RGA Global Claims
Technology Survey 2019

Global Claims Technology Survey 2019

Artificial Intelligence (AI), chatbots, and wearables are just some of the technologies increasingly embedding themselves into our lives, and the insurance industry is working to employ these technologies as part of or throughout the product life cycle.

RGA recently conducted a global survey to determine the extent to which life and health insurers currently utilize technology throughout the claims process in order to improve customer engagement, claims settlement outcomes, or the overall experience. Questions around technologies applied in the underwriting process were also included, mainly to draw comparative conclusions between these two functions. The survey, which was provided in three languages - English, Spanish and Chinese - was conducted online and responses collected from November 2018 through to January 2019.

This report contains the key findings of the survey (as aggregated results) in the following areas:

- The adoption of technology in the claims process
- A comparison with underwriting
- Future technology innovations to be expected in the claims function
- Overall summary and conclusions drawn from the responses

RGA conducts surveys as part of our commitment to our clients and their efforts to better serve their markets. The 107 responding companies are located throughout the world. Asia was the best represented region, with 47 participants. A list of all participants can be viewed at Appendix A. Some companies had more than one response from different functional areas and all the responses are included in the reporting.

We thank all the respondents for sharing their valuable insights into this important topic, and we sincerely appreciate your support.

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Executive Summary

A revolution is taking place and we are all part of it. This is the digital revolution, or fourth industrial revolution as it is sometimes called. Digital technology is everywhere: most of us carry a smartphone, many of us count our steps and track our fitness on wearable devices, and when we contact a service provider, are we really sure that we are dealing with a person or could we be communicating with a chatbot. This is the world we live in today.

There are many examples of these technologies being used in the insurance industry, but we have seen little evidence to suggest they are being used widely to facilitate the life claims process. We surveyed 107 clients from around the world to test this assumption and determine how many life insurers had adopted technology into their claims process or have plans to do so.

The results of our survey suggest that at present, technology is not widely used in the claims process. Survey respondents reported 52% have mobile apps by which policyholders can access and make general service changes to their policy online. However, only 35% of respondents have claims technology functionality available to policyholders.

When it comes to the decision-making and risk management aspects of the claims process, the figures for adoption of technology are smaller again: just 26% of respondents use an expert claims system to assist in decision-making. A minuscule 3% of responding companies, all of which are in Asia, have added an element of self-learning to the expert claims system.

The use of wearables and chatbots as part of the claims process is currently in its infancy. RGA's survey findings confirmed that out of 107 responses, only 6% reported using wearables data in the claims process and 8% for the UW process. Similar figures were reported for chatbots – 7% for claims and 5% for the UW process.

It is concerning that most companies that have introduced expert claims systems do not believe that they are effective, despite 70% having been developed in-house. However, there are clear customer benefits: shorter end-to-end times and improved customer experience were identified as the main benefits from the introduction of a claims system.

When it comes to technology, although the utilization of technology by the claims function does not yet compare favorably to our colleagues in underwriting, we may not be as far behind as we had anticipated. About 40% of respondents indicated they use an expert underwriting system, compared to 26% using an expert claims system. 5% of respondents use AI in their underwriting solution compared to 3% in claims. Surprisingly there is less satisfaction with the effectiveness of expert Underwriting systems.

Things, however, may be about to change: our survey found that 71% of respondents will be introducing new or additional technology into the claims process, and 45% of these new systems will be going live by the end of 2020.

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The implementation of broad technology strategies using elements of expert systems, AI, and chatbots is common, and there is additional interest in wearables playing a role in claims solutions.

Approximately 15% of respondents have no plans to introduce technology into their claims process. This is usually a result of competing priorities within their business.

Whether the adoption and implementation of various technology strategies in the claims process will be a competitive advantage going forward, only time will tell.

The Big Question: Does the Life Insurance Industry Use Technology?

A little over half (52%) of the respondents reported having multi-channel policyholder access, including mobile applications that allow at least basic functionality such as viewing policy information. All of these were available through Apple's IOS, and all but two had Android capability.
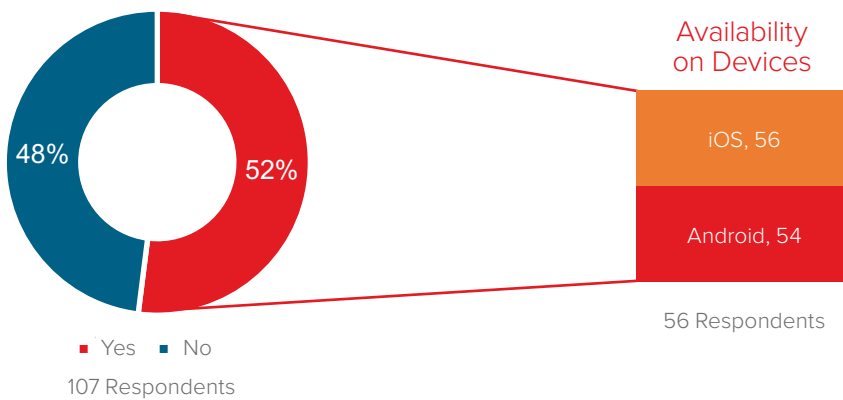

Availability on Devices

iOS, 56

Android, 54

56 Respondents

48%

52%

■ Yes ■ No

107 Respondents

Figure 1:

Insurers with Multi-Channel Policyholder Access: Mobile Apps

1. Does Claims Use Technology?

Of the 56 respondents with a policyholder technology interface only 37 have claims functionality within their application – just 35% of total respondents.

