IBM **Institute for Business Value**

# The cloud-based insurance claim

Improving cost and speed,
while enhancing the claims experience

IBM.

# How IBM can help

Maturing markets, tight capital, increasing risk, new market entrants, and technologically sophisticated customers are just some of the pressures the insurance industry faces today. As a result, insurers have to work faster, more efficiently, and—above all—smarter to address customer needs. Those that do can thrive while others struggle. Smarter insurance means being more innovative, being more connected with customers, and moving beyond risk remediation to risk mitigation and partnership.

The IBM Global Insurance team helps meet these challenges by providing solutions that bring risk partnership to reality. From enhanced customer service to greater efficiency in the back office and improved risk management, there is a smarter insurance solution for you. For more information about IBM Insurance solutions, visit www.ibm.com/insurance.

By Christian Bieck,
David Kwon, and
Wendy Newlove

## Key takeaways

### Manage claims better with cloud
Insurers handling their claims exclusively with cloud-based technology use a lighter human touch. It's quicker and cheaper, and it leaves their customers happier.

### Automate claims handling
The claims function is data rich, rules based, and evidence dependent—and that makes it ripe for automation. With cloud capabilities behind them, leading insurers readily leverage data and AI to implement claims-relevant technologies, such as computer vision, robotics, conversational platforms, and machine learning.

### Create a rewarding claims experience
Cloud computing enables insurers to interact with policyholders and manage their claims in ways that make employees more productive. Cloud helps shift employees' focus away from gathering evidence and completing paperwork and toward creating more satisfying claims experiences that customers want to recommend.

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## How can cloud computing take claims to the next level?

Claims is still the raison d'être of insurance. But it's not the volumes or values of claims that matter most to insurers and policyholders—it's how well they're handled. Historically, insurers optimized their own losses by scrutinizing claims in low-cost ways. Now, in an increasingly digitized world, insurers are discovering how to use technology to redefine efficiency and effectiveness in claims handling.

When an act of nature or humankind causes a catastrophic event, the fundamental assumption of insurance–that is, a transfer of risk and a promise to compensate–gets tested at scale. The impact on lives, possessions, and prosperity can be unimaginable, and the resulting spike in claims can be exponential. Luckily, catastrophic events only occur occasionally. But adversity on a lesser scale is constant.

In 2019, prior to the pandemic, gross non-life insurance claims worldwide amounted to $1.66 trillion.[1] Since the pandemic began, widespread economic and lifestyle restrictions have disrupted much of what insurers long held true about the business of claims. Suddenly, business interruption claims rose; automotive claims fell; and insurers scrambled to ensure staff, processes, and systems could still handle claims and assist policyholders remotely.

Emerging concepts and advancing technologies, such as complex algorithms and clever artificial intelligence (AI) capabilities powered by cloud computing, are transforming each link in the insurance industry value chain. Data rich and evidence dependent, the claims function is especially well suited to these new concepts and technologies, which we see manifesting in a range of places—from lower-touch processing, to the easy retrieval of evidence from obscure places, to digital dialogues with customers in real time.

To benefit, carriers need to strike a balance between data, technology, and expertise so they can shift their attention away from intensive paperwork and toward customer interactions. Those insurers that have traded a legacy of on-premises computing for modern cloud-enabled environments are showing their customers, and the rest of the industry, that they are equipping themselves for the future. With cloud-enabled technology, they can take claims to the next level.

