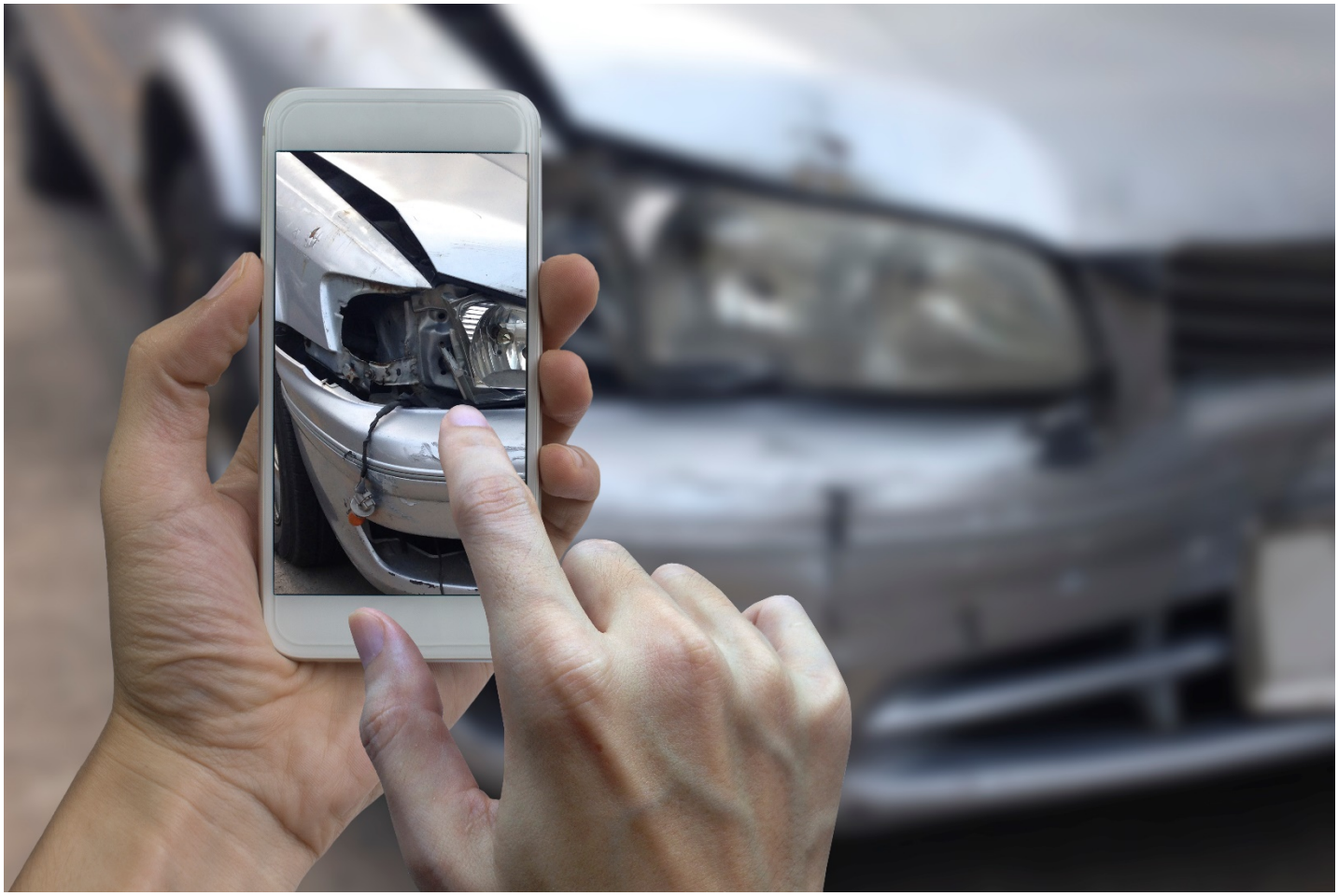
July 2021

How IBM Intelligent Automation for Insurance Claims mitigates claim inaccuracies and lowers cost



Challenges for P&C providers in today's market

For many personal and commercial Property and Casualty (P&C) insurers, the cost of providing P& C insurance coverage for customers has become formidable. Cost-effective, swift claims management is often impeded by complexity, inaccuracy, and fraud, making claims resolution difficult. Additionally, P&C insurers can face high customer attrition since customers tend to switch providers based on a delayed or unsatisfactory claim experience.