We asked claims managers what claims functionalities were available within the applications. As illustrated in Figure 2 (below), the applications allowed for claims notifications and for real-time updates of claims statuses. A small number also supported features such as live chat and location-based services.
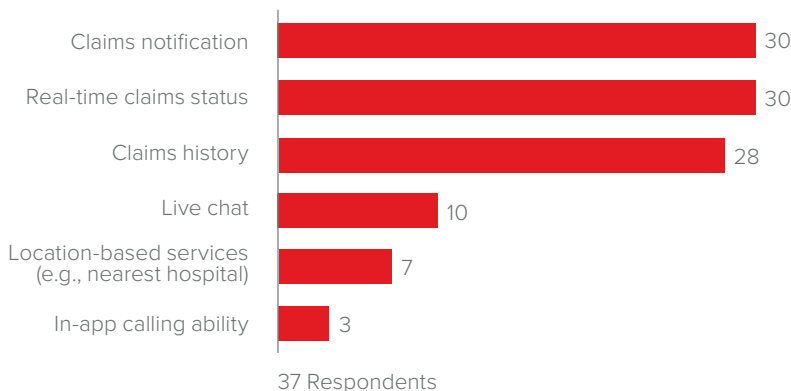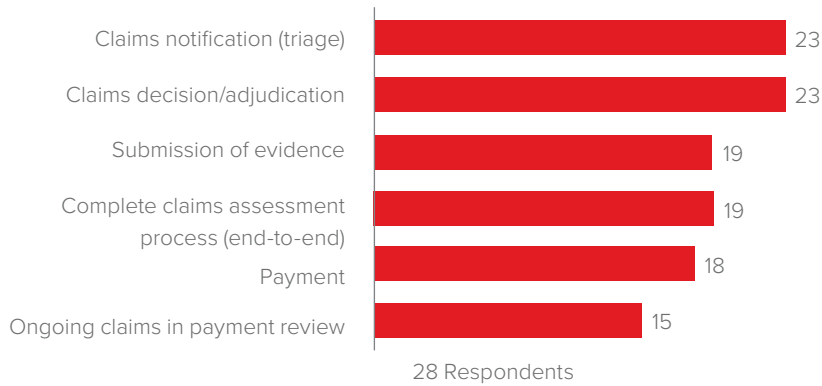

Functionality	Count
Claims notification	30
Real-time claims status	30
Claims history	28
Live chat	10
Location-based services (e.g., nearest hospital)	7
In-app calling ability	3

37 Respondents

Figure 2:

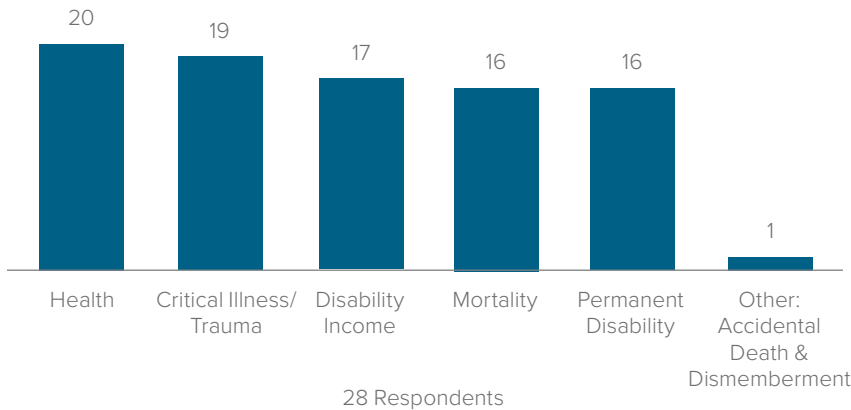*Claims Functionality Within Apps*

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Claims Management

Approximately one in four respondents (28%) have an expert claims system to assist in the management and settlement of claims, and just 19 (17.7%) of those cover the complete end-to-end claims process.

Category	Value
Claims notification (triage)	23
Claims decision/adjudication	23
Submission of evidence	19
Complete claims assessment process (end-to-end)	19
Payment	18
Ongoing claims in payment review	15

28 Respondents

Figure 3:

Part of the Claims Process Utilizing Technology Applications

We were somewhat surprised to see the broad spread of benefits being processed through expert claims systems. Anecdotal evidence had suggested that claims systems were concentrated on health and mortality benefits.

Category	Value
Health	20
Critical Illness/Trauma	19
Disability Income	17
Mortality	16
Permanent Disability	16
Other: Accidental Death & Dismemberment	1

28 Respondents

Figure 4:

Benefits Processed Through Expert Claims Systems

The life insurance industry has clearly been slow to react to the changing technology environment. Just over half of respondents have mobile apps for consumers, and many have no functionality to support claims processes.