## Insurers exclusively using cloud-based technology for claims, compared to those using entirely on-premise technology

## 3%
more claims processed and paid without human intervention

## 5
days shorter backlog of pending claims

## 34%
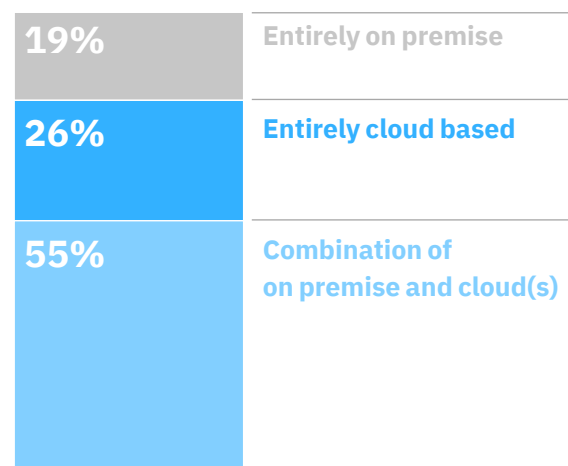more insurers use AI to help detect fraudulent claims

## A boon to business

Cloud is proving itself as a platform for data and AI to fundamentally change the way insurers operate. Most insurers have either partially or entirely moved their claims management systems onto cloud infrastructure in pursuit of smoother claims throughput and a better customer experience. These insurers get to draw on centralized capabilities, such as computing power and storage, that support flexibility, scalability, and interoperability (see "Perspective: What is cloud computing?").

In our research, we found that 81% of insurers are using cloud-based technology for their claims management systems, with over one quarter using cloud exclusively (see Figure 1).[2]

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**Figure 1**

## Cloud for claims
How property and casualty insurers deploy claims management systems.

| | |
|---|---|
| **19%** | **Entirely on premise** |
| **26%** | **Entirely cloud based** |
| **55%** | **Combination of on premise and cloud(s)** |

*Source: IBM Institute for Business Value benchmarking database.*

With cloud capabilities behind them, insurers can readily utilize data and AI to implement technologies that help process claims.

By augmenting claims processes with machine learning and other forms of AI that can manipulate and reason with large volumes of data, insurers can reduce manual handling, lower error rates, and do more straight-through processing. At the heart of this lies an ability to gather, store, retrieve, and analyze data—at speed and to scale.

Cloud computing has changed the way that insurers can interact with data. Compared to legacy computing, cloud computing is a cheaper, more convenient, and more flexible approach to information technology. Speed and scale get delivered via as-a-service models that enable insurers to deploy technologies more quickly than they could with their legacy in-house systems.

With cloud capabilities behind them, insurers can readily utilize data and AI to implement technologies, such as computer vision, robotics, conversational platforms, and machine learning, that help process claims. For example, Zurich Insurance Group partnered with Sprout.ai to trial automated policy checking using contextual AI and, as a result, reduced the time to settle a property claim to under 24 hours.[3]

Larger insurers lead the way in using AI to enhance claims processing, yet access to cloud computing can help insurers of any size to level up, especially compared to insurtechs. While these new competitors can quickly introduce AI-based capabilities, longstanding legacy insurers can gain an advantage by developing more effective AI algorithms. Insurers hold data from exponentially more claims, from more customers, and over a longer period, which are vital ingredients for high-quality decision-making models—a benefit from having been in the game longer.

So, how is the use of cloud technology for claims workflows influencing how well claims are handled, from the perspectives of both insurers and customers?

Our previous IBM Institute for Business Value (IBV) research found that insurers were taking a holistic approach to their customer experience and not focusing more or differently on intensive touchpoints such as claims.[4] We wanted to dive deeper to determine whether cloud computing is visibly improving claims handling in terms of cost, speed, and effectiveness. For answers, we surveyed nearly 1,000 insurance executives worldwide about their property and casualty claims activities (see "Research methodology").

## Perspective: What is cloud computing?[5]

Cloud computing converts information technology infrastructure into a utility. That means organizations can "plug into" infrastructure via the internet and make use of collective computing resources, such as applications, servers, storage, development tools, and networking capabilities, without installing and maintaining them on their own premises. Cloud service providers offer structured service models, such as IaaS (Infrastructure-as-a-Service), PaaS (Platform-as-a-Service), or SaaS (Software-as-a-Service).

