

Technology and Innovation in Insurance— Present and Future Technology in Indian Insurance Industry

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ABSTRACT

Insurance companies are unique — most of their interactions with customers happen through an agent. In effect, a chunk of technology investment goes into improving agent experience. Insurers have developed systems to advise agents on products tailored for specific customers, depending on their history with the insurer and income band. Bajaj Allianz Life Insurance has a mobile app to hire agents. This helps in training, exams and licensing. It has brought on board 15,700 consultants digitally in the past year, cutting down processing time by half.

Insurers have launched mobile phone apps, making it easier for customers to transact with them. They are, slowly and surely, moving towards paperless claims as well. These are, however, only the first steps in digital transformation. Changing core systems is expensive and complicated. So, most transformation initiatives focus on improving systems of engagement with customers.

With the constant advancements and better use of digital tools in the last few years; most of these challenges seem to be addressed efficiently. While technologies such as Robotic Process Automation (RPA), Artificial Intelligence (AI), Block chain, and Advanced Analytics are working as promoters to enhance the importance of insurance, the insurers are working hard to create a more streamlined and integrated insurance system.

Keywords-- Insurtech, Blockchain, Artificial Intelligence (AI), Digitization, Human Intellectual Capital

I. INTRODUCTION

As the insurance industry is evolving, so are the customers. Insurers are constantly receiving ideas from all the corners, and thanks to technology. And this is impacting our consumer behaviour. The state of the insurance sector in our country is entirely different from that in other countries. Despite constant liberalization of the current insurance industry, a major part of the population still does not believe in any insurance. This is majorly because the many challenges associated with the sector including a split ecosystem, regulatory uncertainty, and disjointed data continue to remain specific.

Today's tech-savvy customers look for digital tools and experience from their insurer at par with what they receive from any e-commerce or any other retail industry. While talking about the insurance industry, the consumers these days' demand digitally-oriented applications or websites that provide complete customer support. Many insurers have already started adapting digital tools to make it easier for their customers and their family members to navigate the healthcare ecosystem. Some of the powerful features of the tools include digital on-boarding, ease of selecting plans based on cost and preferences, and personalized content for better understanding of the claims.

II. LEVERAGE ANALYTICS

Analytics is expected to play a great part in driving the insurance industry in the coming few months. The technology will enable insurers across the country to efficiently enable predictive analysis. Insurers can leverage analytics to make predictions about a person's probability of getting an ailment and therefore, timely suggest him to take necessary precautions. This can be done by implementing intelligent health analytics to a patient's medical history in order to predict the future health approach. The technology can even prove positive results for deciding the best course of action, in terms of identification of most effective treatments and drugs resulting in cost-efficient treatments.

Introduction of ChatBots and Voice Assistant

Yet another impressive trend that the insurance industry is witnessing is the introduction of ChatBots and Voice Assistant for enhanced and meaningful customer engagement. Both these technologies are gaining quick popularity amongst the insurers as well as the consumers. The technology specifically leverages Artificial Intelligence (AI) to simulate productive conversation with its users while delivering powerful customer engagement. One of the important reasons for the introduction of ChatBots and Voice Assistant in the insurance sector is the increasing aged population that demands continued care.

Challenges by New Age Firms

New age insurance firms, nimble and technologically savvy, are challenging these old economy

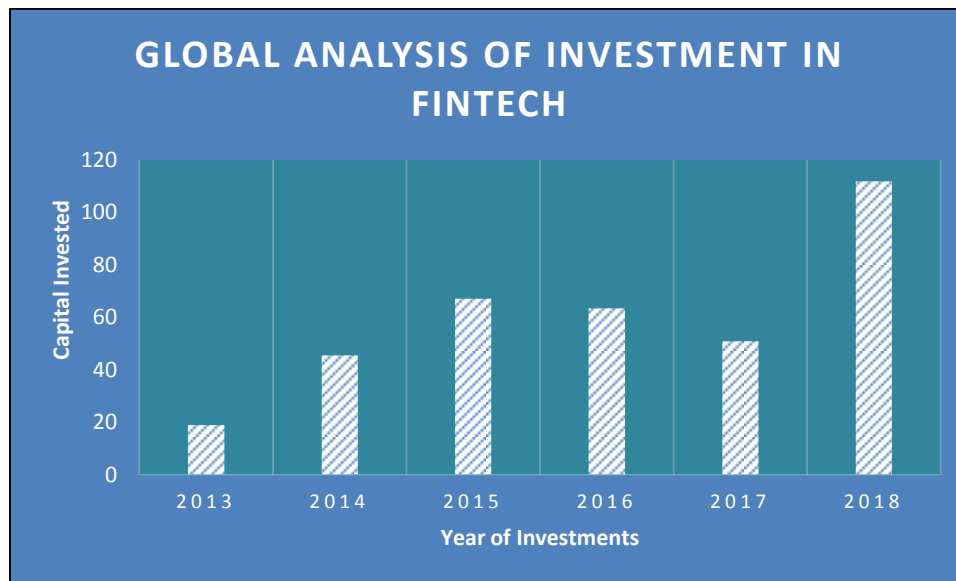
players. Digit Insurance, a two-year-old insurer that focuses on creating smaller value products, is using block chain-based systems at the backend to speed up claims processing. It has already brought down time taken to service a mobile phone damage claim from about 25 days to a few hours. “Servicing smaller ticket sizes means it has to be a cost-effective and technology-driven solution.” Many of these features, like automatically initiating and processing trip delay claims within a few hours, would not have been possible till a few years ago because the technology was simply not available.

