How is process automation changing the insurance actuarial function?

2020/2021 Global Automation in Insurance Report

Willis Towers Watson

How is process automation changing the insurance actuarial function?

2020/2021 Global Automation in Insurance Report

Contents

Background

Several drivers, including regulatory pressures, the need for greater business insights and cost challenges, have created rising demand within insurers to better use modern technologies, such as cloud computing and automation, to meet future needs. These factors have all been further accelerated by the COVID-19 pandemic.

A complicating factor is that insurers often have complex IT environments consisting of multiple systems and data sources that are not well connected, requiring lots of manual effort to make the processes work for strategic decision making. Often, expensive resources, such as actuaries, are responsible for this manual effort since this is the way that 'things have always been done'.

This not only means that processes are slow and costly, but also introduces significant risk of errors.

Equally, regulatory changes and cost reduction initiatives put significant additional pressure on an ecosystem that is already strained, making it even harder to meet the demands without a step change in approach. We are increasingly seeing insurers rely on automation to achieve the step change in capability that is required.

To investigate this trend, Willis Towers Watson ran a global Actuarial Reporting Automation Survey in 2020/2021 across life and property and casualty (P&C) insurers to explore how they are currently using automation in their life valuation/P&C reserving processes and where they aspire to use automation in the future.

Survey highlights

For the purposes of this summary report, key trends and the detailed findings emerging from the survey have been grouped into two sections:

- **Current industry trends**
- **Future industry aspirations**

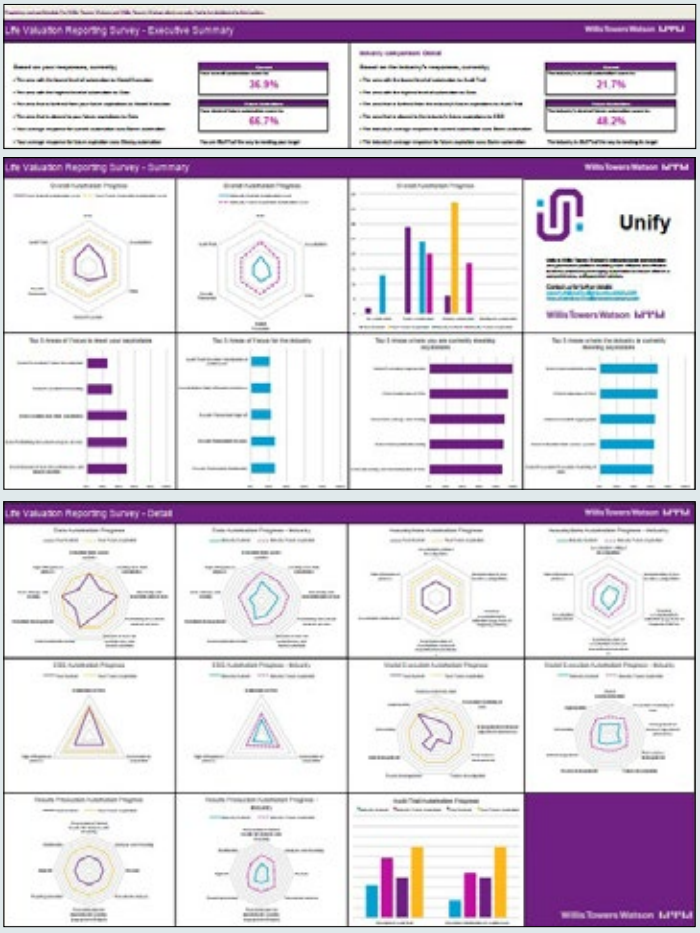
And then sub-divided into:

- **Insurance industry**
- **Life-specific observations**
- **P&C-specific observations**

Note that the scope of the survey covered 'Life Valuation Reporting' and 'P&C Reserving Reporting' processes.

In addition, automatically generated, detailed individual responses providing a comparison of each participating insurer's own answers with the industry averages were communicated to each insurer prior to this report being distributed (*Figure 1*). These reports provided a tailored view of how each company compared to the wider industry; Willis Towers Watson also held individual meetings with a number of these clients to further discuss their results and provide additional insights.

Figure 1. **Example individualized results distributed to survey participants**



Current industry trends

Overview

Increasing demands from management, auditors and regulators require insurers to provide more information in the same or shorter timeframes. This means the processes to create inputs, assumptions and results need to be as efficient as possible to allow for additional requirements within the working day timetable. However, insurers' dependence on multiple data sources and legacy systems causes knock-on delays throughout these processes. Such data issues often result in repeat work fixing the same problems cycle after cycle.

There is also a strong drive amongst participants to gain benefit from automation in it being able to provide greater agility in decision making, that is, deployment of automation to derive insights on the information reported, as well as it speeding up the generation of such data.

An issue, at source, is that the industry is still heavily reliant on Excel tools. These can be cumbersome to update and are prone to error. The areas that therefore require more automation are on either side of the actuarial calculation, where manual data processes and results extraction processes still plague insurers.

Life

Life insurers are familiar with utilizing automation around their model execution processes. Long model runs still cause issues for insurers, but the ability to batch process and schedule execution alleviates reporting pressures. Although a majority of insurers' initial focus is on automating the model execution process, we have seen insurers getting more value from automation when expanding to adjacent areas, such as model point grouping, allocation of IFRS 17 cohorts and economic capital processes, among others.

Life companies' overall current automation score was 21.5%*, meaning insurers answered "no automation" or "some automation" to the majority of questions on the web survey.

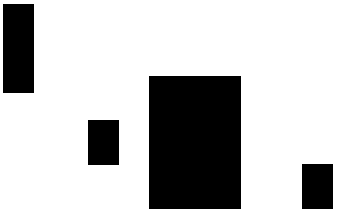
From the core areas of a valuation process, respondents said that assumption processes were the least automated, with an automation score of **16.0%**, whilst data processes were the most automated, with an automation score of **28.0%**. This is no surprise as assumption setting typically requires actuarial expert judgment. However, we note that assumption setting is a high priority area with respect to future aspirations; as such, there is still value to be gained here from looking to automate such processes.