# Compared to on-premise exclusives, cloud exclusives clearly perform on a higher level.

To compare the opposite ends of the cloud computing spectrum, we describe those insurers entirely using cloud for claims as "cloud exclusives" and those still operating entirely on premise as "on-premise exclusives." Cloud exclusives are likely to call their comparatively early decisions to commit entirely to cloud for claims a strategic business decision first and foremost, instead of a technology decision, simply because of how it has improved their business performance.

## Cloud is a vehicle, not a destination

Moving to modern cloud-based infrastructure isn't about arriving at a destination. Cloud computing is a vehicle for achieving differentiated business and customer outcomes from a claims function. Insurers are in the business of paying valid claims, but they have to strike a delicate balance between optimizing losses paid out and honoring the promises in their policies.

Claims outcomes can be compared between insurers to understand efficiency and effectiveness—in terms of processing cost per claim, settlement time, or days of claims pending. Compared to on-premise exclusives, cloud exclusives clearly perform on a higher level (see Figure 2). On average, they spend $42 less on processing a claim. Some of that savings may come from taking less time to settle some types of claims, such as automotive claims, which are at least 5 days quicker, and homeowners' or renters' claims, which are at least 20 days quicker.[6]

As an example, Allstate, a US-based provider of a broad array of protection products, processes more than 18,000 claims per day. Cloud helps Allstate store and analyze the data it holds, which describes a staggering 10 billion miles of driving, to process those claims faster.[7] Faster settlement times help insurers avoid excessive backlogs of pending claims, which on average are 5 days shorter for cloud exclusives than for those operating entirely on premise.[8]
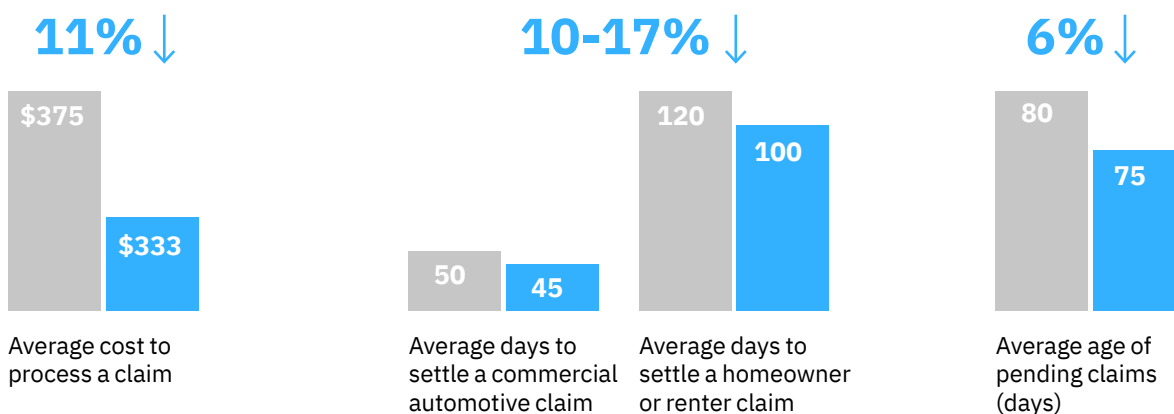
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**Figure 2**

## Stronger claims handling with cloud
Cloud exclusives outperform insurers operating entirely on premise.

**On-premise exclusives**
**Cloud exclusives**



| 11% ↓ | 10-17% ↓ | | 6% ↓ |

$375 → $333
Average cost to process a claim

50 → 45
Average days to settle a commercial automotive claim

120 → 100
Average days to settle a homeowner or renter claim

80 → 75
Average age of pending claims (days)

*Source: IBM Institute for Business Value benchmarking database.*

For the 19% of insurers that have their claims management systems entirely on premise, the implications of their higher costs and longer timelines may intensify if cloud exclusives become even more adept at leveraging data and AI.[9] As context, only 11% of larger insurers with over $5 billion gross written premium (GWP) remain entirely on premise. That is significantly less than the 27% of smaller insurers earning up to $500 million GWP.[10]

## Automating the path for legitimate claims

For cloud exclusives, the benefits do not end simply with saving on handling costs or turning claims around more quickly.