With claims process automation, P&C insurers can mitigate claim costs and reduce customer attrition. Process automation can accelerate the time to claim resolution, improve the accuracy of claim amounts, and increase customer retention resulting in greater customer loyalty over time. This paper examines the challenges faced by P&C insurers in today's highly competitive marketplace, and how IBM Intelligent Automation for Insurance Claims is designed to address claim management issues.

IBM Intelligent Automation improves claims management

Using an intelligent workflow (IW), with a patent pending insurance transformation technology[1] and intelligent automation (IA), IBM Intelligent Automation for Insurance Claims is designed to simplify and automate P&C claims for both claimants and P&C insurers. IBM Intelligent Automation for Insurance Claims leverages IBM Cloud Pak® for Integration, Cloud Pak for Data, Cloud Pak for Business Automation, and IBM Watson® Conversational Services and Visual Recognition Services exposed as microservices to deliver enhanced capabilities that simplify the claims process. The solution's patent pending technology provides the ability to pause and restart a digital conversation based on a digital data conversation, data interactions and retrieval. This fundamental differentiator helps P&C insurers adapt and augment the relationship between machine and human workflows. The solution uses hyper automation technologies like process mining, IBM Business Automation Workflow (BAW), IBM Business Process Management (BPM), IBM Watson Assistant chatbots, artificial intelligence (AI) and natural language processing elements to reorchestrate front-office, core claims systems, and back-office insurance processes. This helps organizations automate enterprise-wide workflows, accelerate the claims filing process and, ultimately, deliver a better customer experience.

IBM Intelligent Automation for Insurance Claims provides image/video intelligence for damage assessment and validation with claims inspection and investigation integration. Using artificial intelligence, the solution can detect fraudulent reporting by analyzing images, and integrates unstructured data and other data sources to build an accurate risk profile. These AI-powered automation capabilities allow the insurer to enhance their existing business processes so that they are efficiently optimized with the use of automation tooling. Additionally, P&C insurers can integrate historical data into self-learning analytics models within the claims process to augment and improve claims handler assessments.

[1] Patent Application for Workflows Separate from Domain Logic, US Patent Pending, USPTO Application 17/247512, December 15, 2020

To improve the customer claims filing experience, the solution provides a simplified and reorchestrated user interface (figure 1 provides a sample customer experience). Upon starting a claim, the customer is assisted by unattended chatbots to collect information about the accident and is immediately assigned to an adjuster.

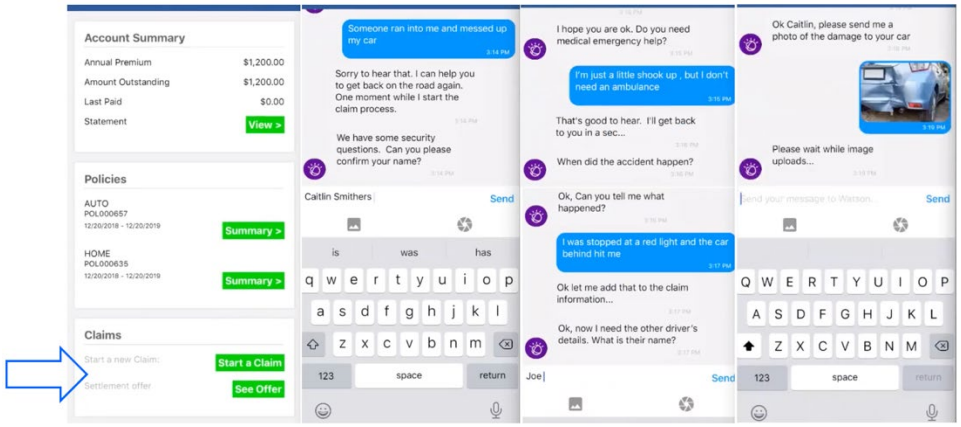


Figure 1: Sample customer experience in IBM Intelligent Automation for Insurance Claim using Watson Assistant chatbots

Figure 2 provides a sample claims handler experience for the started claim in figure 1, in which no injuries are reported, both cars were drivable and no fraudulent activity was detected. For this claim, the solution identified 41 applicable tasks to be tracked out of the solution's total 72 available tasks. The claims handler receives automated details with a list of claims filing tasks that are tailored to the type of claim. The claims handler is also presented with messages and documents pertaining to the claim. Throughout the process chatbots query and validate the accuracy of the customer's input, for example, verifying the insurance information of third parties and checking past claims activity.