P&C

P&C insurers are still struggling to incorporate late data or manual changes into their final reserve estimates and successfully govern and audit these changes for future reviews. In addition, P&C companies are more focused on using automation to support business decision making, and are less concerned with the speed of production compared to life companies.

P&C insurers' overall current automation score was 21.7%*, meaning they answered "no automation" or "some automation" to the majority of questions on the web survey.

From the core areas of current reserving processes, respondents said the engagement with senior management was the least automated, with an automation score of **10.8%**, while data processes were the most automated, with an automation score of **31.9%**. There is still a lot more automation insurers can add around their data processes, however, as this has been a key area of focus for years; it already receives a high automation score.



*See '*Appendix – survey details*' (page 20)

The current automation scores for life and P&C are similar, however do note that (as you would expect) a different tailored question set was provided within the survey for each business type, which focused on the specific core areas of a life valuation and P&C reserving process respectively; therefore a direct comparison of scores is not so straightforward. However, as can be seen from these scores, there are significant opportunities for insurers to embrace automation across both life and P&C. These scores also reflect the potential for life and P&C companies having different views on what is 'automatable'/what needs to be automated to achieve their desired end-state. For example, with life insurers having made good progress so far but having more potentially automatable processes in valuation reporting than P&C insurers, who themselves may have done less automation work to date but equally may have relatively less in their future plans for reserving automation.
The core message to take here is that both types of companies still clearly see the potential to grow in their respective reporting automation space; Willis Towers Watson are helping our clients with this by demonstrating new, exciting and valuable uses of automation beyond what many market participants think of as typical automatable processes.

Future industry aspirations

Overview

Many insurers have aspirational goals to fundamentally transform areas of their actuarial department over the coming years. From our experience, such ambitions are rarely met unless the whole company has a strong and clear vision for transformation. This vision needs to have complete and total buy-in from employees. Insurers need to adopt a culture of change that actively enforces and encourages this vision, otherwise there is high risk of wasted spend, low employee engagement and rejection of new systems and ways of working.

The industry at large recognizes the importance of the 'people' aspect, as part of any automation exercise. We also support this view in that automation can't solely be thought about as a technology play – it needs to span technology, processes and people to be effective and bring about real change in a business, with the focus on bringing people 'on the journey' especially important.

Insurers want the ability to quickly validate multiple data feeds coming from different systems and identify red flags earlier in the process. Insurers also want the ability to drill down into results in a faster, more granular and streamlined way. They say this ability, coupled with more dynamic management information (MI) and business information (BI), will help to derive greater value from results. Using an orchestration tool enables the creation of these insights at regular intervals across all processes.

Life

Life insurers are looking to further componentize/modularize their valuation process by using best of breed tooling for each element. Rather than feeling the need to keep all systems in-house under central IT control, insurers are looking to outsource or move to cloud-based solutions offered by specialist providers to derive value.

The life industry's overall aspirational automation score for the next five years was 49.1%*, meaning insurers answered "some automation" or "strong automation" to the majority of questions.

From the core areas of a valuation process, the top three areas where insurers aspire to more automation are: assumptions, audit trail and results production.

P&C

P&C insurers are looking to be able to perform a first cut of results faster in the reserving process, either using rules-based reserving or machine learning techniques to automate the initial results selection process. These will also enable early identification of which reserving classes need further investigation.

Insurers also want tools that make the best use of actuarial time. This includes spreading out deep dive analyses across the year, not performing a full review at each quarter and increasingly performing more off cycle analysis.

The P&C industry's overall aspirational automation score for the next five years was 44.9%*, meaning insurers answered "some automation" or "strong automation" to the majority of questions.

From the core areas of a reserving process, the top areas where insurers aspire to have more automation are: assumptions, audit trail and senior management engagement.

The impact of COVID-19 and various global 'lockdowns' has also accelerated the drive for automation within both life and P&C companies. The new working environments we are operating in have shifted focus towards greater appreciation of the value that automation can bring to such companies. Automation has rapidly moved up on the C-suite agenda over the last year, with many of these companies looking to actively start to action such plans in 2021/2022.

How companies approach their future automation aspirations will be key. There are many factors to consider across all of Technology, Processes and People (see page 13) as well as taking into account the 'time' dimension, that is, using automation to deliver 'quick wins' in the short term, versus fundamentally re-thinking their business through automation to drive longer term transformation.

*See '*Appendix – survey details*' (page 20)

Reimagine your insurance business with award-winning technology

Unify

Designed specifically for the insurance industry, Willis Towers Watson Unify connects and integrates all of the disparate systems an insurer may have.
It automates to enable processes to be completed more efficiently, freeing up expensive personnel to perform more beneficial, 'value-added' work and governs to ensure compliance, auditability and repeatability.

willistowerswatson.com/unify

InsuranceERM Americas Awards 2020 Winner
Unify – ERM end-to-end solution of the year

DataValidator

Willis Towers Watson DataValidator validates, cleanses and transforms data efficiently, preparing it for use in financial modeling and reporting processes. At each stage it generates detailed audit reports maintaining governance controls that support regulatory requirements.

willistowerswatson.com/datavalidator

InsuranceERM Awards 2021 Winner
DataValidator – Data solution of the year

For more information about how we can help you to reimagine your business, please contact your Willis Towers Watson consultant or email **ICT@willistowerswatson.com**

willistowerswatson.com

Willis Towers Watson

Detailed findings

Current industry trends

Overview

Insurers are looking to evolve actuarial processes to achieve three key goals: greater efficiency and integration; more granular analysis; and gaining more frequent and timely insights from their data. Unfortunately, achieving those goals is a challenge due to a number of barriers, including limited time, limited staff and poor data quality. To achieve these objectives, we firmly believe the first step is to leverage automation in order to create the time and space necessary to invest in and achieve these ambitions.

Data quality and validation remain key pain points for insurers. Insurers want the ability to quickly and automatically gain confidence in the data.

