The State of AI in Insurance

Point of View 2020

MANTRA LABS

Outline

Introduction

India accounts for approximately 6% of insurance premium in Asia and around 2% of the global premium volume. However, only around 4% of India's population is insured which is still below the global average.

Over the last fifteen years, the old insurance economy has migrated to a fully digitalized marketplace where technology acts as the prime enabler for growth and new profits. In that time, newer market forces have emerged such as younger demographics and a growing demand for flexibly-priced insurance products.

To bridge the gaps posed by adapting to these complex forces: Artificial Intelligence has helped optimize several core insurance processes such as new business acquisition, channel management, retention and account penetration among others.

As Insurers continue leveraging AI to match the expectations of simplicity, speed and transparency demanded by their customers — the very idea of Insurance itself has begun to shift; passively transitioning into a more 'bought' (by customers) rather than being 'sold' (by agents) consideration.

Insurance businesses have already implemented AI & automation technologies for speedier customer query resolution, faster claims processing, dynamic underwriting and coverage personalization among other promising case examples. Yet, AI is largely unexplored in many aspects of insurance like customer service, pricing, fraud & risk assessment and dynamic personalization.
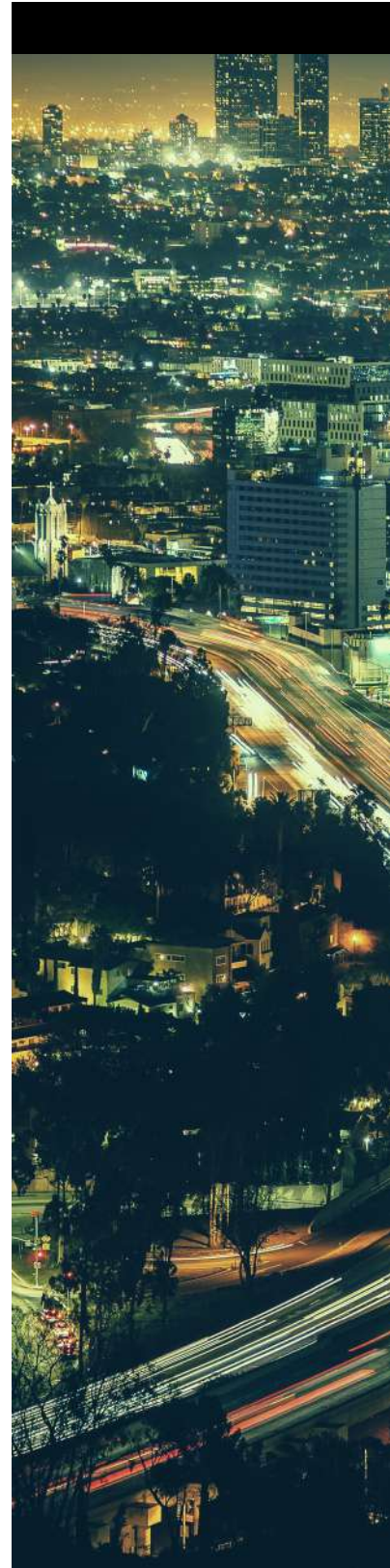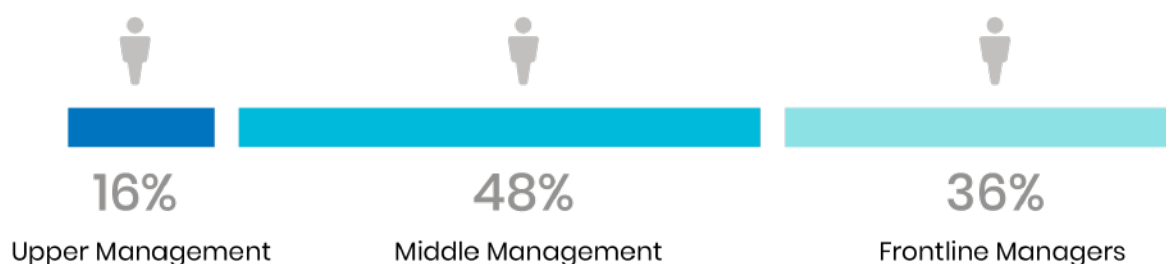
About This Survey

This brief POV aims at helping Insurance decision-makers address the critical challenges in AI implementation for Insurance organizations, and potentially develop strategies around it. Mantra Labs surveyed 114 senior business managers & executives across the auto, home, life and health markets within the Indian Insurance Landscape — to gauge the future state of AI in 2020.