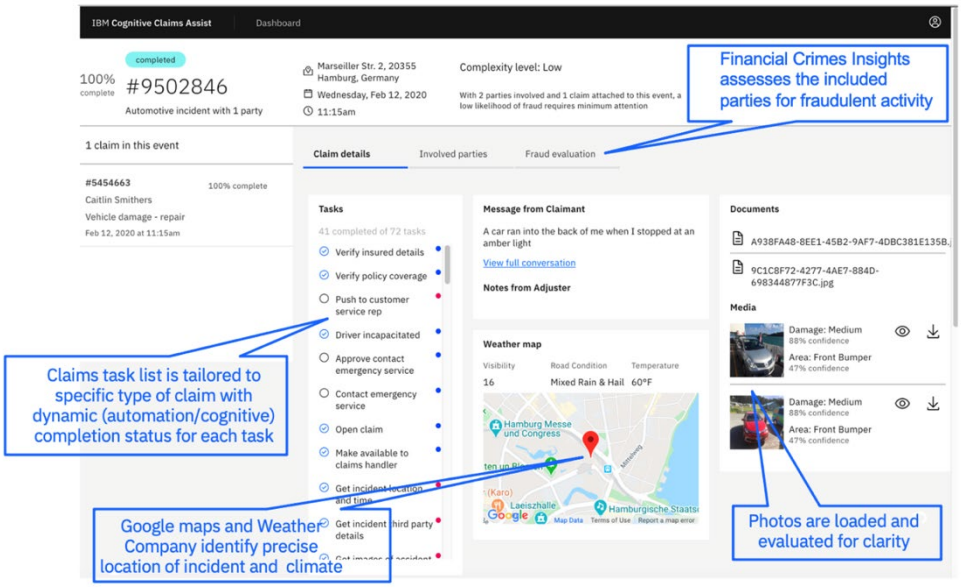


Figure 2: Sample P&C claims handler view shows a completed claim with 42 identified tasks using the dynamic automated task list updated by BAW/BPM

Simplifying the auto claims process

The complexity of P&C claims process results in many claims handling steps that can happen in parallel with data arriving from multiple sources. The intelligent workflow (IW) of the IBM Intelligent Automation for Insurance Claims solution simplifies the intricacies of the claims handling process by automating most claim handling steps through full automation (unattended-mode robotic process automation), cognitive/augmented intelligence (discovery and mining), or digital data decision (data science) interaction. Figure 3 illustrates the extent of automation in the IBM Intelligent Automation for Insurance Claims solution. Of the 58 steps identified in the figure, over 80% have been reorchestrated with automation and/or AI alleviating manual effort.[2] By adding these automation technologies to the claims handling process, the solution improves efficiencies in the following process areas: claims submission, claims adjustment, verification, claims recovery, automated damage assessment, and fraud detection and subrogation, all of which are critical components in the claims handling process.