Linked to this, insurers still have a strong reliance on Excel. Spreadsheets typically require manual updates and adjustments which make them prone to human error and cumbersome to update. Routine tasks become time consuming and expensive. Although data processes are among the most automated elements reported by survey respondents, there are still many data issues insurers are consistently dealing with, including missing data, inaccurate data and poor data quality (that is, data inconsistencies between applications such as experience studies and financials).

The majority of insurance groups have subsidiary teams preparing results, which are then challenged and reviewed by a central/group team. There is still a strong split between insurers either having a centralized process rolled out across the subsidiaries, or instead having subsidiaries with complete autonomy over their own methodology. In each situation, we have found implementing a robust automation and governance platform enables transparency across all processes and ensures any specific subsidiary deviations are captured.

With increasing reporting requirements, teams are required to provide a solid review and challenge of all results. Using automation across the reporting processes reduces the time taken for results to be reported centrally and allows more time for review. In addition, automation can be used to inform the central review, focusing attention onto key segments and assumptions.

Currently though, the reliance on multiple systems, either due to legacy processes or acquisitions, has often left insurers with a platform that has poor interactions between systems and a lack of controls/quality checks.

From a timing perspective, the typical requirement for insurers is to report results quarterly. Some insurers report on a monthly basis internally, and this adds pressure on already restricted resources. Consolidated reporting timelines are also reducing, placing even greater pressure on the reporting process.

Internally, insurers are often reliant on other teams to meet these timeframes, for example: Data, Finance, Administration, Asset Managers and Accounting. Externally, insurers may be reliant on policy data management, third party administrators/back office admin, tool/software developers, financial data sources or asset data providers. The delays between teams, who provide multiple data sources, cause an issue for insurers as they add time to the working day timetable without any control of the process by the actuarial team, further generating the potential for mistakes and errors. New and/or changing reporting requirements also add to the strain.

Insurers commented that they still believe there is insufficient automation across their processes, and that they are still dependent on actuaries to perform repetitive, manual data processing tasks. This is an inefficient use of highly skilled resources and can additionally lead to job dissatisfaction and retention issues.

These issues all make it harder for the actuarial function to act as a true business partner to drive commercial value. Using automation to derive more insights and analysis from the data inherent in these reporting processes will help to alleviate this.

Life

Many life insurers have used some form of automation localized around their model execution processes for a number of years. Long model runs still cause issues for insurers, but the ability to batch process and schedule execution substantially alleviates the reporting pressures. The areas that still require more automation and that insurers are particularly focusing on are the pre- and post-heavy model run processes. Manual data processes and cumbersome results extraction and summarization processes are still plaguing many insurers.

Some insurers also mentioned it is difficult to maintain a live view of market information, for example ESGs, due to the process to create these data feeds taking time to update.

The benefits of automation can be realized across the whole valuation process.

Although a majority of insurers' initial focus is on automating the model execution process, we have seen insurers getting value from automation around model point grouping, allocation of IFRS 17 cohorts and economic capital processes, among others.

Life case study – UK bulk annuity writer

The client recognized its processes were hampering its ability to deliver results as quickly as required. It was incapable of keeping up with increased reporting demands and concerned about the manual time and effort spent in trying to keep up.

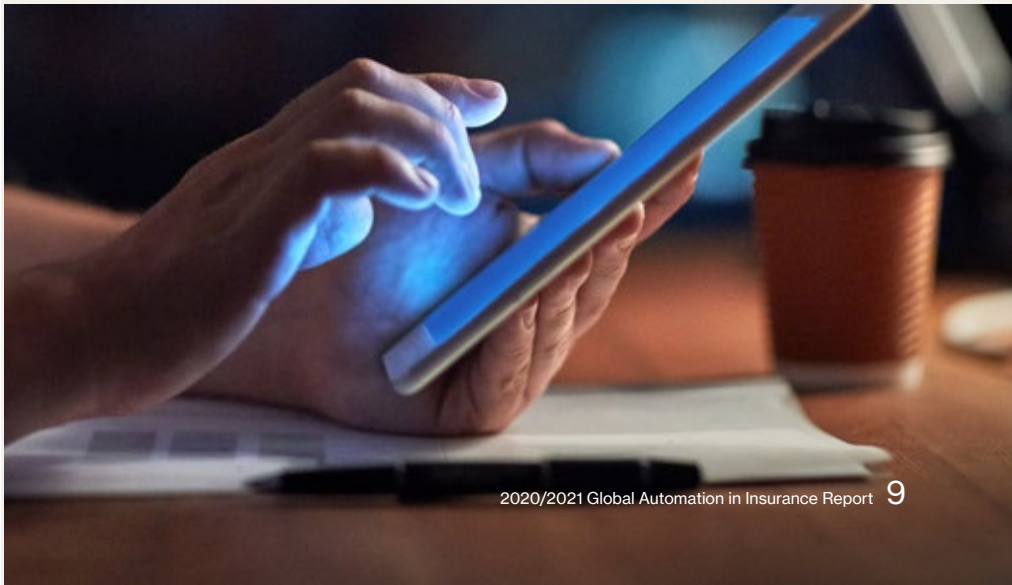
There was also acknowledgment that the client was not able to get optimal benefit from running models using its cloud-based grid capacity as runs were being submitted individually or in small batches.

We worked with the client to build and deploy a faster, more controlled reporting process, as well as extracting additional benefits through building a future proof actuarial system. Through partnering together with end-users and subject matter experts, we designed a solution that met its business requirements and that leveraged our experience to ensure process 'best practice' for the company.

One of the first priorities was to target the most acute client pain points where maximum benefit could be delivered as early as possible. For example, the client's monthly analysis of movement (AoM) reporting process required ~30 model runs that a person had to manually set up, run, extract results from and perform all subsequent processing activity.

The final solution included full automation of the process, through deployment of our Unify platform, which allowed the client to not only significantly reduce manual effort but also allowed it to redistribute time and effort for analyzing the results. Targeting the AoM process early helped to accelerate the investment on the overall project. The solution efficiently utilized cloud-based grid capacity, was able to run on a 24/7 schedule, and produced a full audit trail, including the results of all review points in the process.