Audience Breakdown —

By Role

16%	48%	36%
Upper Management	Middle Management	Frontline Managers

By Function

18%
Marketing & Sales

22%
Underwriting

11%
Policy Administration

8%
Servicing

21%
Claims

20%
Actuarial
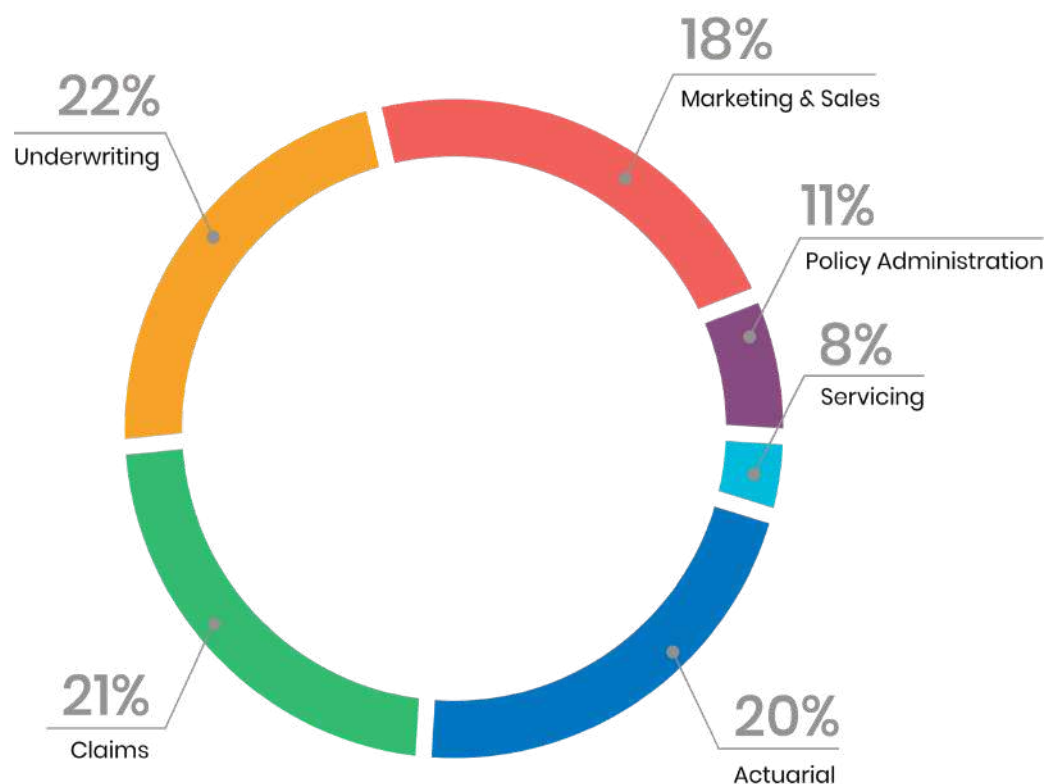
Insurance Needs AI. But Why?

The idea of the traditional insurance product has evolved. Today, bite-sized insurance, usage-based insurance and P2P insurance models are growing more and more popular. The 'Bite-sized' insurance industry in India alone is expected to touch $50B in gross written premiums by 2023. This new visage of insurance is driven by the spurring demands of the next generation.

India will be home to 500 million people under 35 by 2021. Insurance's next target customer has unique and specific needs, and in order to keep pace with the evolving demand of the digital savvy end-user — AI based technologies are being harnessed by upstart insurance startups and incumbent carriers to deliver the goods.

Many insurers are investing in this capability in the hopes of adding complex dexterity and craft to their back and front office. AI adoption continues to accelerate among the top-tier carriers and is now beginning to percolate through the diverse business landscape.

The field of AI that has made the most inroads in Insurance is Machine Learning (ML), which relies on advanced statistical models to draw relationships between patterns extracted from data. By constantly optimizing and learning, these models are the foundation for next-gen business decision-making techniques.

Figure 1: BITE-SIZED INSURANCE PRODUCTS IN INDIA TODAY

BITE-SIZED						
Insurance Product	Mosquito borne Diseases	Cycle Theft	Marathon	Home Protection	Mobile Protection	Fitness
InsurTech/Insurance Partnership	Mobikwik & MaxBupa	Toffee Insurance & HDFC ERGO	Symbo India & Reliance General	Digit Insurance	Digit Insurance	Toffee Insurance & Apollo Munich