In the life insurance industry we regularly talk of the coverage gap, but our offerings need to meet customer needs throughout the life of the policy, not just at the start of the journey where ease of on-boarding and low price seem to be the main focus. It is crucial that customers enjoy the same focus on innovation and service throughout the product life cycle, including at claims stage. We expect customers will increasingly demand this.

How Advanced Are the Solutions?

The majority of responding companies which have introduced expert claims systems did so in the last five years. Only two had some form of expert system prior to the year 2000.

1990s	2002-2012	Last 5 years
2 Respondents	7 Respondents	16 Respondents

28 Respondents

Figure 5:

Implementation of Expert Systems

The majority of the technology solutions (71%) were built in-house and another 25% are using customized proprietary solutions. Only 4% were using off-the-shelf proprietary solutions.

In addition, just three respondents, all in Asia, indicated that their expert claims systems contain some element of self-learning. AI's role is set out in Figure 6 below:
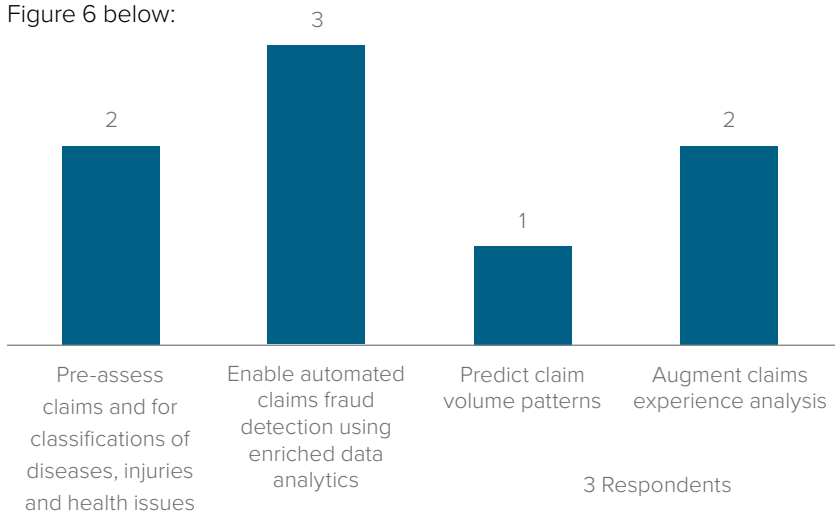
2	3	1	2
Pre-assess claims and for classifications of diseases, injuries and health issues	Enable automated claims fraud detection using enriched data analytics	Predict claim volume patterns	Augment claims experience analysis

3 Respondents

Figure 6:

Role of AI in the Claims Process

Sixty-one percent of respondents indicated no limits are set on the use of their expert claims system, meaning that all claims received pass through their system. However, this does not mean that the system is "straight-through processing," so it is likely that there are internal parameters for referral to a claims assessor. The remaining 39% have placed the parameters in front of the system, which means certain claims are not processed through the system and instead go straight for assessment.

Some of the parameters used are set out in Figure 7.

Figure 7:

Restrictions on Scope of Use

Impact of Technology on Claims Management

We asked claims managers to describe the impact technology has had on improving the efficiency and effectiveness of the claims process.

Just 43% of those respondents with a technology solution indicated the solutions are effective. None characterized their solutions as "very effective," and 57% indicated the technology they introduced is, at best, "slightly effective." This is also despite the fact that 82% of those with a solution have made enhancements since the initial implementation.

7%	50%	43%

■ Not effective   ■ Slightly effective   ■ Effective

Figure 8:

Impact of Technology Apps for Claims Processing

Where technology has been seen as effective, key benefits are illustrated in Figure 9 (below):

Improved customer experience	15 · 3 · 2	
Improved end-to-end times	6 · 12 · 3	
Improved case management	1 · 4 · 9	
Reduced claims expense through increased efficiency	3 · 3 · 8	
Greater consistency across decisions and processes	3 · 2 · 5	
Better (increased/improved) fraud prevention	1 · 3 · 1	

■ Top Key Benefit
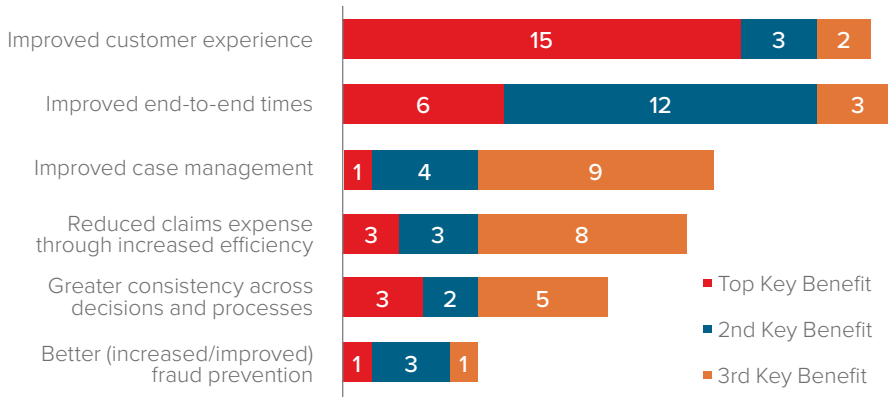■ 2nd Key Benefit
■ 3rd Key Benefit

Figure 9:

Top Key Benefits from Adoption of Technology

RGA observed that the two most significant benefits identified are consumer engagement benefits, with "improved customer experience" and "end-to end times" ranking highest. This could be why claims managers don't believe the technology is effective. They may have seen less improvement in areas that could have a financial impact, such as more effective case management or a reduction in operational expense through increased efficiency. When designing future expert claims systems, expected outcomes and benefits should be balanced between the more subtle areas of consumer engagement and quality of communication and more objective, quantitative areas such as improved efficiency and a reduction in expenses.