Compared to on-premise exclusives, cloud exclusives create a path of least resistance with the greater use of automation. Three times more cloud exclusives use

advanced robotic process automation (RPA) or AI, and they allow more straight-through processing to reduce friction for legitimate claims (see Figure 3).

COVID-19 forced insurers to operate differently—in particular, to focus on improving their use of technologies that can perform key functions remotely. Computer vision, such as image recognition and object detection, is being used to expedite claims by allowing AI to assess damage from pictures instead of in-person appraisals. As computer vision requires vast computing power, especially memory and processing capacity, cloud can make it more accessible and affordable by eliminating the need for infrastructure investment or customized AI capabilities.

In these times of physical distancing, claims handlers can appraise claims using electronic evidence gathered safely. The potential to lower costs and reduce settlement time through this way of working could expand in the future. Ping An, a Chinese insurer, digitized its claims process using image-based damage technology, and it went on to partner with Swiss Re to develop Smart Claims, a solution that prepares a repair strategy and cost within minutes of receiving drivers' own photographs of vehicle damage.[11]

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**Figure 3**

A path of least resistance
Cloud exclusives use more automation to handle claims more effectively.



*More cloud exclusives use advanced robotic process automation*

**3x**

*More claims paid without human intervention*

**3%**

**6%**

**Cloud exclusives**

**$42**
cost saved per claim

**3x**

*More cloud exclusives use advanced AI to detect fraudulent claims*

*Shorter backlog of pending claims*
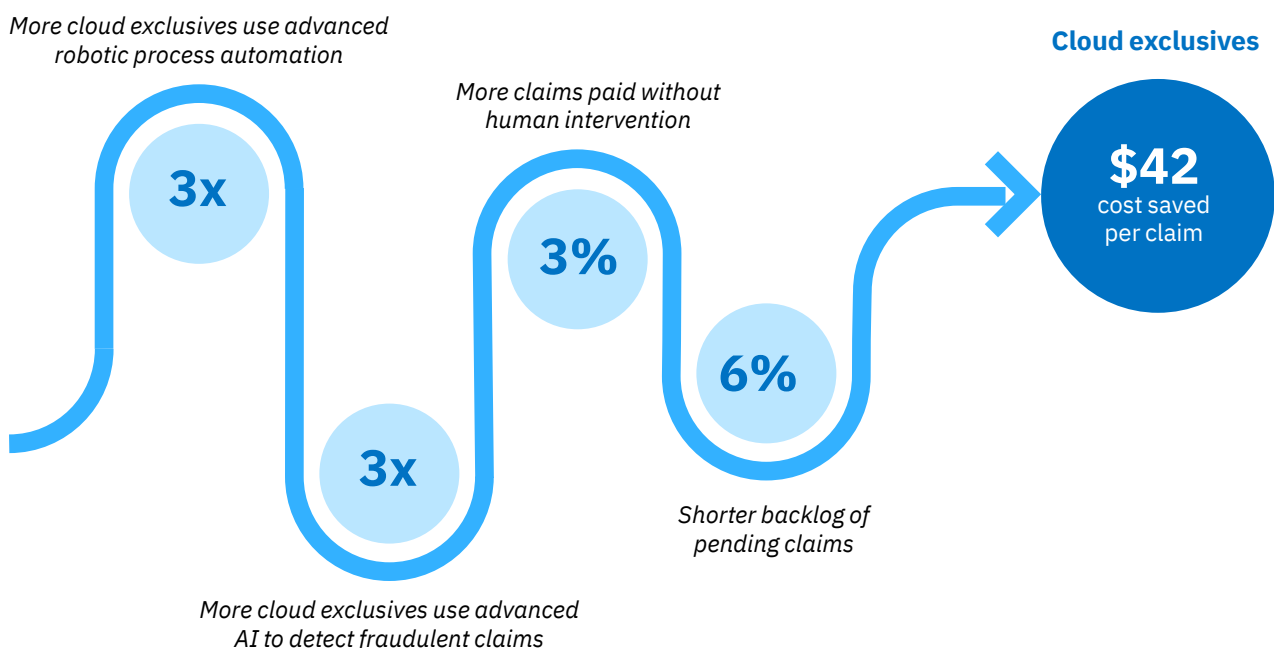
*Source: IBM Institute for Business Value benchmarking database.*