Source: businesstoday.in

ANNUAL PREMIUMS FOR BITE-SIZED PRODUCTS RANGE BETWEEN ₹49 - ₹430

Key Survey Insights for 2020

AI SKILLED PRACTITIONERS ARE GROWING IN NUMBER, BUT QUALITY AI DATA IS HARD TO DEVELOP.
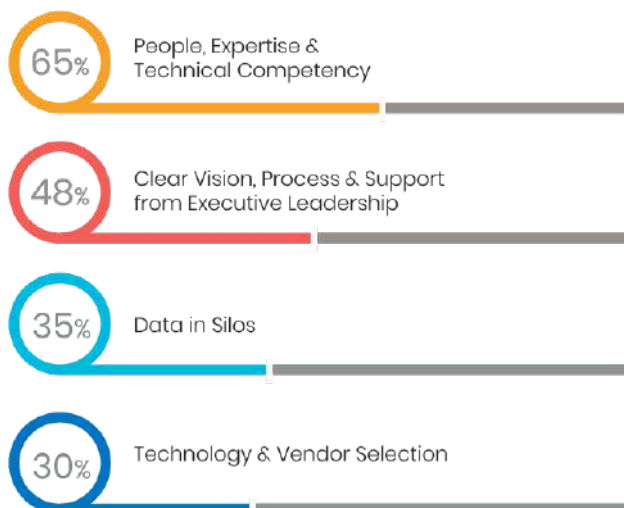
Insurance executives feel that 'skills and talent' in the field of AI are the main barrier for AI transformation in their business. Critical skill-sets like data scientists, cloud specialists, machine learning engineers, and AI engineers are essential to keep pace.

The skilled AI talent shortage is not new, and although still playing catch-up to the US, China and Japan — India has doubled its AI workforce over the past few years to nearly 72,000 skilled professionals in 2019. Recently, there has been a growing pool of graduates and freshers upskilling themselves alongside more seasoned professionals who are actively transitioning to a career in AI.

According to Dataconomy, 96 per cent of Enterprises also face challenges in structuring data that supports their AI strategy. The lack of high-quality data and issues in AI data training may also play a role in the ability to influence the success of AI implementation in organizations. The technology itself is often less understood and even aggrandized, causing many misconceptions surrounding AI's true potential for Insurance.

On the flipside, the dearth of AI talent within Insurance may not be the only barrier to transformation. Several Industry experts have also relayed that many AI-based projects and proof-of-concept work do not take off the ground due to lack of quality data at the disposal of such skilled professionals — derailing their availability/ usefulness for hiring purposes.

Figure 2: What are the core challenges for AI Transformation to your business?

65% People, Expertise & Technical Competency

48% Clear Vision, Process & Support from Executive Leadership

35% Data in Silos

30% Technology & Vendor Selection

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Securing the right data science teams and training the right amount of data needed to support algorithm development can improve confidence levels for organizations.

AI CAN BREAK THROUGH THE SILO MENTALITY.

AI is built on the foundation of quality data. Gini Rometty, IBM's CEO, called data the 'incumbent disruptor' since 80% of the World's data is not searchable and is owned by the companies themselves.

Most businesses that have data kept in silos face challenges in collaboration, execution and measurement of their bigger picture goals. Accumulating information in silos may not give accurate insights into improving engagement, which leads to impersonalized content that doesn't speak to the customer.

Organizational silos are ill-advised, and are proven constrictive barriers to operational productivity & efficiency. In turn, silos may also be adequately responsible for slowing down AI in production and live services.

> "
> 1 in 3 insurance executives, feel that data kept in silos is a pressing concern, for AI transformation.

AI-powered tools are a perfect fit for creating better, more efficient workflows that transcend organizational silos and orchestrate greater synchronization.

The hard truth about overcoming the silo mentality is understanding that implementing AI is not a one-time process; it is a journey that requires time, patience and vision.

AI IS CREATING A UNIFIED VIEW OF YOUR CUSTOMER, BUT INSURERS STILL LAG IN CROSS-CHANNEL INTEGRATION.