The introduction of technology to the claims process has had clear benefits when it comes to customer service. A positive impact has been seen on end-to-end times across the spectrum of benefits, as demonstrated in Figure 10:

	Average Current E2E (days)	(Average Time - days) Prior E2E (Before e-Claims System (ECS))	Differential (days)
Mortality	4.8	7.8	3
CI/Trauma	5.3	8.4	3.1
Disability Income	7.7	12.4	4.7
Health	7.9	10.2	2.3
Permanent Disability	13.1	16.6	3.5

Figure 10:

Claims Processing Times

Improving end-to-end times further will require overcoming certain key obstacles identified by claims managers set out in Figure 11 (below):
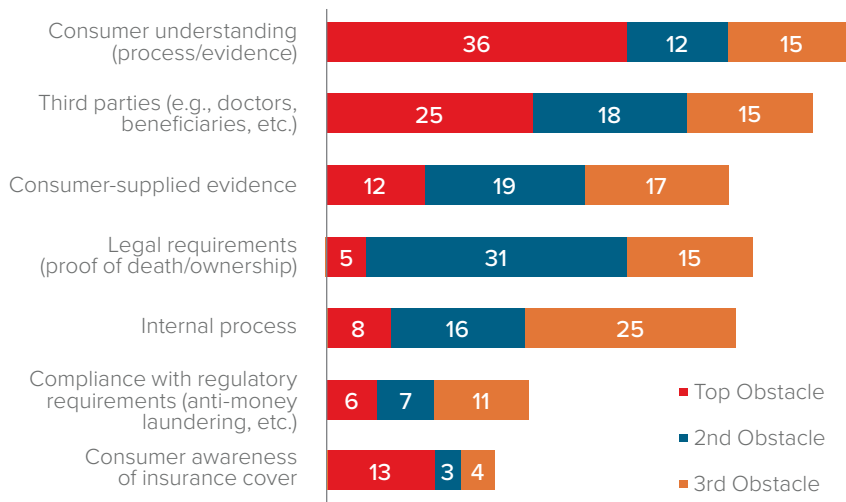
Figure 11:

Top Obstacles to Reducing End-to-End Times

For any future developments, how are companies seeking to address these challenges and can technology help?

Here is a sample of some of the future benefits respondents believe can be achieved through the adoption of new technologies.

Customer Focus	Claims Function	Other
• Faster decisions • Improve customer experience • Reduction in errors • Simplify the documents and make the process more transparent	• Reduce cycle times and costs • Reduce manual processing • Identify risks such as fraud • Target team resources more efficiently	• Scalable solutions across multiple locations • Data-sharing and improving data security • Enhance risk management (at a corporate level) • Summarize medical records, creating more efficiencies

Two key challenges identified by claims managers in the current claims process were customer-supplied evidence and customers' understanding of the claims process. Respondents also believe, however, that technology can simplify the evidence required from customers and make the overall claims process more transparent. If attention is focused on these areas in the development of claims technology, we might further improve the customer experience. However, as was seen earlier, this also needs to be balanced against internal business needs such as increasing efficiency through targeted resourcing.

Use of Wearables and Chatbots

There is a lot of discussion about wearables in everyday life and also within the life insurance industry. Chatbots already feature prominently in other financial services as a means of improving the customer experience. RGA's survey found, however, that neither of these technologies is widely used within life claims.

6% Wearables

- Wearable required to fulfil a policy condition
- Voluntary collecting customers' health and exercise data to help objectively verify physical conditions and lifestyle habits

7% Chatbots

- Provide customer support such as answering first-level queries before directing to human support if required
- In-claim support through the providing of information to aid recovery
- Creating internal efficiencies by assisting with documentation filing

Figure 12:

The Use of Wearables Data and Chatbots

Complementary Activity

We have seen how technology is aiding the claims function on a day-to-day to basis, but what additional activity is being undertaken to supplement the technology using the data available from the claims process?

Of the 107 respondents, just 32% use the claims process as an opportunity for proactive customer engagement. This is mainly focused on recurring claims; early intervention and assistance can greatly increase the chances of recovery, leading to shorter claims. Further application of claims technology can be applied to tracking customer satisfaction through surveys, identifying potential improvements to existing process and upselling opportunities.

Around half of the respondents that have an expert claims system undertake proactive data analysis of the in-force book to identify red flags and potential fraud risks. Interestingly, for those companies with no technology solution no one undertakes any analysis of the in-force book. This creates an interesting question about priorities: does the technology create additional opportunities for claims managers to implement other risk management techniques, or are firms which have introduced technology being more innovative and proactive as a rule?

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2. Comparison with Underwriting

Experience might suggest that claims is well behind underwriting in terms of investment and development of technological solutions, but our survey suggests that the gap is not as large as thought.