# More claims from cloud exclusives' customers are processed without the need for human intervention.

Cloud exclusives focus their investments on improving their claims capabilities, such as optimizing settlement time and reducing fraud or overspend. In the past 2 years, 74% of cloud exclusives invested in faster settlements, compared with only 43% of on-premise exclusives, and 60% of cloud exclusives invested in reducing overspend or leakage, compared with only 35% of on-premise exclusives.

With that in mind, we examined how cloud enables cloud exclusives to use more technology and involve fewer people in transactional activities.

Customers of cloud exclusives make more use of automated channels, such as data information exchanges, websites, and mobile devices, to make first notification of loss. More of their claims are processed without the need for human intervention. A clue to how they do this: Cloud exclusives also make more advanced use of automation, with 52% at least using RPA to perform high-volume,

rule-based, and trigger-driven tasks (see Figure 4). By contrast, only 17% of on-premise exclusives have these more advanced automation capabilities.[12]

As faster-moving claims make fewer demands on contact centers and other contact points to check progress, and as the use of automation reduces repetitive manual activities, claims personnel are increasingly freed up to work on less transactional tasks. Furthermore, cloud helps insurers interact with policyholders—for example, by using AI-powered conversational platforms and assessing damage remotely, both of which can save time. These fundamental changes help create internal operational efficiencies.
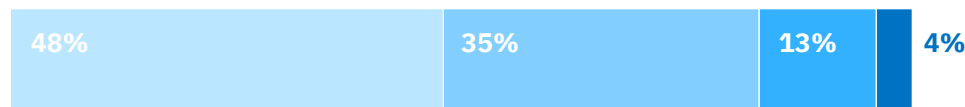
From our research, we learned that cloud exclusives use 16 fewer claims full-time-equivalent (FTE) employees per 1 billion US dollars of claims, which is 1% fewer, compared with on-premise exclusives. For a typical large property and casualty insurer in a country like the US or Germany, this could add up to several million US dollars saved each year.
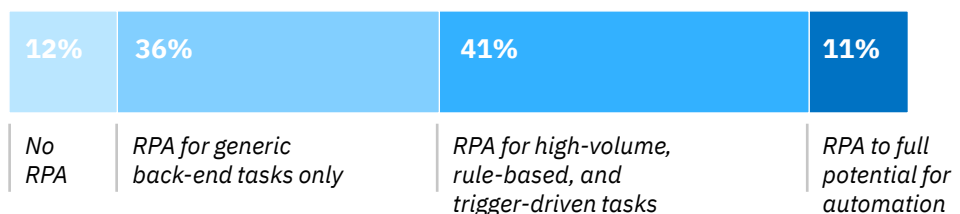
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**Figure 4**

## Making cloud count

Cloud exclusives make more sophisticated use of robotic process automation (RPA).

