics	5%	0%	21%	29%

Figure 3. How AI and machine learning are expected to streamline processes

	Now		Two years	
	Canada	U.S.	Canada	U.S.
Identify high-risk cases	16%	10%	48%	45%
Reduce time spent by humans	21%	8%	47%	49%
Better understand risk drivers	26%	20%	42%	41%
Build risk models for better decision making	26%	8%	42%	45%
Identify consumer patterns to reduce risk	16%	6%	42%	31%
Identify patterns of fraudulent claims	16%	6%	37%	39%
Augment human-performed underwriting	11%	6%	37%	37%

Claims management transformation

Insurers see huge unexplored potential for advanced analytics in the claims area. Fraud prevention and triage to identify complex claims (87% each) are key applications for development over the next two years (Figure 4).

While 25% of personal lines auto carriers and 23% of home carriers surveyed already use advanced analytics for claims, 81% and 82%, respectively, anticipate adopting usage in the next two years. In commercial lines, existing claim analytics usage is highest in commercial auto, but it is expected to grow the fastest in business owner insurance.

Telematics' star is rising

Among both personal and commercial lines insurers, expectations for the wider use of telematics data are very high, with a focus, unsurprisingly, on pricing and underwriting. But that keen interest is also expanding into customer management, claims and loss control over the next five years (Figure 5). Beyond the auto market, where 79% maintain that usage-based insurance will play an important or driving role in rating plans within five years, 47% of respondents see a significant role for telematics in homeowners insurance within this time frame.

Seeing the benefits

The dominant measures of success in the use of data and analytics are improved loss ratio (80%), followed by more efficient use of resources and reduced claim costs (both 53%). Encouragingly, 47% of companies surveyed say that advanced analytics have already had a strong positive impact on the bottom line, with a further 33% citing a positive impact. Nearly two-thirds (60%) say advanced analytics also positively support top-line growth.

Upgrading IT infrastructure and modeling capability

The survey shows that existing IT networks and connectivity can often present the biggest obstacle to becoming more "data driven." Over half of Canadian insurers (52%) are gearing up to use cloud-based services and a significant number (26%) say they are also investigating Hadoop for distributed storage and processing of large data sets.

While generalized linear models (GLMs) and one-way analyses, used by 72% and 66% of companies respectively, are still seen as the primary analytical methods that will carry them forward, over a quarter of companies surveyed are looking to augment their modeling capability over the next two years with such methods as decision trees, model combining methods (e.g., stacking, blending) and neural networks.

Figure 4. How advanced analytics will transform claim management

	Now		Two years	
	Canada	U.S.	Canada	U.S.
Evaluation of claims for fraud potential	20%	26%	87%	82%
Claim triage (identify complex claims to triage workflow)	13%	26%	87%	80%
Evaluation of claims for litigation potential	7%	15%	67%	74%
Evaluation of claims for subrogation potential	13%	13%	60%	62%

Figure 5. Five-year outlook for increased telematics impact on insurance business functions

	Rating and pricing	Underwriting and risk selection	Customer behavior modification	Claim triage and analytics	Loss control
Canada	79%	63%	42%	32%	32%
U.S.	90%	80%	61%	51%	39%



Next steps for insurers

Distinguish the bright stars from the black holes

The different regulatory and business cultural environments between the U.S. and Canada, such as attitudes toward price optimization, have already encouraged many Canadian insurers to venture more quickly into expanding data and analytics than a lot of companies across the border. But as technologies, regulation and markets continue to move on, Canadian insurers (and a growing number of U.S. carriers too) seem poised to seize further opportunities to use big data and advanced analytics to better quantify risk, streamline processes and improve customer experiences, or more likely a combination of all three.

Our experience suggests that the companies that will best harness the potential of this wider analytics universe for competitive advantage will recognize and follow three guiding principles.

1 Data are the primary source of value in analytics. 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.

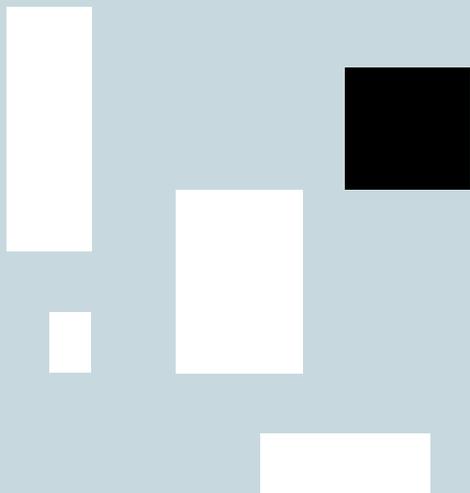
2 More data, in-depth analysis and new insights aren't the end game. They have to translate into something the business can understand, implement and monitor, from which it can derive and offer value. Otherwise, the work done is simply a technical modeling exercise.

3 Stay on top of the technology. Legacy company systems and networks will make it increasingly difficult to conduct business effectively in the advanced analytics age. New technologies that enhance analytical capability and system connectivity, including those coming out of the InsurTech movement, will have a greater role to play.

Further information

For more information about survey results, or to discuss the findings and how Willis Towers Watson can support Canadian insurers' ambitions for big data and advanced analytics, contact:

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