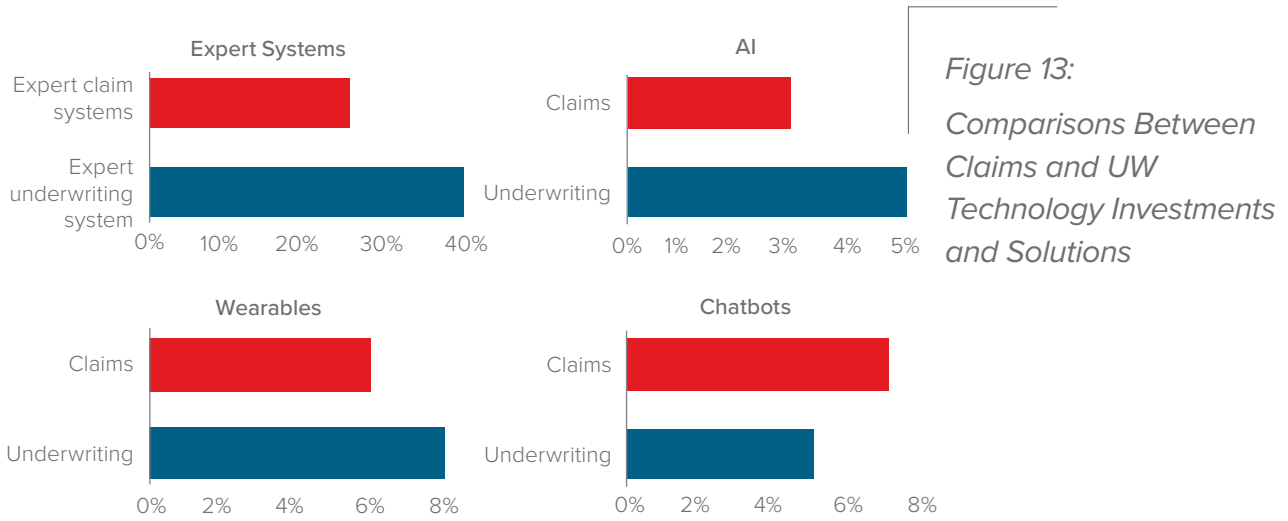The comparisons between claims and underwriting can be found in Figure 13 (below):

Figure 13:

Comparisons Between Claims and UW Technology Investments and Solutions

Expert Systems

Forty percent of respondents indicated they use expert underwriting systems, compared to 26% who use expert claims systems. Only 19 (18%) respondents, however, have both an expert underwriting system and an expert claims system, just 24 (22%) have only an underwriting solution, and 9 (8%) have only a claims solution.
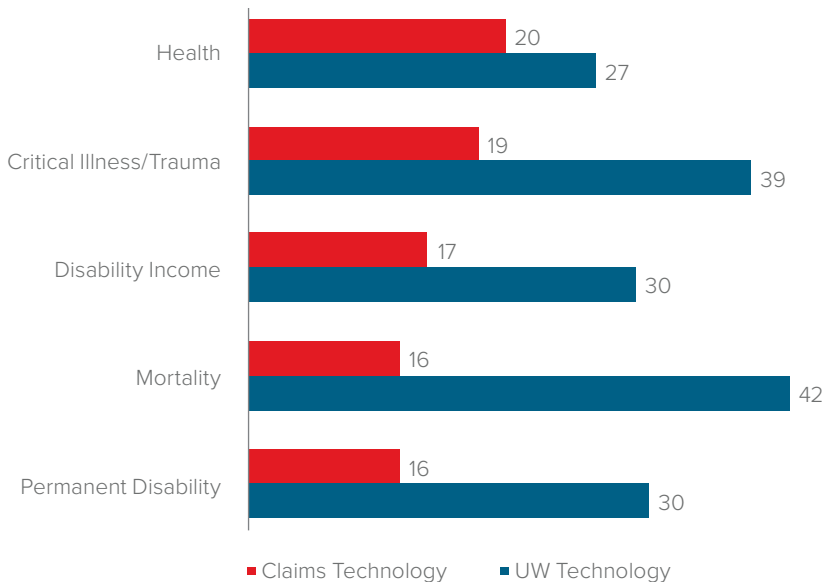
Figure 14:

Use of Technology by Benefit Types

As with claims, underwriting systems are spread broadly by benefit type. RGA observed there appears to be a shift in focus: the key factor for the benefits using an expert underwriting system appears to be volume, where use of a claims system tends to be associated more with the complexity of the benefit.

Artificial Intelligence

The use of AI in the underwriting process is limited, with just five respondents indicating that their underwriting system had some element of self-learning. Four of the five are based in Asia, and the fifth is located in North America. This is a similar outcome to claims.

Wearables

Wearables are now a common feature of our customers' lives, but our survey suggested there is low take-up in terms of use in underwriting or claims. Just 8% indicated that wearables data is used as part of the underwriting process; of these, 50% indicated that consumers were granted discounts based on the available biometrics.

Wearables data was used by 6% of respondents in their claims process, mainly to verify habits and as an indicator of the impact of the underlying medical condition.

