Reimagining insurance processes with
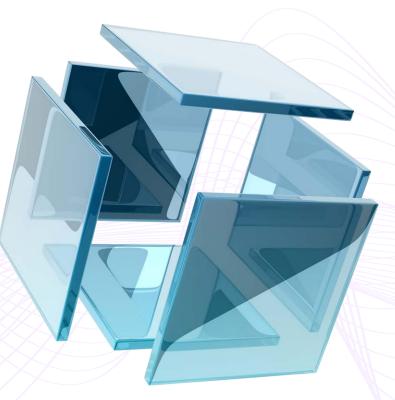# INTELLIGENT SOLUTIONS

Unleashing a potential
$10 billion to $20 billion
profit boost for
North American carriers

Leading insurers that use intelligent solutions to reinvent the customer experience and to drive human-machine collaboration are achieving returns in excess of 10 times their investment in the technology.

INSURERS DEPLOY INTELLIGENT SOLUTIONS TO GREAT EFFECT, BUT MOST ARE HOLDING BACK

Insurance carriers are under pressure to do more, to do it faster, and to do it more cost-effectively. Though many of them have taken significant steps to drive better performance and enhance operational efficiencies, rising consumer expectations and continued cost pressures mean that they need to do even more.

To meet the customer experience demands of the future and to achieve the levels of efficiency they need to compete in a digital world, insurers must not only think smarter, but execute smarter by embedding intelligence into every business process. Intelligent solutions offer carriers the opportunity to do just that—but only if they are ready to take the technologies out of the lab and deploy them at scale.

Our Process Reimagined survey shows that many carriers have progressed past investigating and piloting the technologies, towards using intelligent solutions to streamline selected business processes and customer experiences. More than half are already using intelligent solutions for at least one business process, and two-thirds of those reported that they reaped at least a four-fold return on investment (ROI).

But most insurance organizations remain relatively immature in their use of intelligent automation, and have yet to scale and industrialize their intelligent solutions deployments. Their challenge is to move beyond using intelligent solutions for incremental process improvements, towards completely reimagining their business processes and customer experiences.

Intelligent solutions

Foundational automation leverages a range of business process management tools and utilities to enable straight-through processing and drive effective work orchestration: business rules engine (BRE), business process model and notation (BPMN), business process execution language (BPEL), scripts, macros, batch programs, minibots.

Robotic process automation (RPA) uses advancements in optical character recognition (OCR), RPA tools and micro services to enable broader automation, focused on eliminating repetitive manual and rules-based tasks.

Higher-end tools with cognitive capability use artificial intelligence (AI) and analytics to enable automation of more complex tasks by bringing automated decision-making into the system. These automated "co-workers" or "virtual agents" increasingly augment human work with predictive capabilities that span speech, text and video analytics.

The most advanced intelligent solutions drive machine-based process execution where human judgment is key. These provide self-learning and self-healing capabilities, using adaptive processes and natural language.

MOVING FROM LAB TO LIFE

Accenture research indicates that carriers recognize that intelligent solutions represent a significant opportunity for them to improve business performance:

- **80 percent** of insurers in the Process Reimagined survey acknowledged the value of intelligent solutions in taking on more complex tasks and adapting without human intervention.

- **47 percent** of the carriers in the survey said they were investigating or piloting intelligent solutions.

- **63 percent** of insurance executives responding to the Accenture Future Workforce Survey agreed the industry will be completely transformed by intelligent technologies.[1]

- The Future Workforce study also found that **75 percent** of insurers were planning to use AI to automate tasks to a large or very large extent in the next three years.[2]

- Research for the Accenture Technology Vision for Insurance 2018[3] shows that **more than 90 percent** of insurers are using, planning to use, or considering the use of, machine learning or AI in claims or underwriting processes.

Intelligent solutions — insurance use cases

Accenture has identified over 100 intelligent solutions opportunities across the life and P&C value chains.

Claims management: Intelligent solutions can automatically process claims data, spot potential fraud and analyze trends in fraudulent activity. An Accenture life and health client expects to cut its handling time for illness and disability claims from 100 days to 5 seconds by using a combination of OCR, text analytics and machine learning.