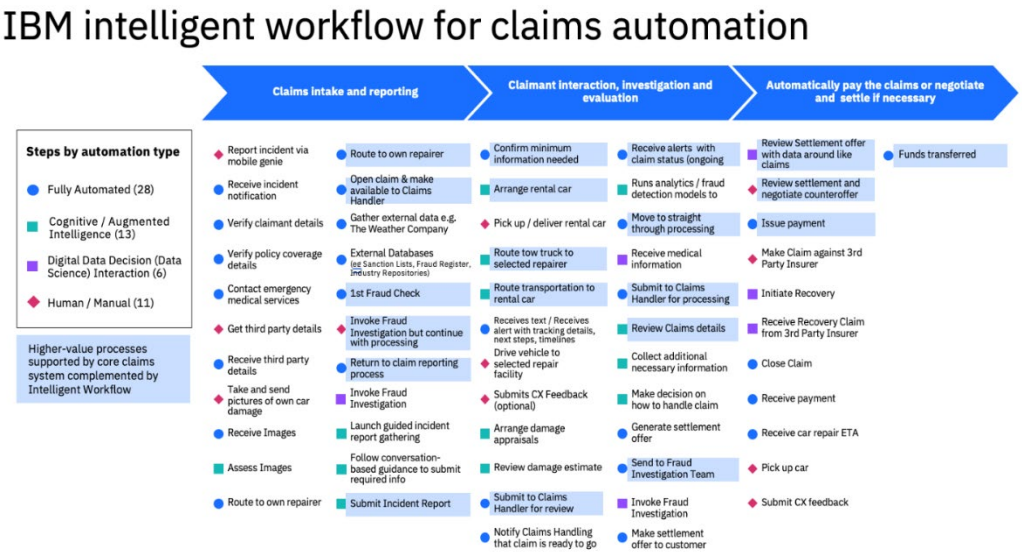


Figure 3: Reorchestrated IBM Intelligent Workflow process for auto claims automation with steps by type of automation

Not only does automation help simplify the claimant's effort and user experience; it improves P&C employee productivity and increases utilization of higher-value skills (see blue highlighted steps in figure 3). IW and automation alleviate claims handlers from performing routine, time consuming steps such as arranging for a car rental, finding a tow truck, or issuing payments.

Lowering the cost of risk reduction

An important business metric for P&C insurance is the Cost of Risk (CoR). Two critical KPIs that comprise CoR are Combined Ratio (CR) and Claims Leakage (CL). Combined Ratio is an insurer's incurred losses, loss-adjustment expenses, acquisition costs, and general and administrative costs compared to earned premiums for the same period. A CR score above 100 indicates that insurers paid out more than they took in as premiums. This can happen, for example, after a hurricane when P&C insurers receive high volumes of total loss claims.

[2] Blue, green, and purple icons in figure 3 indicate tasks reorchestrated with automation and/or AI.

In contrast, Claims Leakage represents lost dollars because of insurance claim fraud, claimant mistakes, improperly carried out procedures, and out-of-date or disparate systems. In the U.S. alone, the Coalition Against Insurance Fraud estimates that the insurance industry loses $80 billion annually due to fraud.[3]

Improving the claim handling process can directly impact CoR since it can help insurers more accurately evaluate CR and CL. Despite the demand for greater claims efficiencies, the P&C market has not considerably enhanced its cost structure in the past 15 years according to McKinsey.[4] In large part, this is because conventional P&C insurance companies are challenged to find ways to make significant changes in how they run their business. With the IBM Intelligent Automation for Insurance Claims solution, modernizing through reorchestration is possible. Automation drives efficiencies by alleviating overhead, avoiding manual errors, and enabling IT organizations to allocate more resources to value creation. Insurers can simplify the claims handling process and can achieve an improved CoR.

To examine how the solution's automated intelligence (AI) and automated workflow (IW) can decrease CR and CL, auto claims data from numerous insurance companies was used to calculate estimated savings. For one Asia Pacific insurance company (figure 4), CL efficiency savings were estimated to be 1%, or $515M per year,[5] given the company's volume of annual claims. In terms of CR, cost savings identified an additional 0.91%, or $76M annually,[4] associated with improved efficiencies in the claims handling process. This combined estimated savings represents a significant reduction to the company's combined ratio and claims leakage.

Risk mitigation options for P&C insurers

For many insurers using automation technologies to lower the cost of risk for claims handling is just the beginning. Automation is increasingly used to improve the accuracy and efficiency in the following areas of insurance operations:

- Underwriting
- Customer Interaction and Servicing
- Policy Administration
- Benefit & Claims Administration
- Risk Management

Automation enables insurers to create more personalized customer experiences to address declining premium revenues and to implement lower cost models

Contact IBM insurance consultants to examine business and IT options for your enterprise

[3] https://insurancefraud.org/fraud-stats/
[4] https://www.mckinsey.com/industries/financial-services/our-insights/how-insurers-can-improve-combined-ratios-by-five-percentage-points
[5] Estimated Cost Ratio (CR) savings percentage of 1% and cost leakage (CL) savings percentage of 0.91% are based on automation technology discussions for auto claims handling with a P& C insurance company in Asia Pacific. Annual number of claims, number of claims handlers, claims payout amounts and other costs were provided by the customer. Anticipated savings percentages are an estimate for this customer; estimates for other customers will vary. For additional information on estimated annual savings, contact the IBM IT Economics team, IT.Economics@us.ibm.com.