Chatbots

This is one area where claims take-up exceeds that of underwriting. This probably isn't surprising, as much of the sales process still takes place through an intermediary whereas contact with claims tends to come from the insured or their legal representative, so chatbots are likely to be more useful.

Effectiveness

With claims being behind underwriting in relation to the introduction of technology, it might also be expected that they are also behind in their view of the effectiveness of their solution. Notably, this survey found that just 23% of respondents believe their underwriting solution is effective; that leaves 77% of respondents that believe that their solution is only slightly effective.

This represents a significantly worse position than claims, where 43% believe their expert claims system is effective. What lessons can claims managers learn from their colleagues in underwriting to ensure the solution they implement works for them on an ongoing basis?

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3. Looking Forward – Claims Technology

Only about one in four respondents have introduced a technology solution for claims, but the coming years could see much wider adoption, with 65% of respondents indicating they plan to implement a technology strategy in the foreseeable future.
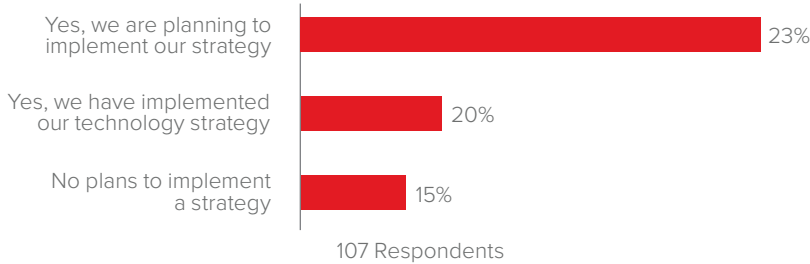
Yes, we are planning to implement our strategy — 23%
Yes, we have implemented our technology strategy — 20%
No plans to implement a strategy — 15%

107 Respondents

Figure 15: Implementation and Planning for Claims Technology

Companies have a broad strategy, with 69% targeting more than one solution. The most common combination is an expert claims system with AI capabilities, but chatbots also play a role in a large number of strategies. Finding a role for wearables in the claims process appears to be more challenging.
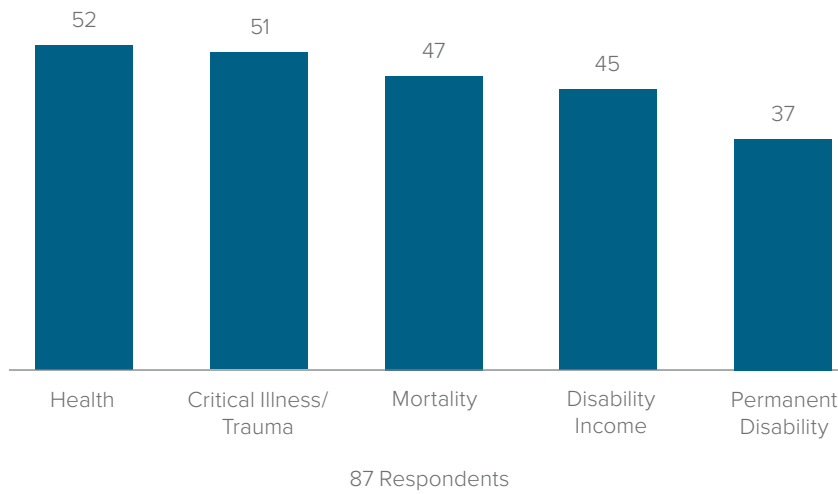
1%
12%
31%
21%
35%

Expert rules system — 69
AI — 56
Chatbots — 31
Wearables — 15
Other — 12

84 Respondents

■ One ■ Two ■ Three ■ Four ■ Five
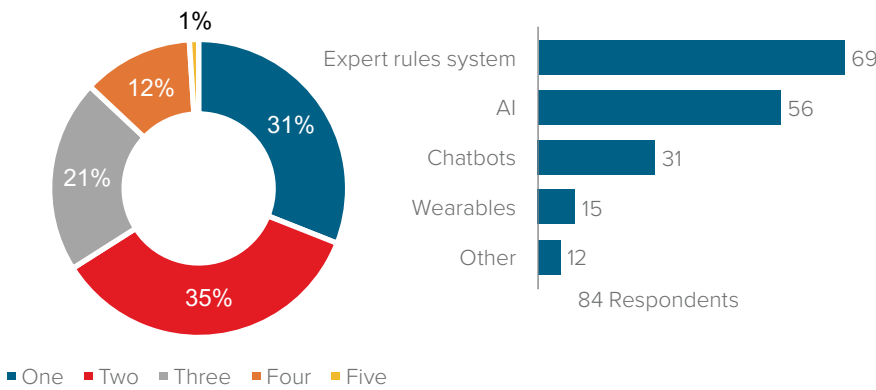
Figure 16:

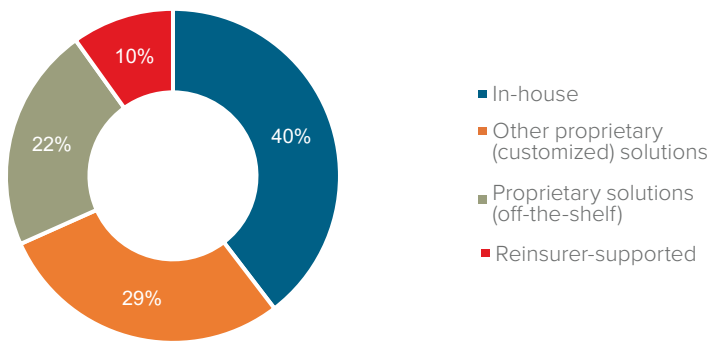*Technology Strategies of Focus and Applications*

Where a strategy is present or is being implemented, there is a clear desire to implement the new technologies as soon as possible. Fifty-two respondents indicated they will launch their projects by 2020, and 34 expect their implementation to go live in the same period.