**On-premise exclusives**

| 48% | 35% | 13% | 4% |

**Cloud exclusives**

| 12% | 36% | 41% | 11% |

| *No RPA* | *RPA for generic back-end tasks only* | *RPA for high-volume, rule-based, and trigger-driven tasks* | *RPA to full potential for automation* |

← **None**          **Sophisticated** →

*Source: IBM Institute for Business Value benchmarking database.*

Detecting fraud is difficult for insurers. Ever-proliferating forms of fraud make it essential to relentlessly refine detection mechanisms to try and stay at least a step ahead of potential perpetrators. Our research found that 10% of claims are fraudulent, equal to 12% of the value of the claims handled by the insurers we surveyed.[13]

The prevalence of fraud is consistent regardless whether insurers use packaged or proprietary software and deploy it on premise or on cloud. However, the capabilities that insurers use to combat fraud differ. 86% of cloud exclusives use AI to help them detect fraudulent claims, whereas almost half of on-premise exclusives do not use any AI (see Figure 5).[14]

How do cloud exclusives use AI to help identify fraud? They use their wealth of historical claims data to train machine learning models to quickly filter claims and isolate suspicious behavior—before insurers pay unwarranted claims and incur losses due to fraud, yet without deterring the path for legitimate claims. AXA and Liverpool Victoria are among insurers mining policyholders' public social media networks and using machine learning to harvest insight into possibly fraudulent claims.[15]

Cloud exclusives handle claims with a lighter human touch. It's quicker and cheaper and, ultimately, leaves their customers happier.
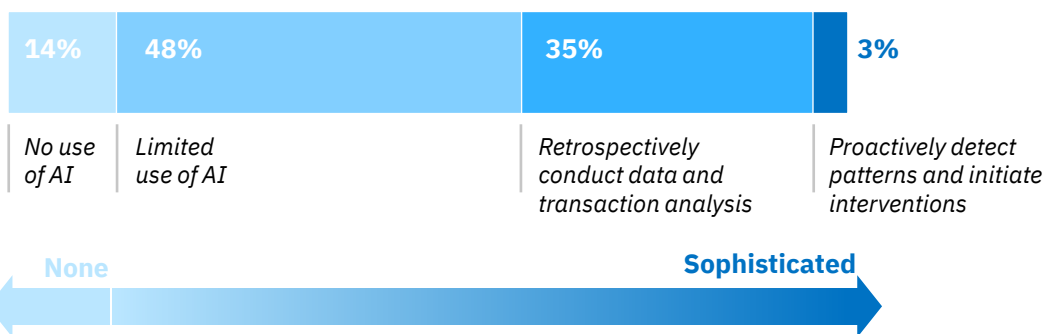
**Figure 5**

## Staying a step ahead
Cloud exclusives use AI to help detect fraudulent claims.

**On-premise exclusives**

| 48% | 38% | 12% | 1% |

**Cloud exclusives**

| 14% | 48% | 35% | 3% |

| *No use of AI* | *Limited use of AI* | *Retrospectively conduct data and transaction analysis* | *Proactively detect patterns and initiate interventions* |

None ← → Sophisticated
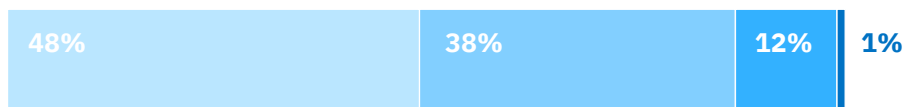
*Note: Due to rounding, percentages may not equal 100%.*
*Source: IBM Institute for Business Value benchmarking database.*

## Barbican Insurance Group: Using tech when time is of the essence[16]

On day 145 of an epic solo voyage in 2015, round-the-world sailor Matteo Miceli's vessel, the Eco 40, collided with a floating cable and capsized 600 miles from Brazil. Miceli had to abandon his boat, but he vowed to launch a salvage operation as quickly as possible. A rapid settlement would be critical to his chances for success.

Given the remote location, the insurer, Barbican Insurance Group, had limited information to help determine whether to pay the claim. Anticipating constructive total loss, Barbican's claims team swiftly deployed GPS to trace the vessel's movements and verify it was upturned. The €240,000 claim was settled in only 4 days and paid just 2 days later, enabling Miceli to locate and salvage his vessel. An efficient claims operation rescued Miceli's vessel and his hopes.