Anticipated Cost Leakage and Cost Ratio Efficiency Savings with automated intelligence (AI) and automated workflow (IW)

Annual number of claims	34,250
Number of claims handlers	3,000
Cost of claims handler staff in US dollars	$195,000,000
Cost of claims payout in US dollars	$6,929,000,000
Total cost of annual claims in US dollars	$7,124,000,000
Cost Leakage (CL) efficiency savings percentage	1%
Cost Leakage (CL) efficiency savings in US dollars	**$515,000,000**
Cost Ratio (CR) efficiency savings percentage	0.91%
Cost Ratio (CR) efficiency savings in US dollars	**$76,000,000**
Total efficiency savings in one year	**$591,000,000**

Figure 4: Savings model for Asia Pacific P&C insurance company's annual auto claims

How types of claims impact savings

Depending on the type of loss, P&C providers can see a greater reduction in CL and a more significant improvement in CR. This is because automation can significantly streamline processing for simple and low complexity claims. For example, an Own Damage claim is more likely to have a larger CL than a windshield replacement claim. A windshield replacement claim typically involves just one part and labor. Conversely, a minor collision like a fender bender might include dozens of parts and labor hours, making it more difficult to evaluate the accuracy of the submitted repair cost. Ascertaining the true extent of damage can also be a challenge. An automatic door lock, for example, might have been damaged before the accident, but the claimant could report that it stopped working after the accident.

Figure 5 depicts different claim types according to CL propensity versus CL mitigation with intelligent automation (IA). As described above, a windshield claim has low CL propensity and can be highly automated. On the other hand, an Own Damage claim has a high CL propensity but a lower potential for automation due to its complexity.

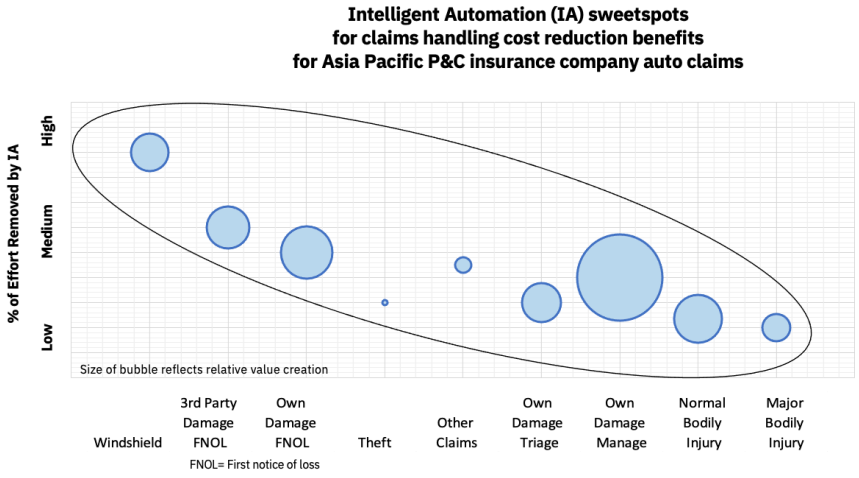


Figure 5: Claims leakage reduction with automated intelligence (AI)

Similarly, figure 6 illustrates the variability of claim handling (CR) according to claim type. Albeit claims with simple and low complexity can gain the greatest benefits from IA and IW, claim types with a low predisposition for automation can still benefit from automation. Automation of simple and low complexity claims broadens the bandwidth for claims handlers to do greater higher-value work by using digital data decisioning. Another benefit from automation is that P&C claims managers can swiftly identify exception claims that require additional investigation.