This all meant that time was created for the actuaries to focus on more 'value-add' work such as checking the validity of assumptions and results, rather than performing the process of running models – ultimately, all leading to a faster process with better quality reviewed results at lower cost. This resulted in a new process which ran in the half the time and required significantly less manual effort to perform.



The current automation score for each core area of a life valuation process:

28.0% Data

23.5% Model execution

22.5% ESG

17.0% Results production

16.2% Audit trail

16.0% Assumptions

The life insurance industry's overall current automation score was

21.5%

The following specific areas are where life insurers currently use the most automation:

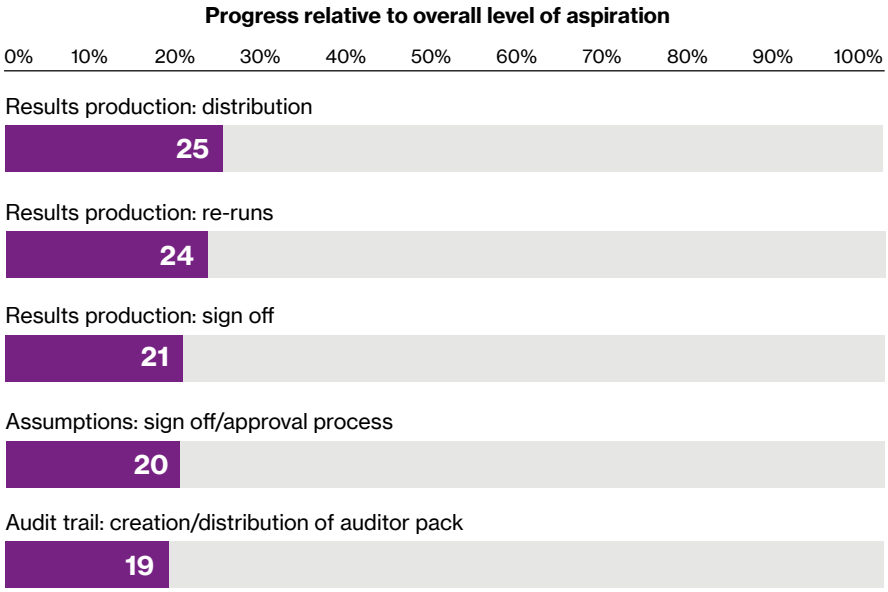
- Model points/clustering
- Aggregation of model results
- ESG calibration
- Data extraction from source systems
- Model batching of runs

These were the five highest scoring detailed areas from the 37 areas questioned on the 'Life Valuation Reporting' survey.

Survey participants received a detailed breakdown of their results compared to industry averages/ top focus areas etc. for both current and future aspirations.

Out of the 37 detailed areas questioned on the survey, the following five areas are where insurers have currently made the least progress towards their future level of aspiration (*Figure 2*).

Figure 2. **Top five specific areas of focus for automation in the life industry**



P&C

Most P&C insurers said senior management are now highly engaged with the reserving process or are becoming more engaged. Typically, senior management provide review and challenge of results through attendance at a reserving committee. There is additional pressure to provide management with informative, easy-to-interpret exhibits. Often, for example, management wants a view of results earlier in the working day timetable or at more regular intervals. Using robust automation and process orchestration tools allow insurers to create exhibits without using up actuarial resources.

A recurring issue is that insurers are still struggling to refresh late data or manual changes into their final reserve estimates and audit these changes for future reviews.

Many of the problems stem from reliance on multiple data sources and coordinating external/internal teams, which can often lead to knock-on delays through the reserving process. Insurers are trying to combat this using data process automation.

The situation is not helped by the fact that the majority of insurers still rely on Excel for processing results. However, a few are moving towards a dashboard solution (Power BI was most commonly mentioned). More insurers are also using SQL and SAS for data processes to load and transform into their data system.

P&C case study – London market managing agency

The client's best estimate and earned reserving process included lots of manual steps, multiple data feeds and clunky Excel exhibits. The existing process took around seven working days for management to receive a first view of results. Management were keen to reduce this down to one working day.

The client hired a reserving actuary to focus on transformation, who made some significant changes before engaging with us, creating exhibits in Tableau dashboards and processing data in SQL. As well as these key changes they wanted to use process orchestration software to automate all the 'handle turning' processes that were currently being performed by the reserving team.

Through using the combined automation platform of Unify and DataValidator, the team is now able to produce a first cut of results, with accompanying management dashboards, within less than a day of data being available.

Through collaboratively working with the reserving team, we completely transformed the process. DataValidator was used to create robust data checks and transformation at all stages in the process. Wrapping Unify around the whole process allowed for early detection of red flags and added governed user reviews, a function the client described as: "Streamlining the reserving process and freeing up user time for analysis."

The final solution requires limited human interaction, which means the process can be run outside of business hours to further speed up the processing of results. Unify-enabled rules-based reserving produces an informed view of the 'first cut of results on day 1' and, coupled with an enhanced Actual versus Expected diagnostic, enables users to quickly and efficiently focus their attention on the areas of most value.

As well as the above benefits, the solution enabled quick and automatic refreshes of interactive dashboards, giving the client a live view of any methodology changes and the impact on reserves.

The current automation score for each core area of a P&C reserving process:

31.9% Data

22.1% Results production

22.0% Loss calculations

14.6% Assumptions

13.8% Audit trail

10.8% Senior management engagement

The P&C insurance industry's overall current automation score was

21.7%

The following specific areas are where P&C insurers currently use the most automation:

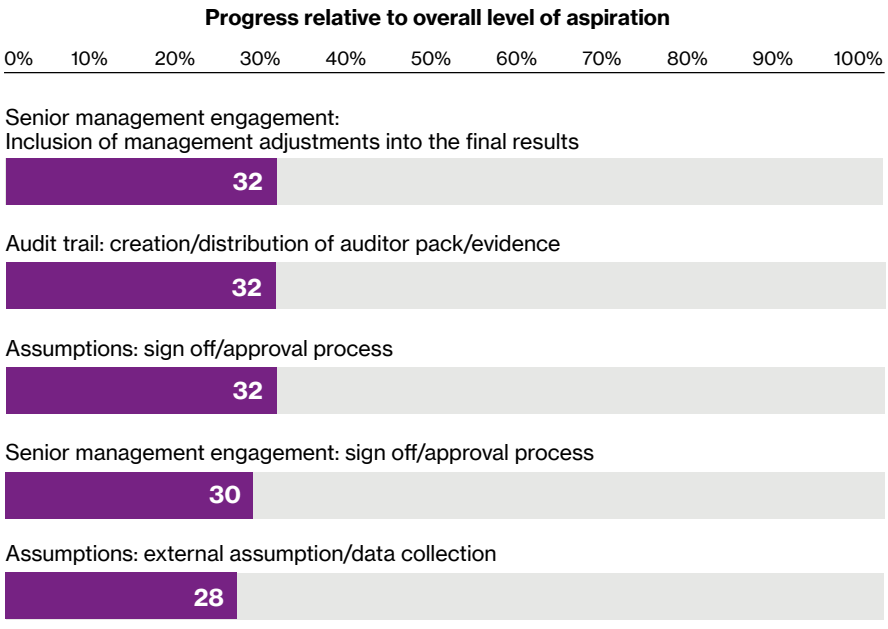
- Data extraction from source systems
- Cleansing and transforming data
- Loading of transformed data into another application for analysis
- Roll forward of prior models to account for new exposure and production of high level summaries of reserves
- Incurred but not reported (IBNR) claims

These were the five highest scoring detailed areas from the 35 areas questioned on the 'P&C Reserving Reporting' survey.

Survey participants received a detailed breakdown of their results compared to industry averages/ top focus areas etc. for both current and future aspirations.

Out of the 35 detailed areas questioned on the survey, the following five areas are where insurers have currently made the least progress towards their future level of aspiration (*Figure 3*).

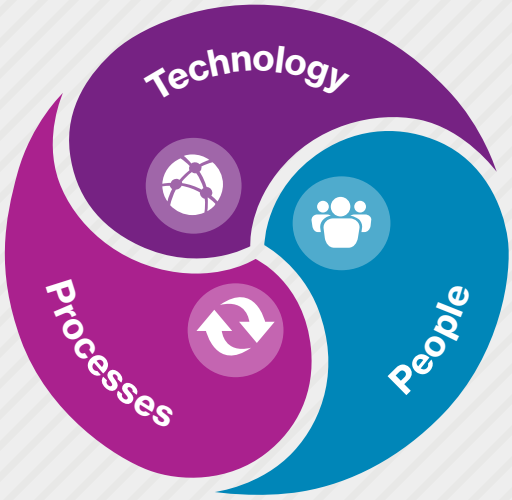
Figure 3. **Top five specific areas of focus for automation in the P&C industry**



The importance of Technology-Processes-People

Automation is not only about the technology and selecting the right automation tool for the job. Insurers need to consider all possibilities when looking at what processes to automate and the level of re-engineering required in those processes. All team members need to be engaged throughout an automation project to ensure they adopt and use the solution in the best possible way.

Figure 4. **The virtuous circle of aligning technology, processes and people**



Technology

- Many companies have invested heavily in technology, but haven't yet paired it with people and processes, and therefore may not be fully benefiting from the expensive technology they've purchased
- The technology selected should be future proof, scalable and maintainable and all 'hidden' costs considered (for example, ongoing costs of IT support)
- Companies are moving to a 'plug and play' type approach, with specialist tools being used for specific functions, rather than a one-size fits all tool

Processes

- Processes should not be considered in isolation; a consistent methodology for process re-engineering should be applied across the business to ensure consistency and transferability of skills between processes
- Companies need to determine the best way to automate different elements of the process. Either fix the underlying process and then shift that process into automation – 'Fix and Shift' – or quickly shift the existing process into automation and fix it incrementally later – 'Shift and Fix'. This is not always a binary choice and should be considered on a spectrum
- Don't just consider the 'happy path' of the process – we find 75% of an automated process build is dealing with the scenarios when 'things go wrong'

People

- Leadership needs to set a clear vision, for which they are accountable, in order to ensure success. They also need to embed a culture of change such that any automation is given the right focus and not just worked on 'as and when'
- Changing the hearts and minds of employees and identifying 'champions of change' is key to ensuring the embedding of automation in a company
- The target operating model should be robustly challenged with regard to how roles will change within the team. Such changes should be communicated transparently with the business

Future industry aspirations

Overview

With demands from management, auditors and regulators increasing and deadlines becoming tighter, it is more important to use resources effectively and ensure there is no 'dead' time within the reporting process.

As expected, many insurers wish to automate away manual 'handle-turning' activities, but the driver here isn't solely cost reduction. In most cases it is also viewed as augmentation of the workforce, which once freed from routine tasks, can be deployed to more value-add activities and/or to mitigate potential for errors inherent in executing manual processes.

This leads to a general sense of uncertainty in the next few years around what an ideal team size should be in a function where automation is deployed. The general consensus among respondents is that valuation/ reporting teams should reduce in size, but there isn't a clear industry view on the magnitude of change.

The aspirations of individual insurers seem to very much depend on their company culture, and where the company falls on the spectrum of views regarding automation as a purely cost reduction exercise versus adding value and acting as an enabler.

The industry at large also recognizes the importance of the 'people' aspect, as part of any automation exercise. We also support this view in that automation can't solely be thought about as a technology play – it needs to span technology, processes and people to be effective and bring about real change in a business, with the focus on bringing people 'on the journey' especially important.

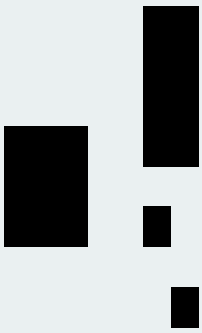
Insurers want an easy-to-use orchestration platform that connects all systems and tools used in the process. Using a process orchestration platform enables integration between multiple systems. This also reduces key-person risk.

Notably, insurers want the ability to quickly validate multiple data feeds coming from different systems. Robust, audited data solutions are key to a successful data process to ensure data quality and validity across a number of data types.