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Similar to those with existing solutions, respondents who plan to adopt technology over the coming years are targeting the full range of benefits.
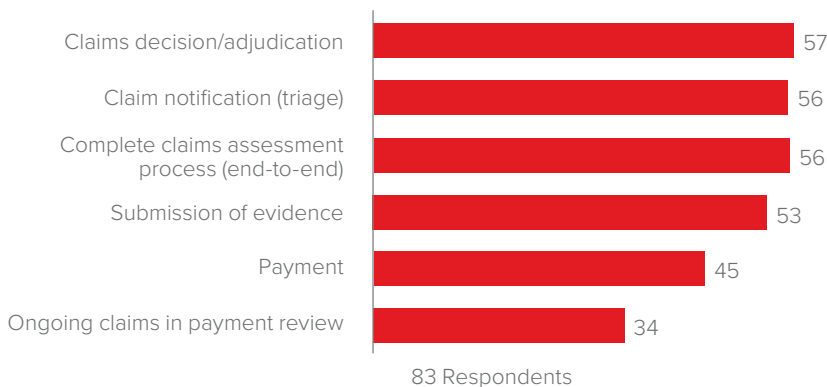

Health: 52
Critical Illness/Trauma: 51
Mortality: 47
Disability Income: 45
Permanent Disability: 37

87 Respondents

Figure 17:

Benefits for Technology Applications

RGA has observed that those respondents implementing a technology solution are far more likely to buy from a third-party provider than in the past, including off-the-shelf plug-and-play solutions. The shift away from in-house solutions might reflect a loss in a company's own IT capabilities or an increase in the willingness of technology companies to target the life insurance industry with claims solutions.

- In-house: 40%
- Other proprietary (customized) solutions: 29%
- Proprietary solutions (off-the-shelf): 22%
- Reinsurer-supported: 10%

Figure 18:

Planned Solution Development

The areas targeted by new expert claims systems are very similar to the existing solutions, with many covering the full end-to-end process.

Claims decision/adjudication: 57
Claim notification (triage): 56
Complete claims assessment process (end-to-end): 56
Submission of evidence: 53
Payment: 45
Ongoing claims in payment review: 34

83 Respondents

Figure 19:

Targeted Areas of the Claims Assessment Process

It is interesting to note that those insurers currently planning to implement new technology solutions are more likely to impose restrictions on its use than those with existing technology solutions. A higher proportion of new adoptions are seeking to use the tool for end-to-end processing while fewer are using in-house solutions, opting to buy in proprietary systems, often with no customization. Taken together, these two items might explain why a smaller proportion of respondents will be using their expert claims system for all claims.
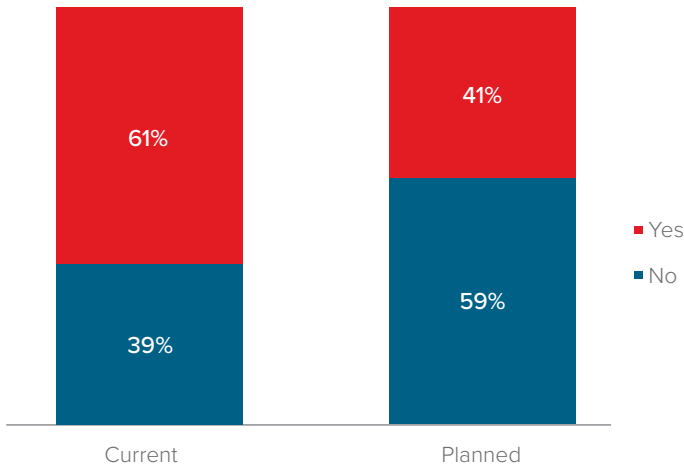
Figure 20:

Restrictions of Use

For those who currently have no plans to implement a technology strategy, the following (Figure 21) represent the common reasons for this.
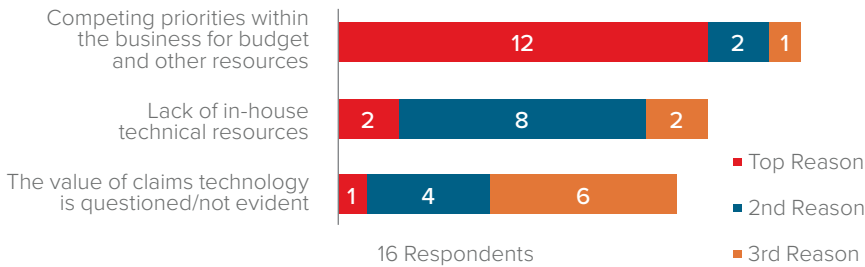

Figure 21:

Top Reasons Given for Not Developing a Strategy

The overwhelming reason for a lack of technology strategy is competition with other functions for budget and resources. Will these companies find themselves at a competitive disadvantage given the broad adoption of technology expected in the coming years?