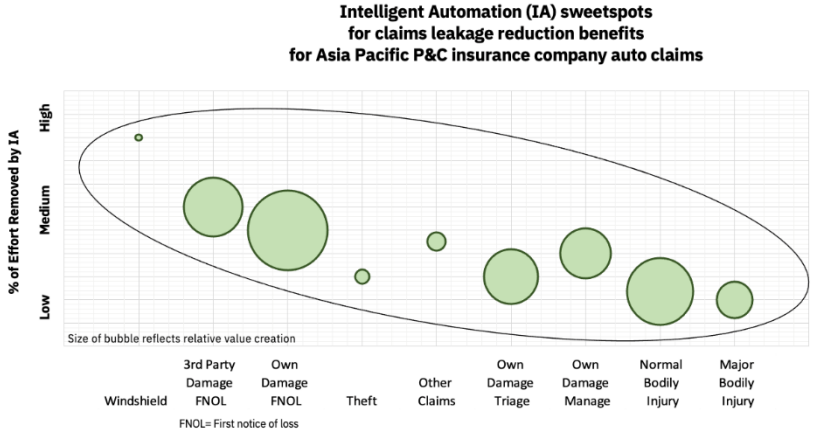


Figure 6: Claims handling reduction (CR) with automated intelligence (AI)

Productivity gains with IA

Claims operations are one of the most critical functions within any insurance company. Without automation and a high level of integration across multiple enterprise IT systems, the insurance claims workflow can be slow and prone to clerical errors. Three areas that lead to disruptive clerical errors are human mistakes, improperly carried out procedures, and legacy or disparate systems. In a conventional claims handling framework, the claimant submits information through various channels such as email, phone, or online forms. The data is then entered often by hand into the first notice of loss (FNOL) claims systems. Next, the claim is validated against the policy administration system for policy coverage, adjusted for settlement, reviewed for fraud, and settled. Throughout the process errors occur, either inadvertently or deliberately, leading to an increase in CL.

The IBM Intelligent Automation for Insurance Claims solution can improve P&C employee productivity by matching skills and experience with claim complexity, for example, identifying adjustment professionals, adjudicators, and case investigators that are best suited to handle specific claims. The solution can also expedite assessment of damage estimates by collecting data from multiple sources. IBM Watson Assistant chatbots can be trained to gather key information from various documents such as paper-based or PDF forms, police reports, or a doctor's statement. Once the claim information is collected, AI can be used together with intelligent automation to analyze the data and detect fraud in real-time. If a claim is screened and found to be low risk, it may be authorized for an immediate payout. If the claim is deemed more complex, it will be triaged by an adjuster, while a flagged potentially high-risk claim can be sent directly to a special investigation unit for further review.

Reduction in transaction processing time allows P&C employees to remove simple tasks from their workload, eliminate errors, and focus on more meaningful human interactions with customers that can improve the overall customer experience within the claims process. In addition, IA data collected from the automated process can be leveraged to reimagine and reorchestrate the automated tasks in new ways, which can lead to improved business agility and an efficient customer experience.

IBM Intelligent Automation for Insurance Claims also provides efficiencies for IT staff. Kubernetes and other components in OpenShift provide automation at the platform layer. This underlying automation eliminates system drift[6], reduces human-induced errors, increases the number of projects that IT administrators can support, and reduces the amount of time needed for patching. The platform layer is abstracted and available to all application deployment components, so developers can focus on producing code to meet business requirements instead of struggling with operational tasks. This abstraction layer in the Red Hat OpenShift platform, coupled with its self-service interface for faster resource provisioning, enables developers to containerize, update code, test, and maintain workloads efficiently in an agile framework. Forrester estimates that the initial developer productivity gain of 20% grows to a 40% improvement by year three and identifies potential reduction of operational staff by 10% over the same three-year period.[7] Learn how IBM Cloud Paks can help modernize your insurance business.

Mitigating customer attrition with IA

According to a customer service study by McKinsey, after a positive experience, more than 85 percent of customers increased their value by purchasing more products; conversely, more than 70 percent reduced their commitment when things turned sour.[8] In today's P&C insurance market, insurers find it challenging to retain customers, and to differentiate themselves in the eyes of their consumers. Customers tend to have infrequent contact with insurers, and when they do, it may be in an unfavorable context (car accident, home damage) that requires a claim. This lack of customer engagement adds additional pressure for each insurer to provide the best overall customer experience with every interaction that they have with their customers. Even so, the World Insurance Report indicates that only 30 percent of policyholders report having positive customer experiences with their insurers."[9]

Improving customer loyalty reduces customer churn and reduces unnecessary spending on customer acquisition costs to attract new customers. To decrease the rate at which customers are lost to other companies, P&C insurers can improve their customers' experience by increasing customer interactions outside the claim filing process. An effective practice can be providing proactive notifications that potentially avoid events in the first place and that result in filing a claim.