## Tokio Marine: Automating vehicle damage assessments with AI[17]

Tokio Marine's policyholders were accustomed to waiting 2 to 3 weeks for vehicle damage assessments and repair estimates. To speed this up and improve customer service, the insurer selected a computer vision startup to streamline the appraisal process.

Computer vision is used to analyze photos of damage. It also recommends repair options, including associated labor, by using AI trained on millions of images of past car damage and human appraisal outcomes.

Now, all claims can be reviewed remotely. And Tokio Marine has reduced the time to assess damage from days to minutes.

## A claims experience worth rewarding

For customers, there is no perfect time to make a claim on insurance. But handling claims is a perfect time for insurers to deliver an exceptional experience.

Making a claim heavily shapes customers' perceptions of their insurers—it deeply challenges insurers, and many struggle to succeed. Customers, fairly or not, compare their claims experience to other more vibrant and dynamic customer experiences. Combined with the adversity factor of insurance claims, this can lead to lower customer satisfaction.

Not all our respondents use net promoter score (NPS) to assess their claims experience by asking customers how likely they would be to recommend them based on the handling of their claims. For those that do, the average NPS score is 19, compared with the top score of 70.[18] While this level of advocacy is low in an absolute sense, there is significant potential in a relative sense. The top quartile of cloud exclusives achieve an NPS of at least 26, which is 30% higher than the top quartile of on-premise exclusives.

# Automation and AI can get the paperwork done while staff spend their time with customers.

Cloud exclusives are more inclined to use advanced technology to support customers throughout their claims experience. They make more sophisticated use of digital touchpoints to interact with customers, which can help free staff to support customers in other ways. For instance, staff can assist customers who are too heavily involved with containing their actual loss to think about claims. They also can help unravel entitlements or exclusions and help ensure appropriate notifications to preserve the validity of claims for complex losses.

Automation and AI are more than an extra pair of hands. They can get the necessary paperwork done while staff spend their time with customers—ultimately improving their experience and earning their advocacy. As quantified by NPS, customers value the ease and speed these technologies provide throughout their claim experience (see Figure 6).

Above all, cloud exclusives show us that the big benefit of cloud-based technology is not just the combination of lower costs and faster claims, but what cloud enables: low-touch, loss-limited pathways for legitimate claims and a better experience that customers reward with their advocacy.