Time pressures mean insurers are looking to get results as soon as possible in the process. This entails using data sources to create informative, interactive dashboards that are quick to produce using automation solutions. As well as the ability to automate current processes using a process orchestration tool, insurers need a solution that is flexible and easy to maintain to allow for inevitable changes in business requirements. Insurers are looking to operate in an audit-efficient way to ensure proper audit trails and transparency exist across their processes.

Many insurers have aspirational goals to fundamentally transform areas of their actuarial department over the coming years.

For example, by setting ambitious objectives such as "complete removal of Excel" or "alignment to a standard reporting template across all lines of business". From our experience, such ambitions are rarely met unless the whole company has a strong and clear vision for transformation of this kind. This vision needs to have complete and total buy-in from all employees, from key stakeholders to 'on the ground' resource. Insurers need to adopt a culture of change that actively enforces and encourages this vision, otherwise there is high risk of wasted spend, low employee engagement and rejection of new systems.



Life

Life insurers are looking to perform more model runs within the same timelines and have greater demand for 'what-if' capability, heightened by the pandemic. This means the processes to create inputs, assumptions and produce results need to be as efficient as possible to allow long model runs to take place within the working day timetable. Insurers want to reduce the number of ‘wasted’ model runs. The ability to check inputs up front reduces the likelihood of re-running models and using an automated solution (with the ability to allow for intervention/expert judgment as necessary) reduces human error further.

With the increased number of required model runs, insurers are looking at alternative grid solutions to optimize runs across the working day timetable.

In particular, some insurers are using cloud-based offerings to quickly increase grid capacity. Insurers see the longer-term computation requirements for model runs ever increasing – and therefore need to think about long term scalable solutions which will continue to deliver on an ever expanding set of requirements (both regulatory and internal).

In addition, increased regulatory requirements pushes focus onto processes on either side of the actuarial models to ensure these are as efficient and flexible as possible. Companies aspire to automate and simplify their processes to reduce the burden of pre- and post-processing of files given the expectation of increasing run schedules. As some insurers are struggling with such processing now, these problems will only be exacerbated as reporting requirements continue to expand over the coming years. Indeed, for some companies this is also driven by the need to harmonize systems and processes across different portfolios, such as those that have become part of the same organization through acquisition.

Life insurers are looking to further componentize/modularize their valuation process by using best of breed tooling for each aspect. Rather than feeling the need to keep all systems in-house under central IT control, insurers are looking to outsource or use cloud-based solutions offered by specialist providers to derive value. This trend is due to some companies viewing IT as a non-core skill better performed by a specialist third party. However, there are other companies that are moving in the opposite direction, that is, preferring to build their own systems, which can avoid third-party license fees at the expense of needing to retain broader skill-sets in-house.

In order to make a modularized process as seamless as possible for the end 'business-as-usual' user, insurers need to integrate and orchestrate systems via APIs (Application Program Interfaces), cloud and simple web interfaces such that the user journey is not fragmented across multiple third party non-federated applications.

The aspirational automation score within the next five years for each core area of a life valuation process:

56.5% Data

49.1% Model execution

47.6% Results production

47.5% Audit trail

43.7% Assumptions

43.5% ESG

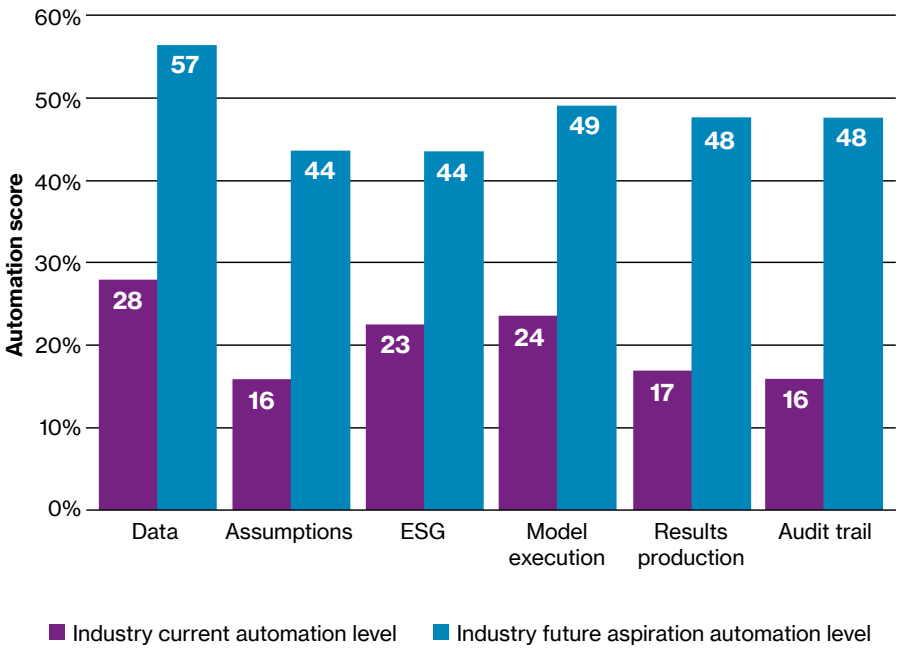
The life insurance industry's overall aspirational automation score for the next five years was

49.1%

These are the top five areas where life insurers aspire to use the most automation in the future (with many insurers already making progress on these goals):

- Data extraction from source systems
- Cleansing and transforming data
- Loading data from subsidiaries
- Model points/clustering
- Execution/batching of model runs

Figure 5. **Comparison between current and future automation score across different aspects of life insurance**



As a relative percentage between current and future score, **Audit Trail** is the area that is furthest from the life insurance industry's future aspirations.

As a relative percentage between current and future score, **ESG** is the area that is closest to the life insurance industry's future aspirations.

P&C

Senior management is keen to have a view of results earlier in the reserving process without using up actuarial resources to create exhibits. With the availability of more data, management want more insights into the business from the actuarial function.

As soon as data is available, the reserving team wants a quick turnaround before it can start looking at the results and adding value through expert actuarial judgment. Often the reserving team takes a number of days to process the data before it can start making results selections. As part of data processing, red flags should be identified early on to inform the team which reserving classes need further investigation. Increasingly this is being done through interactive actual versus expected and analysis of change dashboards. Robust consolidation processes, the use of data templates and structured data capture processes are also alleviating pressures on tight timelines.