6 in 10 insurance executives agree that integrating multiple channels is how they would improve the customer experience journey. We find that their biggest challenge for success is the organization's ability in identifying the user precisely and consistently across all journeys.
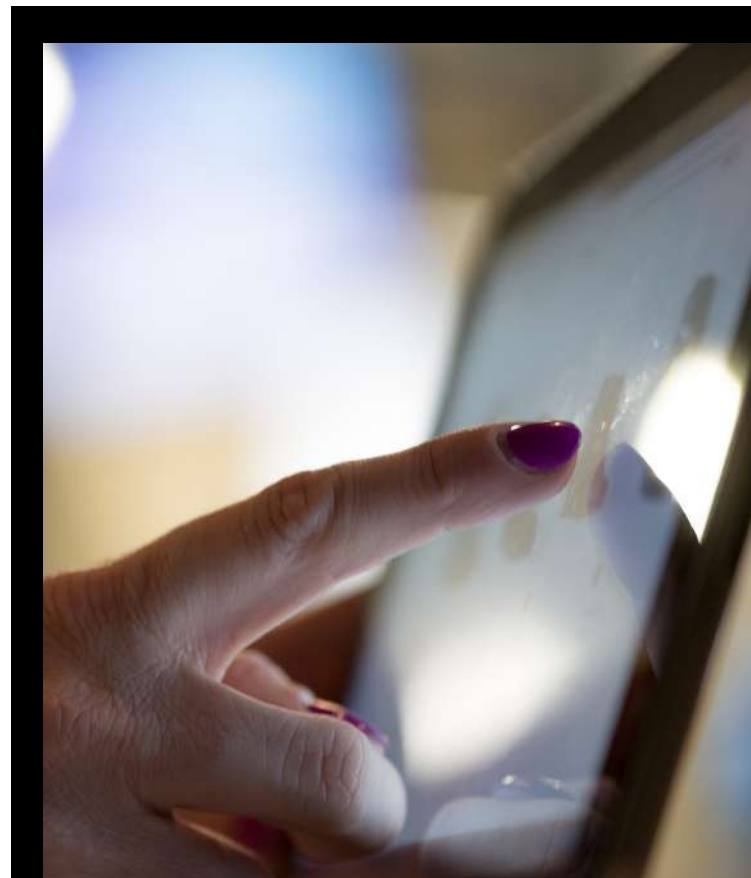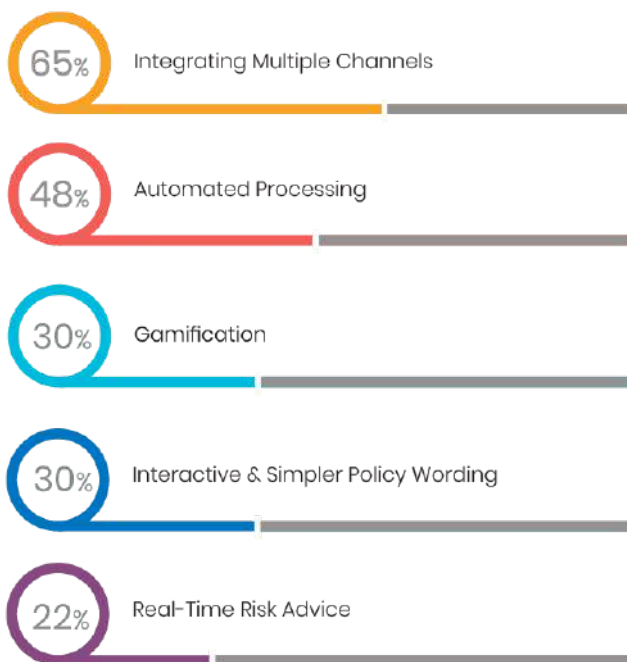
The impact to the overall customer experience depends on the ability to integrate these technologies across all channels. Where carriers have hit a snag is in understanding how to use the right technology and adapting it for that specific channel or touchpoint.

Delivering an Omnichannel experience may be the holy grail for insurers, but truly achieving this can be a long, complex process. A key concern is the synchronization of data in the integration process across all channels including sales channels, ERP, CRM and social media.

In 2019, Customer Experience (CX) was on the insurer's top-of-mind. Leveraging AI to improve customer touchpoints through the use of robo-advisors and chatbots that have voice skills, for instance, is helping deliver a more interactive experience to the end-user.

Conversational AI, a swiftly growing segment, is transforming the way businesses can address their customer's routine queries and even assist in processing real-time events like gathering claims information through video. These tools will free up time for the organization and can dramatically improve the speed of service delivery.

Figure 3: What added measures would you adopt to improve the Customer Experience Journey?