Underwriting: These solutions can help extract information about key risk factors and automate identification of product trends linked to demand and profitability.

Sales: AI can alert agents to prospects who are ready to buy, helping to drive higher conversion rates.

Product and pricing: Intelligent data analysis can incorporate a wider range of risk factors to more accurately price risk.
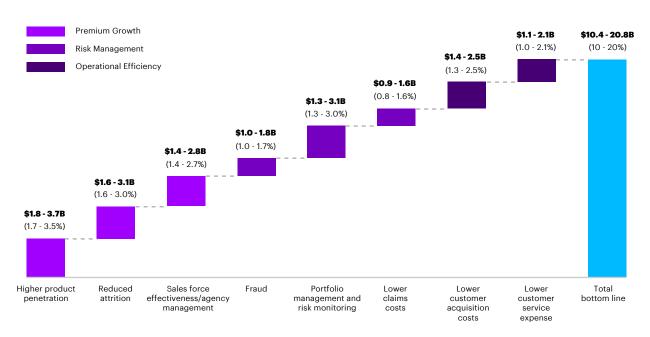
The customer experience: Process automation is enabling whole new levels of personalization and convenience in customer service. Co-op Insurance customers in the UK can receive an auto insurance estimate after answering four questions from a chatbot on Facebook Messenger.[1]

The real story to emerge from the Process Reimagined survey is not that carriers are merely investigating intelligent solutions. It is just how many of them have moved beyond considering, conceptualizing and piloting intelligent solutions towards deploying them for live applications. More than half (53 percent) of carriers are using intelligent solutions in one or more business processes:

17% in one business process;

30% in more than one business process;

6% across the value chain.

These solutions are creating significant value. Sixty-five percent of the carriers investing in them are reporting business improvements of up to four times their investments, while 20 percent are achieving results of at least five times their investments. Some report an ROI of tenfold or more.
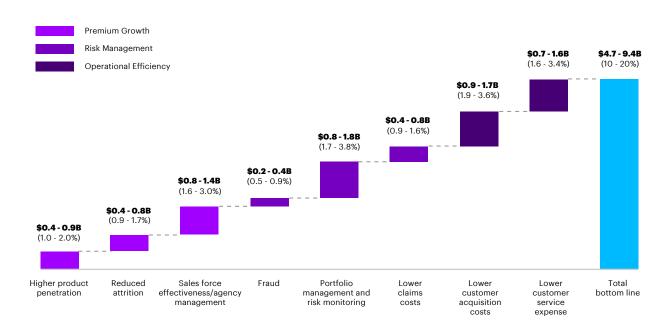
Accenture's calculations indicate that the North American insurance sector alone could reap a 10 to 20 percent improvement in annual profitability by investing in the broader suite of intelligent solutions including analytics, machine learning and AI. This would be worth $10.4 billion to $20.8 billion a year.

Creating Value Using Intelligent Solutions
TOTAL US INSURANCE INDUSTRY

Legend:
- Premium Growth
- Risk Management
- Operational Efficiency

Category	Value
Higher product penetration	$1.8 - 3.7B (1.7 - 3.5%)
Reduced attrition	$1.6 - 3.1B (1.6 - 3.0%)
Sales force effectiveness/agency management	$1.4 - 2.8B (1.4 - 2.7%)
Fraud	$1.0 - 1.8B (1.0 - 1.7%)
Portfolio management and risk monitoring	$1.3 - 3.1B (1.3 - 3.0%)
Lower claims costs	$0.9 - 1.6B (0.8 - 1.6%)
Lower customer acquisition costs	$1.4 - 2.5B (1.3 - 2.5%)
Lower customer service expense	$1.1 - 2.1B (1.0 - 2.1%)
Total bottom line	$10.4 - 20.8B (10 - 20%)

• L&A: Individual Life and Individual Annuity segments only. Based on Accenture Analytics estimates.
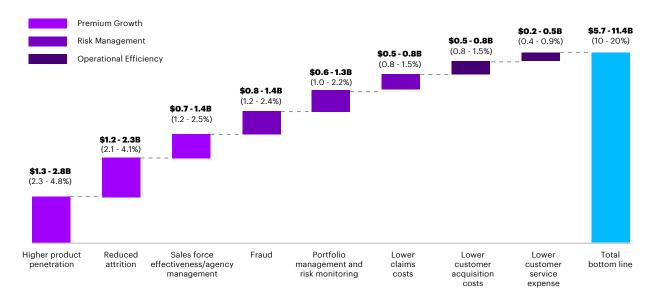• P&C: All Personal and Commercial lines. Based on Accenture Analytics estimates.