4. Summary and Conclusions

We have seen that the life companies we surveyed have been slow to adopt technology solutions, with only about half having multi-channel policyholder access capability and a quarter having an expert claims system. To date, there appears to have been little appetite to find a place for wearables or chatbots in the claims process, while AI has only been adopted in Asia by a very small number.

The use of an expert underwriting systems is around 50% more common than an expert claims system, a much smaller difference than we anticipated. When surveyed about the effectiveness of their tools, surprisingly underwriters indicated a higher level of dissatisfaction as compared to their claims counterparts. Conversely, claims satisfaction was also relatively low and given that most existing solutions were built in-house it is concerning that claims managers don't believe they are effective, one reason might be that the focus has tended to be on customer experience rather than risk management.

There does appear to be a change on the horizon, with 85% of respondents either implementing or ready to implement a technology strategy that includes expert claims systems supported by AI and including the use of wearable technology or chatbots.

Technology offers us some great opportunities to improve the way we interact with our customers and manage claims, reducing bottlenecks in the claims process and allowing claims managers to focus resource and attention on those claims that need detailed investigation. Finding the appropriate balance will be a challenge so it is important that the claims function is represented throughout the design and implementation phases.

Appendix A: Survey Participants

RGA would like to thank the following companies for their participation in our 2018 Global Technology Survey:

Asia

1 An Online P&C Insurance Co. Ltd
ABC Life
Aegon Life
Aegon_THTF Life Insurance
AIA
Aviva Life Insurance
BNP Paribas Cardif TCB Life
BOC-Samsung Life
Cardif China
Cardif TW
Cathay Life Insurance
China Pacific Life
China Post Life Insurance
Corporation Limited
China Taiping Life
Chubb Life Assurance Public
Company Limited
Cigna
Cigna_CMB Life Insurance
CITIC -Prudential Life Insurance
FarGlory Life Insurance
Foresea Life Insurance
Fubon Financial
FWD
Great Eastern Life Assurance (M)
Berhad
GuoLian Life
HSBC
Huatai Life Insurance
ICBC-AXA Life Insurance
Manulife Philippines
Manulife-Sinochem
Mercuries Life Insurance
MetLife
Nan Shan Life Insurance Co., Ltd
New China Life Insurance
OldMutual-GuoDian Life Insurance

PCALT
Ping An Life
Prudential Assurance (M) Bhd
Prudential Life Insurance
Shin Kong - HNA Life
Insurance Co., Ltd.
Shin Kong Life
Sino-Korea Life Insurance Co., Ltd
Star Union Dai Chi Life
Insurance Co Ltd
Sun Life Vietnam
Taiping Financial Services Co., Ltd.
Taiwan Life insurance company
ZhongAn Online P&C
Insurance Co. Ltd
Zhujiang Life Insurance Co., Ltd.

Australia and New Zealand

AMP NZ
AIA New Zealand
Asteron Life NZ
Cigna Life Insurance New
Zealand Ltd
CommInsure
OnePath
Sovereign
TAL
UniSuper
Zurich

North America

Anthem
Assumption Life
Bankers Life
Blue Cross Life
Co-operators
Country Financial
Empire Life Insurance
Equitable Life of Canada

Great-West Life
Guardian Life Insurance
Kansas City Life
Lincoln Financial
Madison National Life
Insurance Co., Inc.
MetLife
Mutual of Omaha
Nationwide
Pacific Blue Cross
Principal
Reliance Standard Life
SSQ Insurance
Symetra Life
Unum
USAble Life
Voya Financial

Latin America

Chubb
Equidad-Honduras
Seguros del Magisterio

Europe

Aegon
AIG Life
AmTrust
Aviva
Bene Assicurazioni S.p.A.
HSBC
Scottish Widows

Africa

Discovery Life
FMI
Old Mutual
Outsurance

Gulf Countries

Oman Insurance Company
Takaful Oman Insurance Company

Glossary of Terms

Artificial Intelligence (AI)

Artificial intelligence (AI) is an area of computer science that emphasizes the creation of intelligent machines that work and react like humans. Some of the activities computers with artificial intelligence are designed for include:

- Speech recognition
- Learning
- Planning
- Problem solving

Chatbot

A chatbot is a computer program that simulates human conversation through voice commands or text chats or both. Chatbot, which is short for chatterbot, is an AI feature that can be embedded and used through any major messaging application.

Claims Assessment Process

A general term to cover the cradle-to-grave process of assessing a life insurance claim, i.e. from initial notification to final settlement.

Expert Claims System

A rules-based system to assist claims assessors in their role. The system might highlight "red flag" features of a claim or identify the evidential requirements or undertake an assessment of the claim and make a recommendation in respect of the claims decision.

Wearable Device (Wearable)

Wearable devices are smart electronic devices (electronic device with microcontrollers) that can be worn on the body as implant or accessories. Normally in this context they are watches or other devices that provide biometric information, such as heart rate, number of steps taken, etc.

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