65% Integrating Multiple Channels

48% Automated Processing

30% Gamification

30% Interactive & Simpler Policy Wording

22% Real-Time Risk Advice

Figure 4: OMNICHANNEL FULFILLMENT WITH AI
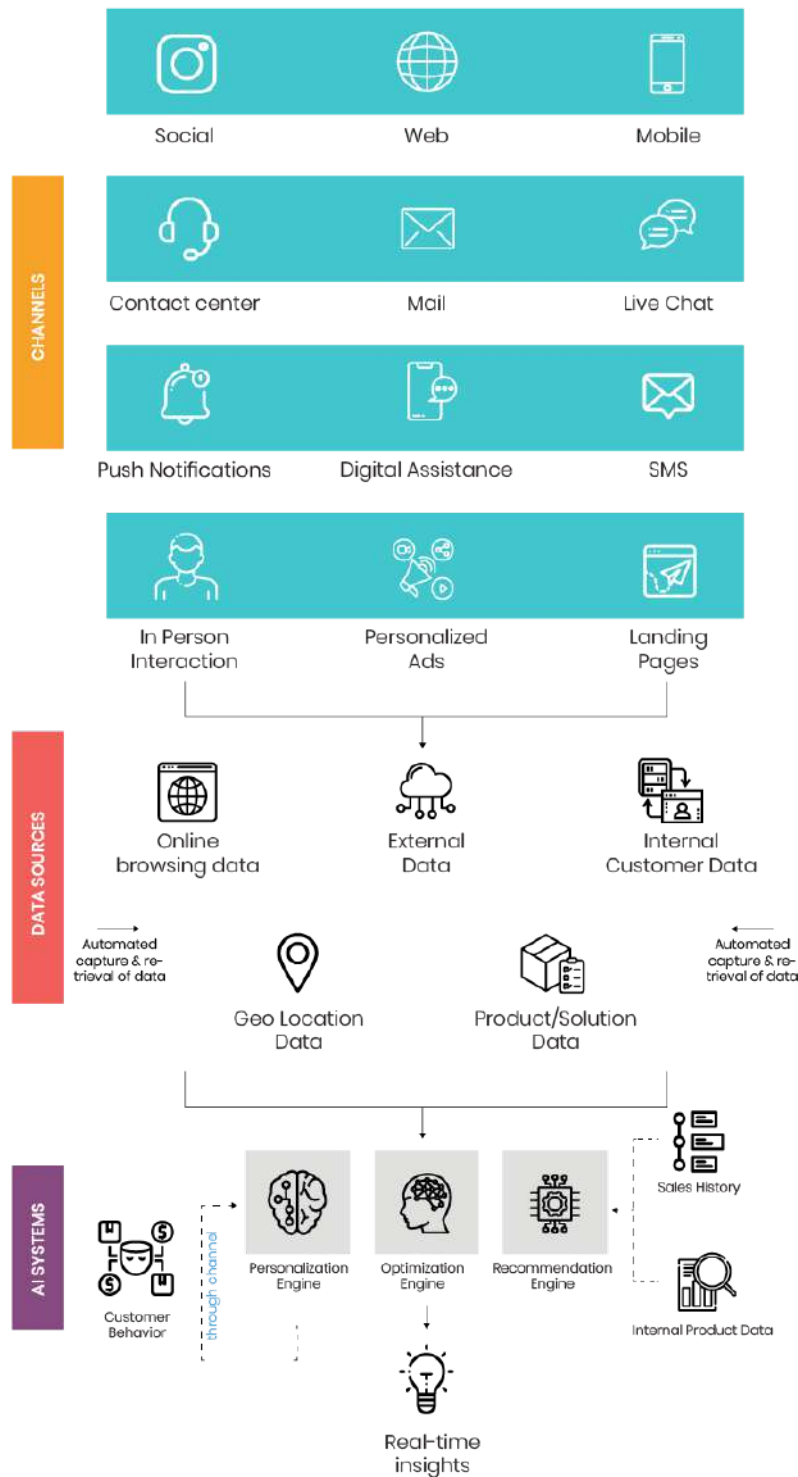
Industry experts agree that the best approach when transitioning to an Omni-channel model is first addressing channel conflict. In insurance, channel conflict typically arises when multiple distribution channels are competing for the same customer. Delivering a true omni-channel exposure is made possible for the customer by giving them a singular interaction experience and journey continuity with the brand first as opposed to only exposing the customer to an isolated mix of channels.

INSURANCE CARRIERS ARE EAGER TO COLLABORATE WITH INSURTECHS, IF THE OPPORTUNITY IS RIPE.

InsurTech funding in 2019 reached $6B revealing a stronger emphasis by insurance organizations to fast-track the progress and development made by startups in tackling age-old insurer ills with AI-fueled innovations.

These partnerships have been the focal point of the past few years with many large incumbent insurers underwriting new classes of insurance products that are more personalised to the end-consumer.

> " The InsurTech advantage translates real collaboration into disruptive business models that brings exciting products closer to the heart of the customer and new revenue streams for the insurer.

We find that 7 in 10 Insurance executives surveyed would prefer to collaborate with InsurTechs to develop new offerings — by focusing on streamlining a specific core function of their insurance process. Through a mobile-first business model, InsurTechs are now able to reach more niche-demos of the underserved market.

Insurers are increasingly turning to InsurTechs to deliver the most apt technology that best fills their business needs and gaps. InsurTechs are seen as advantageous because they can add value by scaling their operating models at incredible speed owing to their nimble size.

InsurTechs are also helping large insurers optimize their core processes and improve their operational efficiency through AI-based solutions such as cognitive process automation, natural language processing and ML-derived insurance analytics.

Figure 5: What key capability can your business acquire by collaborating with InsurTechs?

71% Developing New Offerings

60% Operational Efficiency

31% Managing Customer Experiences

31% Advanced Data Management Capability

13% Enhancing Existing Offerings

ACHIEVING REAL OP-EFF IS KNOWING WHAT TO AUTOMATE AND WHERE TO AUGMENT.

Identifying the right processes — both high-volume and highly repetitive — for augmentation/automation can bring pivotal operational improvements to large insurers that are enterprise scalable and allows the customer to move at pace with you.

Nearly half of all Insurance executives surveyed believe that Automated processing can add value to their customer experience journeys. In the claims journey itself it can help with extraction of data, claims verification, complex error-tracking, etc. to bring about significant increase in processing accuracy and reduction in turnaround times.

While the front office is responsible for driving customer experience, engagement and behaviour, the Insurance back-office is focussed on streamlining in-house operations. Customer Onboarding, for instance, which is the first interaction stage for support in any organization is a vital point in the customer journey owing to strong first-impression bias.