Creating Value Using Intelligent Solutions
LIFE & ANNUITIES INDUSTRY

- ■ Premium Growth
- ■ Risk Management
- ■ Operational Efficiency

$0.4 - 0.9B
(1.0 - 2.0%)
— Higher product penetration

$0.4 - 0.8B
(0.9 - 1.7%)
— Reduced attrition

$0.8 - 1.4B
(1.6 - 3.0%)
— Sales force effectiveness/agency management

$0.2 - 0.4B
(0.5 - 0.9%)
— Fraud

$0.8 - 1.8B
(1.7 - 3.8%)
— Portfolio management and risk monitoring

$0.4 - 0.8B
(0.9 - 1.6%)
— Lower claims costs

$0.9 - 1.7B
(1.9 - 3.6%)
— Lower customer acquisition costs

$0.7 - 1.6B
(1.6 - 3.4%)
— Lower customer service expense

$4.7 - 9.4B
(10 - 20%)
— Total bottom line

• L&A: Individual Life and Individual Annuity segments only. Based on Accenture Analytics estimates.

Creating Value Using Intelligent Solutions
PROPERTY & CASUALTY INDUSTRY

- ■ Premium Growth
- ■ Risk Management
- ■ Operational Efficiency

$1.3 - 2.8B
(2.3 - 4.8%)
— Higher product penetration

$1.2 - 2.3B
(2.1 - 4.1%)
— Reduced attrition

$0.7 - 1.4B
(1.2 - 2.5%)
— Sales force effectiveness/agency management

$0.8 - 1.4B
(1.2 - 2.4%)
— Fraud

$0.6 - 1.3B
(1.0 - 2.2%)
— Portfolio management and risk monitoring

$0.5 - 0.8B
(0.8 - 1.5%)
— Lower claims costs

$0.5 - 0.8B
(0.8 - 1.5%)
— Lower customer acquisition costs

$0.2 - 0.5B
(0.4 - 0.9%)
— Lower customer service expense

$5.7 - 11.4B
(10 - 20%)
— Total bottom line

• P&C: All Personal and Commercial lines. Based on Accenture Analytics estimates as per
Accenture Insurance Analytics proposals to Kemper Insurance. Contact Sharad Sachdev – see back page.

BUILDING TOWARDS AN INTELLIGENT INSURER

The key differences between carriers investigating and those industrializing intelligent solutions lie in how they approach it. Most insurers start out in intelligent solutions with a technology-centric pilot to evaluate a single technology (such as RPA) as a tool for business improvement. Then, they often apply this tool to an existing process without considering how intelligent solutions could completely change processes.

As they mature in their usage of intelligent solutions, organizations should consider three dimensions:

01 Capabilities

Intelligent solutions are not a single technology, but an array of capabilities and toolsets. As they mature in their use of these solutions, carriers look at the business problem they are hoping to solve or the business value they wish to achieve, then consider which intelligent technologies can be combined to make it happen.
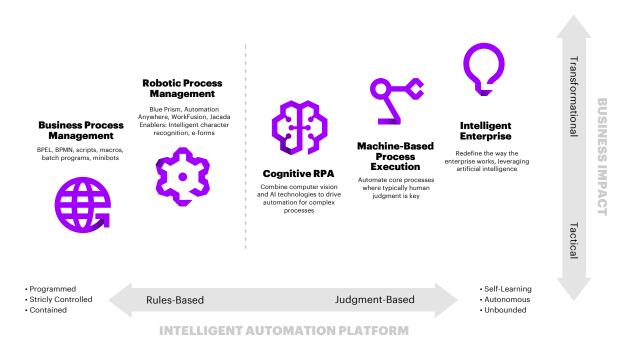
02 Processes and experiences

Leaders in intelligent solutions rethink their processes with intelligence in mind. Rather than using the tools with existing processes, they create self-optimizing "living" processes that use machine-learning algorithms and real-time data to continuously improve. This has the potential to unlock new workforce roles and new ways for humans and machines to work together.