Insurers are looking at the ability to perform a first cut of results faster in the process – either using rules-based reserving or machine learning techniques to automate the initial selection process. We are increasingly seeing insurers adopt automation solutions in order to perform automatic selections.

The addition of multiple reserving bases, arising from regulatory or other changes, means insurers are having to perform more allocation steps.

Insurers must be careful when designing a process to perform the different allocations to ensure the solution allows easy interpretation of movements. The solution used must be robust and scalable across bases.

We see the reserving process creating very different processes for on-cycle (the process that begins with the data cut-off and ends with quarterly/annual financial reporting) and off-cycle reserving. On-cycle reserving will be quick, controlled and will provide intuitive management information that simplifies the understanding and communication of results. Off-cycle, companies will be able to actively monitor development as claims are reported, take deep dives into segments with exceptional results and will tweak the algorithms that will be used to quickly produce the on-cycle results.

The aspirational automation score within the next five years for each core area of a P&C reserving process:

58.9% Data

46.9% Loss calculations

45.8% Results production

39.4% Assumptions

35.7% Audit trail

28.5% Senior management engagement

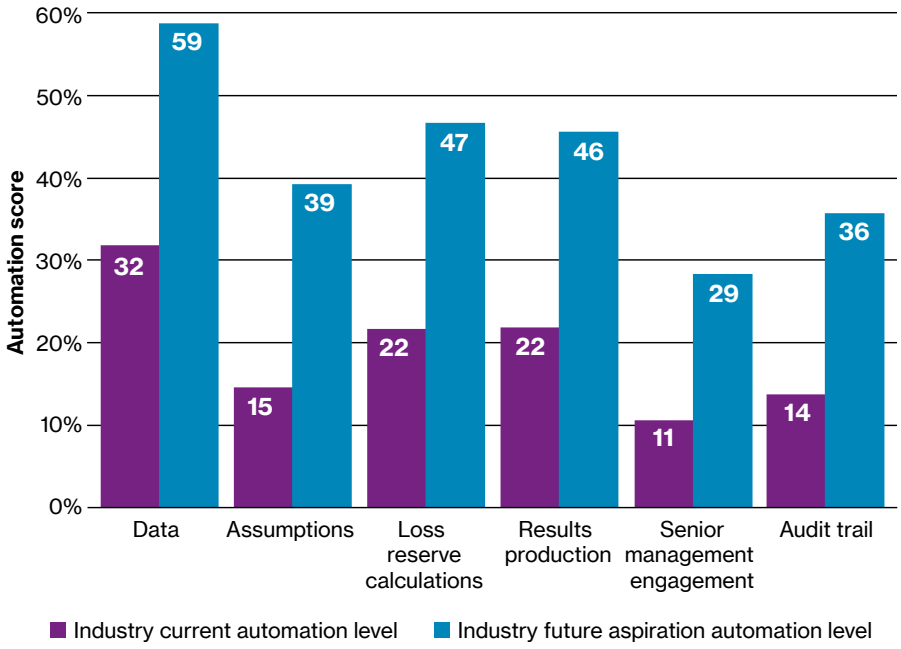
The P&C industry's overall aspirational automation score for the next five years was

44.9%

These are the top five areas where P&C insurers aspire to use the most automation in the future (with many insurers already making progress on these goals):

- Data extraction from source systems
- Cleansing and transforming data
- Loading of transformed data into another application for analysis
- Reconciliation of cleansed and transformed data
- Performing movement analysis on data

Figure 6. **Comparison between current and future automation score across different aspects of P&C insurance**



As a relative percentage between current and future score, **Assumptions** is the area that is furthest from the P&C industry's future aspirations.

As a relative percentage between current and future score, **Data** is the area that is closest to the P&C industry's future aspirations.

Conclusions

Our survey highlights the gap between the insurance industry's current use of automation and where it aspires to be in the next five years. Companies have an opportunity to be an early adopter of automation and reap the benefits while the competition catches up.

The results are set against the backdrop of increasing regulatory, management and auditor demands that are putting pressure on actuarial processes, including the need for transparency across all actuarial calculations.

Consequently, insurers are keen to improve their processes using automation and other controls. Many are moving to more centralized ways of working to ensure consistency across the company. Implementing an automation solution across the business is helping to accelerate this trend.

Insurers will be looking at platforms which help integrate systems, provide audit and governance across the process and leverage additional computer power to produce results faster.

In our experience of working with both life and P&C companies on automation and transformation projects, a few factors could be key to creating compelling business use cases and a greater likelihood of successful outcomes:

Processes, People and Technology

Automation is not just about technology and selecting the right tool for the job. Insurers need to consider all possibilities when looking at what processes to automate and the level of re-engineering required. The whole team need to be engaged throughout an automation project to ensure they utilize the solution in the best possible way.

What processes to automate

The obvious indicators that a process should be automated are if it is: repetitive, rules-based, prone to error and is time sensitive. In addition, insurers should consider the short-, medium- and long-term needs of the business to determine the right balance between quick win automation (critical in building early momentum) versus longer-term more fundamental transformation.

Start straight away

There is no time like the present! Insurers should be looking at bringing automation into their business as soon as possible. In particular, with the so-called 'new normal' introduced by COVID-19, this is an opportune time to be considering embedding automation into your business.

Appendix – survey details

Representatives from **52 life** and **66 P&C** companies across the world, including some of the largest multinational and domestic insurers, participated in the survey.

We are extremely grateful to those who took part, particularly given the current challenges associated with responding to the COVID-19 pandemic.