At the same time, creating a frictionless and intuitive onboarding process can be challenging because of complex compliance requirements. In fact, even updating the process for compliance with regulation can delay onboarding times, driving overall onboarding costs by upto 20 per cent.

A FULLY AUTOMATED & DIGITAL CLAIMS PROCESS IS NOT JUST HYPE. IT'S REAL AND IT'S EFFECTIVE.

We find that Claims and Underwriting are the two main areas with the greatest propensity for adoption of AI among insurance organizations. 7 in 10 insurance executives surveyed feel Claims Processing is witnessing the highest adoption among all other areas in the value chain. With advanced algorithms & deep learning models insurance claims can be largely automated, affording insurers improvements to process efficiency, reliability and utilization — even reducing processing times from days to hours or just minutes.

An integrated claims experience involves redesigning the entire claims journey from the customer's standpoint and optimizing back-office processes that align with the end-to-end digitalization of the claims process. Each touchpoint requires seamless handoffs to sustain faster digital interactions across the entire channel mix.

There are still several large-scale manual processes within claims processing that bear higher operating costs. By screening claims for straight-through processing, technical support staff can focus on handling more complex issues.

Figure 6: ZERO-TOUCH INTEGRATED CLAIMS EXPERIENCE USING AI
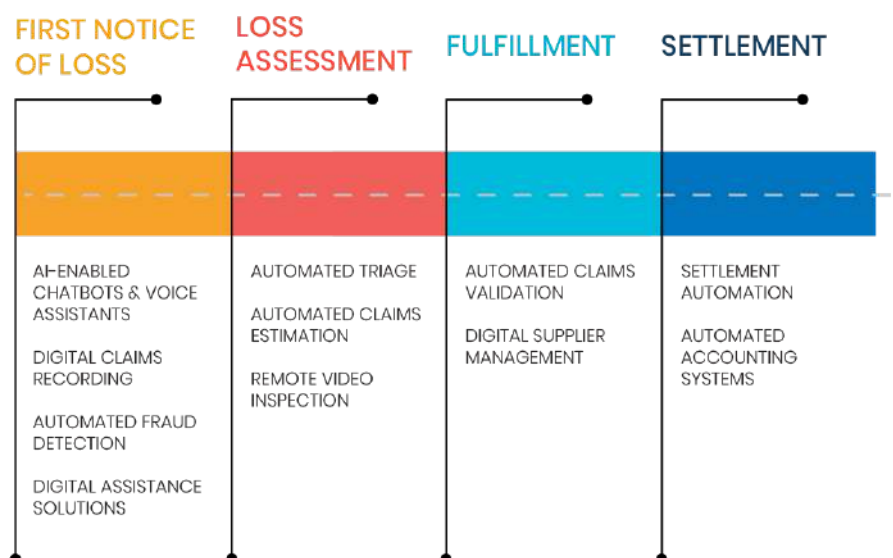
Customers care about self-managing their insurance on their mobile. If it's not convenient to use, it's not ready for them to adopt. A zero-touch claims experience allows insurers to earn their customer's confidence and differentiate their brand from the looming threat of Big Tech also vying for the same customer.

AI-ASSISTED UNDERWRITERS CAN PREDICT REAL-TIME CUSTOMER VALUE WITH DEEPER ACCURACY.

Across the underwriting value chain, AI can help underwriters improve risk assessment and pricing. Data gathered via IoT-based sensors can help extract insights from unstructured data sources, enhance policy rating, personalization and automate demand analysis.

For instance, assessing risk using computer vision (eg: customer uploading images of their car, aerial drones taking images of a house) creates 3D models that allow the underwriter to precisely improve the quality of risk evaluation.

> **"** Nearly half of all insurance executives say they are seeing an increased adoption of AI In Underwriting & Risk Management.

With technologies like Natural Language processing and cognitive document processing, information can be extracted and understood from documents to precisely evaluate the customer's risk profile. Even processing applications or existing policies using AI-trained models can speed up quality checks, flag greater exposure areas that can save underwriters several man-hours in reviewing these errors. To further optimize the process, these results can also be dispensed into downstream systems for enhancing critical decision-making.

Figure 7: What aspects of the insurance chain are you seeing the most adoption with AI?