03 Platforms

Insurers that treat intelligent solutions as a series of isolated technology investments or simply as add-ons to their existing solutions will not get the best return on their investments. The leaders recognize that intelligent capabilities represent a new platform capability, similar to existing core systems such as policy and claims or workflow and business process management solutions. Intelligent capabilities scale best when they integrate the architecture, technologies, people, skills, processes, and governance necessary to enable rapid, consistent, and quality deployment and management.

Intelligent solutions spectrum
BUILD TOWARDS AN INTELLIGENT ENTERPRISE

Business Process Management

BPEL, BPMN, scripts, macros, batch programs, minibots

Robotic Process Management

Blue Prism, Automation Anywhere, WorkFusion, Jacada Enablers: Intelligent character recognition, e-forms

Cognitive RPA

Combine computer vision and AI technologies to drive automation for complex processes

Machine-Based Process Execution

Automate core processes where typically human judgment is key

Intelligent Enterprise

Redefine the way the enterprise works, leveraging artificial intelligence

Transformational

Tactical

BUSINESS IMPACT

• Programmed
• Stricly Controlled
• Contained

Rules-Based   Judgment-Based

• Self-Learning
• Autonomous
• Unbounded

INTELLIGENT AUTOMATION PLATFORM

Today, only 10 percent of carriers have built an intelligent platform to reimagine their processes. In so doing, they are rethinking their businesses in terms of processes, data, and human/machine interaction.

The survey shows that insurers are developing capabilities at different speeds:

24% are reinventing processes to be able to adapt to changing conditions and to self-perform repeatable tasks.

31% are harnessing data and applying analytics to drive new insight, advice, decisions and customer experiences.

34% are rethinking human/machine interactions to drive speed, quality and consistency of outcomes.

What do some of these programs look like in practice? In life insurance, Manulife is using AI and deep learning to analyze unstructured financial data. This enables investment researchers and portfolio managers to make more informed decisions by analyzing data from news articles, analyst reports and other similar sources.[5]

A leading insurance provider in Europe teamed with Accenture to implement an analytics strategy and customer-centric solution, including machine learning techniques and algorithms developed with the Massachusetts Institute of Technology. The intelligence gained from analytics is enabling the company to provide more relevant offers to customers at the right place—online, offline, during customer service calls, on the web, and more—at the right time and the right price.

Dai-ichi Life Insurance Company in Japan has introduced a FaceAI feature, which simulates what a person might look like in the future, based on a photo taken with a smartphone camera, factoring in smoking and drinking habits. Based on the results, it displays a recommended health improvement course.[6]

Where human/machine interactions are concerned, AIG has partnered with Human Condition Safety to create tools that combine wearables, AI, information modelling and cloud computing to help construction workers, managers and owners prevent injuries.[7]

The research shows that insurers understand these kinds of outcomes are within their reach: 83 percent of executives agreed that intelligent solutions can automatically adapt processes. But only 24 percent said that carriers are making the shift to solutions that go beyond processing and orchestration and instead deliver "living", self-adapting, self-healing and self-learning processes.

ACCELERATING PROGRESS TO LIVING SERVICES

Until now, most insurance carriers have focused investments in intelligent solutions on making small improvements to existing processes to increase automation, improve quality, or boost decision-making. However, the leaders are thinking about it differently. They are looking at how these technologies can completely reinvent business processes, worker engagement and customer experiences.