Life insurers responded to a web-based survey with questions covering:

- Data processes
- Assumptions
- ESG
- Model execution
- Results production
- Audit trails

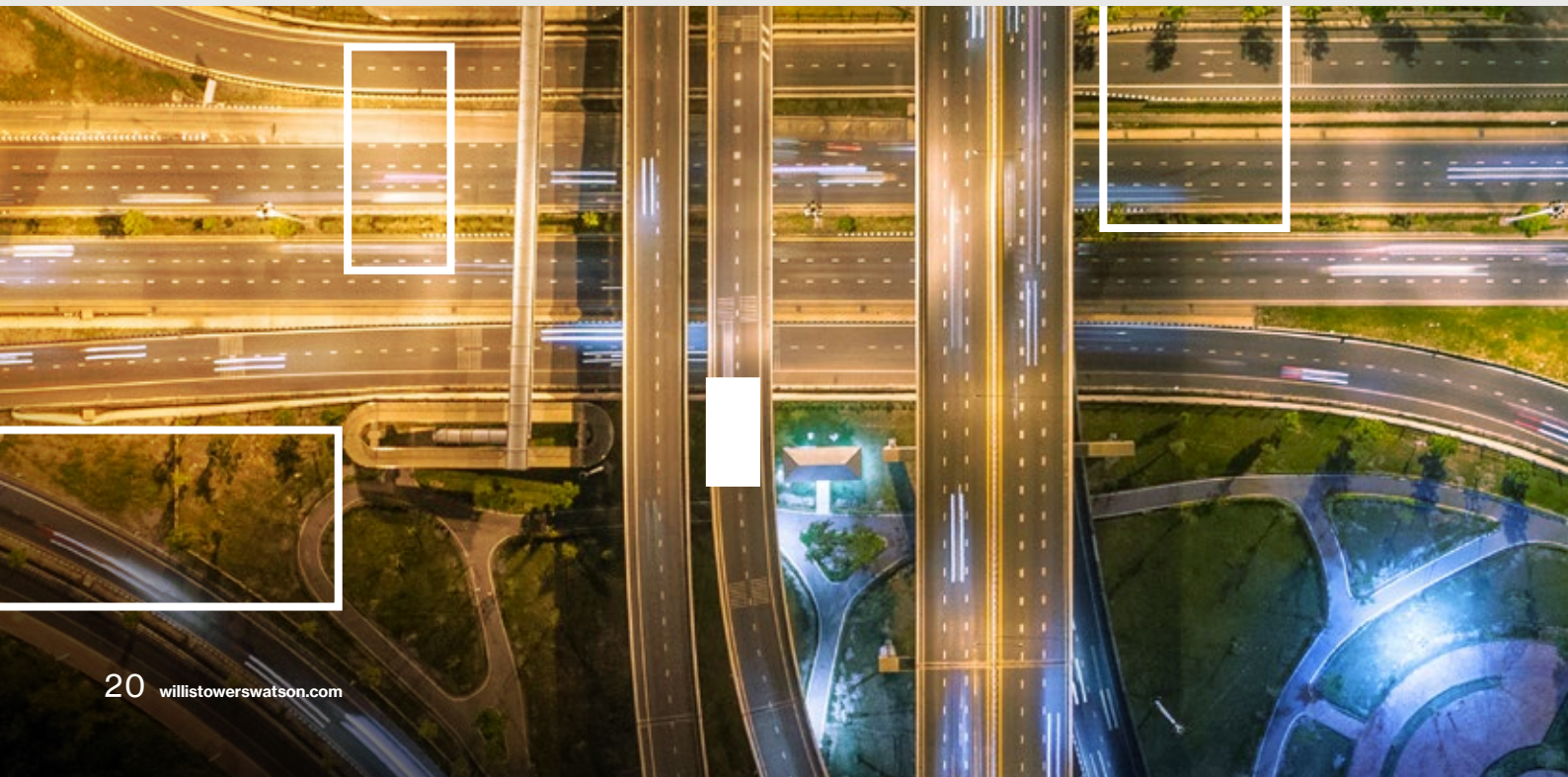
P&C insurers responded to a web-based survey with questions covering:

- Data processes
- Loading/setting of supporting assumptions
- Loss reserve calculations
- Results production
- Senior management engagement
- Audit trails

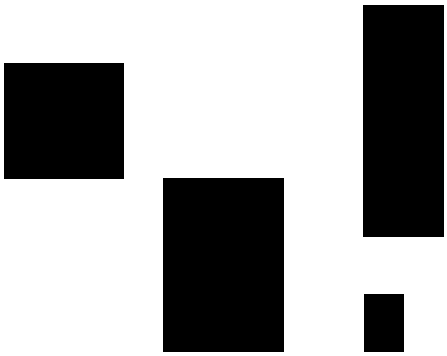
Within each section of the surveys, respondents were asked questions regarding the level of automation they currently use and what they would like to achieve over the next five years. Answers were presented in the form of:

- No automation
- Some automation
- Strong automation
- Intelligent automation
- Not applicable (where relevant)

These answers were then plotted on a scale by Willis Towers Watson and turned into an 'automation score', where 0% represents no automation and 100% represents full intelligent automation.



Willis Towers Watson focuses heavily on business process excellence and has market leading tools and expertise to help any insurer on the road to automating their business.



For more information, please contact:

Joe Milicia
Global Proposition Leader
Business Process Excellence,
Insurance Consulting and Technology
joseph.milicia@willistowerswatson.com

Max Drannikov
Global Proposition Leader
Business Process Excellence,
Insurance Consulting and Technology
max.drannikov@willistowerswatson.com

Tom Beasley
Technical Product Leader
Insurance Consulting and Technology
tom.beasley@willistowerswatson.com

Holly Layton
Associate Director
Insurance Consulting and Technology
holly.layton@willistowerswatson.com

About Willis Towers Watson

Willis Towers Watson (NASDAQ: WLTW) is a leading global advisory, broking and solutions company that helps clients around the world turn risk into a path for growth. With roots dating to 1828, Willis Towers Watson has 45,000 employees serving more than 140 countries and markets. We design and deliver solutions that manage risk, optimize benefits, cultivate talent, and expand the power of capital to protect and strengthen institutions and individuals. Our unique perspective allows us to see the critical intersections between talent, assets and ideas – the dynamic formula that drives business performance. Together, we unlock potential. Learn more at willistowerswatson.com.

willistowerswatson.com/social-media

WTW-HP-2021-0492

willistowerswatson.com

Willis Towers Watson