[6] In a non-containerized environment, changes to a configuration may not be automatically propagated to other configurations, leading to non-standardized configurations, or system drift, that can introduce code inconsistencies and security exposures. OpenShift uses configuration templates to help administrators avoid environment mismatches.
[7] https://www.tectight.com/wp-content/uploads/2019/11/The-Total-Economic-impact-of-IBM-Cloud-Private.pdf
[8] https://www.mckinsey.com/business-functions/organization/our-insights/the-moment-of-truth-in-customer-service
[9] https://www.ibm.com/cloud/blog/announcements/reinvent-insurance-claims-with-ibm-cloud-paks

The IBM Intelligent Automation for Insurance Claims solution is capable of analyzing data from diverse sources to alert customers of upcoming events in their area. For example, homeowners can be alerted of a severe ice storm and receive information on how to avoid pipe bursts. IBM Cloud Pak for Data and IBM Cloud Pak for Integration allows customization and integration of external APIs like weather and maps to validate events so the solution can notify customers in advance of a storm.

Another approach to improving the customer retention is to shorten the claim cycle. With over three quarters of the claims filing process benefiting from automation or AI, the IBM Intelligent Automation for Insurance Claims solution can significantly decrease time to claim settlement for customers.

Reduce costs and increase customer loyalty

P&C insurance companies that implement the IBM Intelligent Automation for Insurance Claims solution can improve critical business metrics such as CR, CL, and COR by leveraging the solution's automation and AI technologies that reduce claim handling times and claim inaccuracies. With the use of intelligent workflow and process reorchestration, P&C insurance customers can also benefit from a more positive claims experience with a simpler, and faster, claims filing solution.

If your organization is looking for a P&C insurance solution to reduce claims costs and gain customer loyalty, contact IBM, at IT.Economics@us.ibm.com, to help you assess your current claims filing solution and evaluate areas for efficiencies. Our team can help you identify process bottlenecks, and develop a roadmap to achieve an AI and IW based solution that can lower claims handling costs, achieve more accurate claims settlements, and help avoid customer attrition.

About the authors

Michael Dudding, michael_dudding@us.ibm.com is a Senior Software Designer in the Worldwide IBM IT Economics Consulting and Research organization. He conducts hands-on competitive research on IBM software and systems, focusing on Linux® on IBM Z®, Power®, and X86. Michael has 30 years of IT experience across multiple industries and geographies. During his career at IBM, he has held various roles that include solutions architecture, sales, consulting, and competitive research.

Gregory Sechuga, gsechuga@us.ibm.com is program director of the Worldwide IBM IT Economics Consulting and Research organization. Gregory is an Executive IT Architect, IBM Senior Certified and The Open Group Certified Distinguished Lead/Chief Architect. He has more than 25 years of experience in architecting and implementing complex enterprise IT solutions across a broad range of industries and platforms. Before joining CPO, Gregory was a Lead Architect in the Microsoft practice of IBM Global Business Services where he led and delivered many large enterprise infrastructure, application development and application integration projects for IBM customers.

With 40 years of experience in IBM, Mark Carter, mwcarter@us.ibm.com has spent the past 16 years as an industry expert in his current role as Manager, Business Innovation, Global Insurance Industry. He specializes in identifying crucial global insurance industry trends that contribute to sustained year-over-year business growth. Mark advises executives across the insurance industry facing transformation, automation, and profitable growth challenges. Additionally, he delivers solutions utilizing Intelligent Automation, Blockchain, IoT through connected ecosystems, hybrid cloud, and security. Mark's focus on Intelligent Workflow to build digital workforces has awarded him two Patents Pending:

[1] Patent Application for Workflows Separate From Domain Logic, US Patent Pending, USPTO Application 17/247512, December 15, 2020.

[2] Patent Application for Intelligent Secure Automation Of Claim Preemptive SUBROGATION, US Patent Pending, USPTO Application Filed 17/302978, May 18, 2021.

Susan Proietti Conti, sconti@us.ibm.com is the WW Program Director for the IBM IT Economics Consulting & Research team and has over 20 years of experience working in IBM SW and HW development and product management. Susan is a certified IBM Executive Project Manager and PMP®.

IBM Corporation
New Orchard Road
Armonk, NY 10504
U.S.A.
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04039104-USEN-03