**Figure 6**

## A moment of truth
Claimants reward cloud-exclusive insurers with advocacy in return for a better experience.



*More claims first notified via automated channels*

**2%**

*Faster at handling claims*

up to
**17%**

*More claims processed and paid without human intervention*

**3%**

*Shorter backlog of pending claims*

**6%**

*The best of*
**cloud exclusives**

**30%**
higher NPS
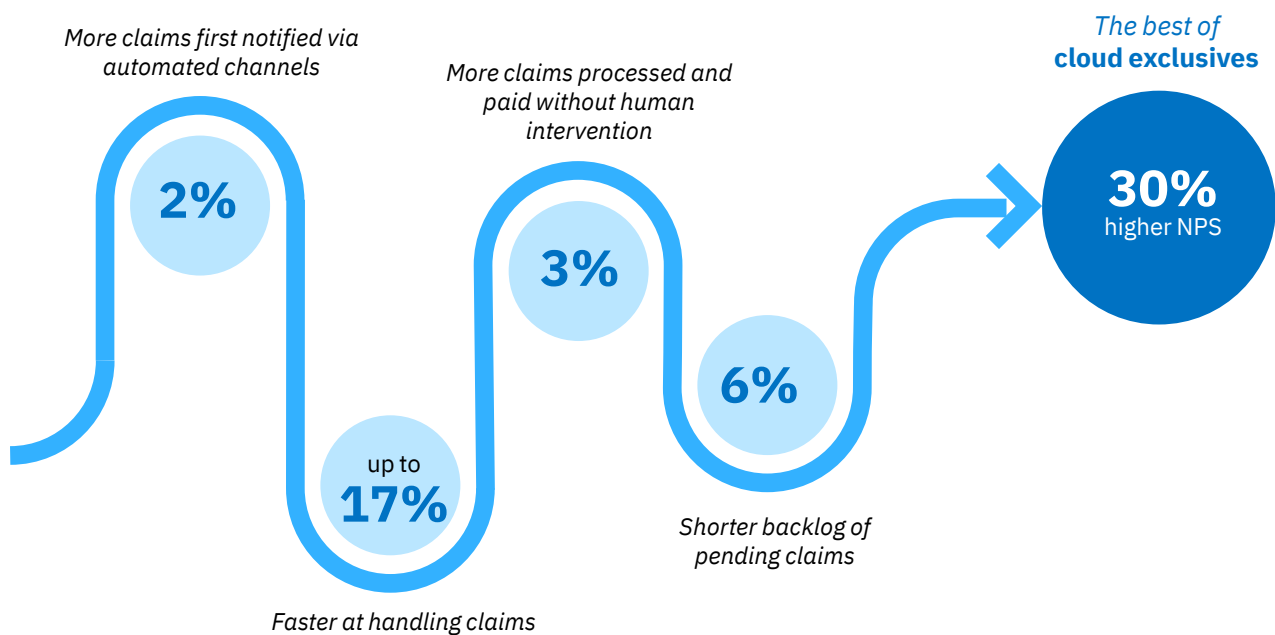
*Source: IBM Institute for Business Value benchmarking database.*

# Action guide
## *The cloud-based insurance claim*

Whether they're not yet using cloud or not using it well enough, insurers can take these steps to help them get to the next level.

### 1. Eliminate residual on-premise claims management systems

– Identify on-premise capabilities demanding significant computing power, especially those retrieving or processing lots of data quickly. Then explore ways to deliver that functionality using cloud computing.

– Find in-person activities that can be performed remotely with technology, such as computer vision, drones, or chatbots, to allow staff more time to care for customers.

– Access innovative technologies that are slower or harder to build in-house by using cloud as a platform, perhaps by working with insurtechs or cloud service providers.

### 2. Look for opportunities to leverage data and AI to automate claims handling

– Pinpoint data that could be used by AI, such as road user or weather data, to train machine learning in ways that would automate claims handling and increase the likelihood of straight-through processing.

– Evaluate the underutilized data inside and outside your organization that could inform claims handling or outcomes.

– Create a data and AI strategy to progressively adopt advancing concepts and technologies that make the most of the vastness of data, both needed and created, in the claims process.

### 3. Empower employees to focus on a superior claims experience

– Consider how a Chief Experience Officer could help put customers' needs and experiences at the center of claims handling processes and systems.

– Free up claims personnel to spend more time supporting claimants and less time working on transactional tasks by using automation, such as RPA that reduces repetitive manual activities.

– Reskill, recruit, or partner to fill any talent gaps in specialist skills and expertise needed to bring together strong teams of claims experts, data scientists, and technologists.

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Christian Bieck is the Global Insurance Leader for the IBV. He has more than 28 years of experience in the insurance industry as project manager, consultant, and researcher. Christian is a frequent speaker on thought leadership and innovation at insurance events and workshops. He has authored various papers on insurance trends and implications, both for the IBV and international insurance industry publications.

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## Research methodology

In cooperation with Oxford Economics, the IBM Institute for Business Value surveyed heads of claims for 990 property and casualty insurers in 31 countries in early 2021. Our survey examined the claims function, with a focus on baselining performance and uncovering the drivers of differentiated claims handling. Organizations varied in size, with 32% of survey respondents representing large insurers with gross written premium (GWP) over $1 billion. Unless otherwise stated, the values shown throughout this report are medians.

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