74% Claims Processing

39% Fraud Prevention

48% Underwriting & risk management

22% Customer & Agent Onboarding
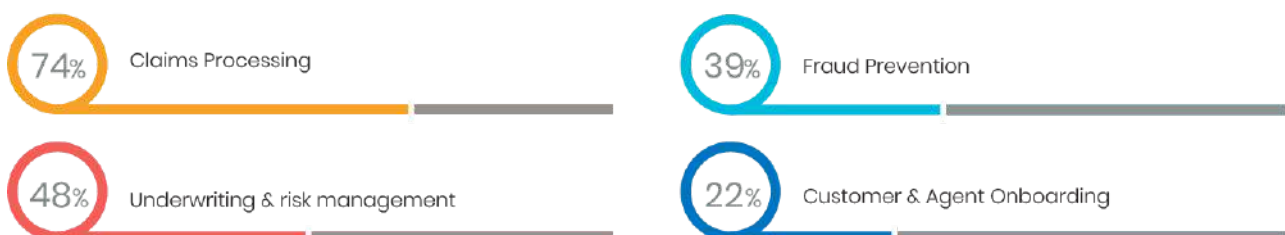
INSURERS ARE BETTING BIG ON ADVANCED INSURANCE ANALYTICS FOR 2020 & BEYOND.

Predictive Analytics has risen to the top of technologies that will have the most impact on the insurance carrier for 2020, with 7 in 10 executives saying they are most likely to invest in this capability. Predictive analytics has the potential to improve several functions of the value chain including underwriting, risk appraisal, claims, pricing and marketing.

Predictive variables, the outcomes of advanced data mining techniques, are used to predict the likelihood of certain events in insurance. Machine learning coupled with predictive analytics can also be used to track the results of the model with actual real-world experiences. Using this data, these models can be corrected automatically to reinforce learning and deliver precisely-tuned predictive scores.
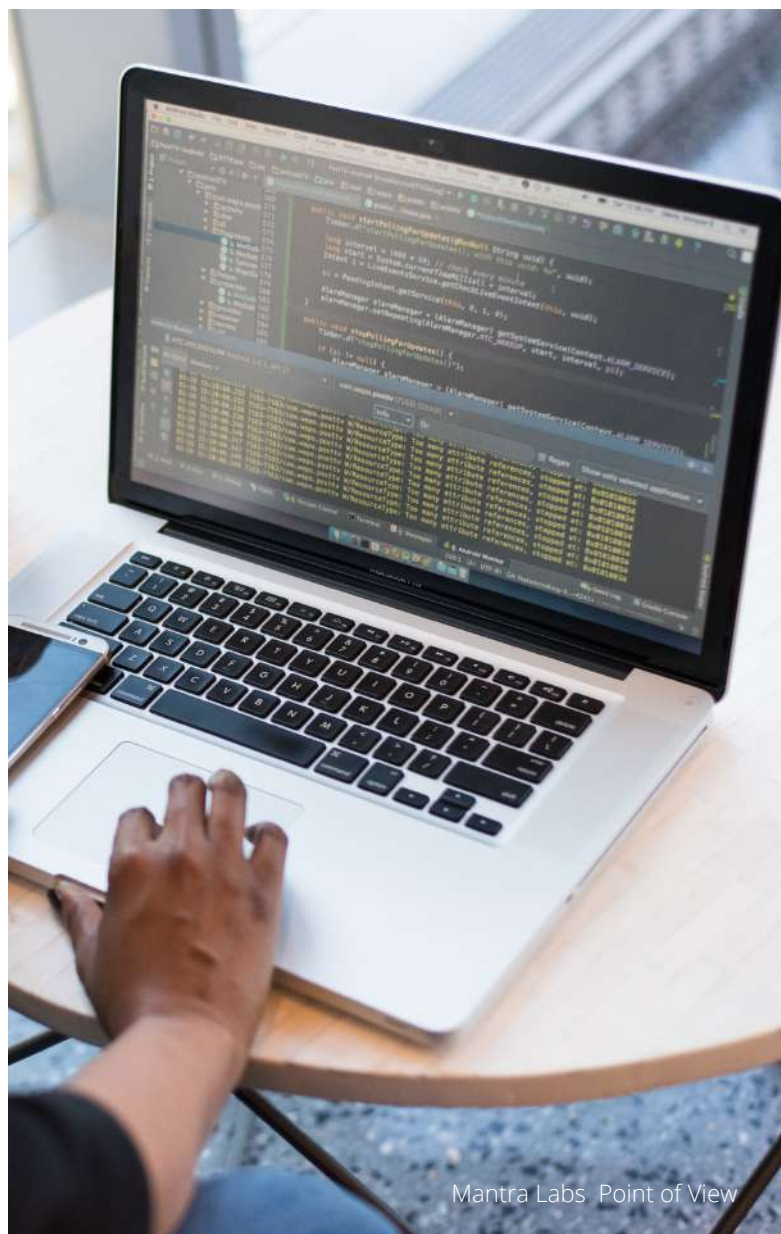
Identifying outlier claims (claims that have costs above a fixed-loss threshold amount) early on can be done through models that are trained on past claims with similar characteristics. Advanced notice of potential loss can be triggered as alerts for claims specialists even before the claim has been filed.

Insurance analytics can also be useful for identifying customers who are on the verge of cancellation. Predictive analytics can produce advanced insights to formulate early warning systems that can help carriers identify customers who are not satisfied with their coverage and require special personalized focus. Early remediation in assessing these customers can help insurers address their issues before the customer has already decided to cancel.