IDC projects that spending on cognitive systems in the insurance sector will double between 2017 and 2019, leaping from $322 million today to $645 million in two years' time.[8] Those insurers that can move quickly and most decisively will secure considerable competitive advantage. Accenture estimates that insurers that fully commit to AI and invest in human-machine collaboration could, between now and 2022, increase revenues by 17 percent.[9]

Accenture's experience shows that successful deployments of intelligent solutions tend to start small, but are usually linked to a larger organizational strategy. The insurers that drive the best results from intelligent solutions focus on three breakthrough areas:

Automating processes to create efficiencies, improve quality, and deploy new customer experiences. This includes advanced analytics for decision-making, RPA applied to simple tasks, and solutions that combine machine learning and robotics to extend automation and create living processes. P&C carrier Vern Fonk uses an automated email solution that adopts human-like personas, reads texts and responds to engagement cues within any email to determine a person's intentions. The system handles more than 25,000 enquiries a month, giving 90 percent of users the answers they need in fewer than three questions.[10]

Enabling humans to make better decisions in areas such as underwriting, claims, payments, and the customer experience. For example, Allstate has developed ABIe (the Allstate Business Insurance Expert), a virtual assistant that walks agents through complex product processes.[11] Ant Financial Services in China uses an AI-driven image-recognition system to enable vehicle insurance claims adjusters to make more-standardized and objective assessments of external vehicle damage.[12] Around 80 percent of insurance executives surveyed for Accenture's Technology Vision for Insurance 2018[13] agreed that AI will work next to humans in their organization, as a co-worker, collaborator and trusted advisor within the next two years.

Transform customer, agent and employee experiences with intelligently enabled end-to-end processes. Take this example: During the morning commute, a policyholder collides with another car. He contacts the insurer's claims hotline, preferring to speak with a human being, and completes a basic first notice of loss report. The claims advisor establishes that the customer was at fault and asks for photos of the damage to be uploaded from the insurer's smartphone app.

The system uses computer vision and machine learning to analyze the images, confirms that the customer was at fault, and automatically organizes for his car to be collected and for a courtesy car to be delivered. Simultaneously, a separate algorithm automatically scores the claim. As the predicted risk score for personal injury is high at 63 percent, the claim is pushed to the Claims Dashboard App to be reviewed by a specialist claims handler.

DRIVING VALUE WITH INTELLIGENT SOLUTIONS

The potential of intelligent solutions to drive significant financial benefits across the entire insurance value chain is tremendous. Yet 70 percent of insurance executives in the Technology Vision for Insurance 2018 research admitted that AI is advancing faster than their organization's pace of adoption.[14]

To keep up with the rate of evolution in intelligent solutions, insurers cannot simply conduct random pilots or make single technology investments. The best results will be achieved by those carriers that are willing to think boldly, but invest prudently.

To ensure success, there are five critical areas to get right:

01 Digital strategy
Whether for a single functional area or for the enterprise, an intelligent solutions journey starts with an end-to-end evaluation of availability of intelligent opportunities, prioritized against return on investment criteria, and defined with a clear development plan.

02 Intelligent operating model
Though pilots can be executed by isolated project teams, sustained investment and management of intelligent solutions require a new infrastructure of talent, skills, processes, governance, vendors, and organization.

03 Technology architecture
The technology around intelligent solutions continues to evolve, but that doesn't mean carriers shouldn't have a scalable and expandable core intelligent architecture. They should make intelligent use of software, data, and cloud-based and software-as-a-service capabilities.

04 Portfolio approach
Intelligent solutions can provide immediate value to many core business processes. They also provide the potential to create completely new services and process experiences for customers, agents, and employees. By taking an outcome-driven portfolio approach to investments, carriers can gain rapid financial value from improving the core, while investing in higher-risk/higher-return transformative bets.

05 Value measurement
Investing in intelligent solutions should be done with the same rigor as other capital investments. The value case for solutions should be defined upfront and the results should be tracked closely and shared so that future projects can deliver more and more value to the business.

The proven ability of intelligent solutions to deliver fast, measurable bottom-line results makes investing in intelligent solutions a smart choice.

The key question: can you invest in them intelligently?

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About the research

Building on an earlier pilot study, we investigated where and how companies are applying artificial intelligence to manage and reinvent business processes. Our survey of 1,075 process professionals from large global companies concluded in early 2017. It included: 156 CXOs, 420 executives, 382 managers, and 117 analysts/engineers. Within the overall sample, 185 of the global companies were from the insurance sector. To develop the key findings in this report the primary research results were combined with an in-depth analysis of the potential profit impact of intelligent solutions on North American tier 1 insurers.

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