We also find that 'empowering agents' is a priority among the top leadership, but middle management is leaning towards predictive analytics for generating decision support analytics and creating new business value.

Industry experts also feel that implementation in areas such as RPA and online customer journeys have not panned out in terms of achieving ROI. Their learnings through their own implementation experience reveal that RPA and other automation-based technologies should not be viewed as a total replacement for the human-in the loop. Completely removing human effort can create a high level of automation investment and effort which can mean higher costs or extended delays to seeing real benefits.

Figure 8: Which of the following areas are you most likely to invest in 2020?

73%	Predictive Analytics
68%	Artificial Intelligence
23%	Robotic Process Automation
18%	Online Customer Journeys
9%	Empowering your Agents

Mantra Labs Point of View

HOW TO PLAN FOR THE AI JOURNEY IN YOUR ENTERPRISE

Identify the right process for transformation

An isolated view on specific automation technologies for quick cost-cutting can derail the success of your overall AI implementation efforts. Use cases that address a specific insurance challenge or problem need to be identified internally first. This may involve the automating of small value & repetitive tasks, but the bigger goal may be to overhaul the larger process overtime that can bring in real and measurable benefits. It is equally important at this stage to measure product execution back to the customer. Once a set of workflows or a process and relevant KPIs are identified, the organization can transition to the essential data governance steps.

Treat Data as your centrepiece for transformation

AI PoCs are hard to develop without a large domain historical dataset for analysis. Open datasets are only useful for very small use cases like text recognition and sentiment analysis. We recommend that Insurers should engage with data scientists/consultants to review the quality of your data. Performing data exploration exercises can challenge/validate the existing assumptions about data captured and stored within the organization. Once the relevant clean data is labeled and trained, business & domain experts can now decide with ML engineers on the right model building strategy and the apt set of variables for determining outcomes.

Secure the right skills for implementation

Data scientists who speak both 'data' and 'business' to the relevant business owner may be few and far between. To secure the right combination of talent and skills, Insurers must first assess skills gaps internally and how best to fill those gaps (ex: hiring new talent vs. training existing staff). However focusing on skills alone may not be sufficient. Forming a multidisciplinary AI team has greater value since it requires receiving more buy-in from several unique stakeholders who can together shape the organization's AI strategy. This is a smarter approach to get other business leaders to commit to the AI transformation process.

Encourage Experimentation & Fail Forward

Insurers that want to be innovative, lean and disruptive in the long run need to embrace the idea that 'failure' is a useful by-product of any successful AI implementation project. Real solutions with business-wide impact can only come through the learnings from failed projects made during this phase — an important investment focus during this journey. If insurers foster this mindset, teams will feel more confident in experimentation through iteration before a prototype can be put to the test.

Nurture AI from the ground up, and don't stop

AI can be realistically implemented under a two-fold, simultaneous approach. The first aspect is in developing the Insurance analytics capability needed to address strategic business and technology gaps. This is a long term work stream that requires significant backing from top leadership and other key stakeholders. An essential part of this development phase is to foster growth, make mistakes, learn fast and stay the course. Over the long term, a truly AI-first and analytics driven mindset will infuse top-down throughout the organization. Once the capability is in place, new solutions can be built and implemented to deliver direct value.

Conclusion

We find that AI is no longer being viewed as a standalone function of IT, it has become a core component of the enterprise blueprint. Through breakthroughs in computational models and processing power, AI is gradually being explored for augmenting decision-making beyond just automating tasks. Humans are also learning to define new roles for themselves while AI co-exists alongside them as their digital counterparts.

Through the next decade, AI will be the ultimate test for new technology leadership to prove their mettle. Our recommendation is for data & analytics leaders, and digital transformation heads to evangelize the commitment to AI throughout the organization. They will need to spearhead a 'Do Not Delay' mindset in order to seize the opportunity at the door.

Survey Methodology

The data was collected via an online questionnaire among a sample of 114 senior business managers & executives responsible for technology related decisions for their company, within India.

The insights gleaned are derived from a mix of survey responses and personal interviews conducted with a select panel within the polled group. The survey was carried out throughout November & December 2019.

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About
Mantra Labs

Mantra Labs is an AI-first products & solutions firm with a core team of 175+ digital tinkerers and experimentalists, having delivered 100+ projects around the globe. The company specializes in solving real-world front & back-office challenges faced by Insurance & InsurTech companies using Artificial Intelligence. Mantra has worked with some of the World's leading Insurers like SBI General Insurance, Religare, DHFL Pramerica, Aditya Birla Capital, and AIA Hongkong.

Mantra Labs is also a recognized **InsurTech100** company deeply involved in developing technology solutions for business-specific problems with several strategic technology partnerships including MongoDB, IBM Watson and Nvidia.

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