Bancassurance

The insurance sector has evolved rapidly since privatization in the early 2000s. Over the last 17 years, the industry witnessed several dramatic shifts, including the emergence of Bancassurance, de-tariffing regulatory activism, the explosion of health insurance, as well as the emergence of large government insurance schemes. Insurers are being challenged to bring in strategies that deliver on the promise of experience and operational excellence—forcing a relook at existing processes, tools and resources. Often the answer seems to lie in emerging technologies and data.

III. TECHNOLOGY AND INNOVATION IN THE INSURANCE SECTOR

Insurance regulation and innovation hubs While innovations are generally a positive development, there are a number of potential policy and regulatory ramifications which can create some uncertainty and certain limitations in business developments. In terms of competition policy, the potential to have new entrants to the market through the application of innovations and new technologies could bring greater consumer utility. The rationale for competition law or policy is to improve the consumers’ welfare and the efficiency in production and supply, which would lead to lower prices and wider choice. The possibility of new entrants in the form of start-ups and greater choice as a result of innovation and technology could bring a number of positive developments to competition in the insurance market. When start-ups want to become an insurer or an insurance agent/broker, there are potentially prohibitive capital and/or fit and proper requirements that must be met to gain authorization to operate. Perhaps for this reason, there are very few InsurTech start-ups that have gained insurance underwriting licenses, and most have broker licenses.



Source: Source: Pulse of Fintech 2018, Global Analysis of Investment in Fintech, KPMG International (data provided by PitchBook) January 4, 2019.

IV. INSURANCE TECHNOLOGY TRENDS TRANSFORMING THE INDUSTRY IN 2019

Advanced insurance technology is already an integral part of the P&C industry, for both carriers and

insured’s. Getting insurance quotes can be as easy as clicking a button, managing coverage can typically be accomplished via a mobile app, and paper insurance cards are mostly a thing of the past.

Insurance technology is poised to mature even more in 2019. While some of these tools are already employed by some carriers, we see them becoming more

and more commonplace throughout the industry. Insurers looking for a competitive edge should consider embracing one or more of these eight emerging insurance tech trends.

Insurance Trends in 2020

The key challenges faced by insurance innovators are those that have been impacting the industry. They are: Human Intellectual Capital, Artificial Intelligence (AI), Block chain, Digitization, Personalization and Data, as well as Hiring and Retaining Technically Skilled Talent.

As with every other industry, insurance is becoming more technologically advanced (and some may say, disrupted) by the day though the transformation is much too slow. There are several reasons for this, but one that may or may not surprise you is that insurers are struggling to attract and retain top-talent despite insurance being a multi-trillion dollar, high-growth industry. In the last three years, insurtech funding has increased by 60% in the US (from US\$1.46 billion to \$2.44 billion according to CB Insights), while it's more than tripled in Asia (from \$140 million to \$506 million)

1. Human Intellectual Capital

It's one thing to be aware of the innovations shaping the future of your industry, but implementing them is quite another. And without talented, skilled staff, you have little hope. This is the barrier faced by many insurers, which is why human intellectual capital needs to be a key focus if they don't want to be left behind.

2. Personalization & Data

Insurers are starting to put the customer at the heart of everything they do. By activating and collecting the right data – from IoTs such as connected cars, activity trackers, and even toothbrushes! – they're able to better understand consumer needs and offer customized advice, coverage, and tailored pricing. This shift indicates **insurers are now viewing consumers as individuals, rather than customer segments.**

3. BEAM

Beam uses IoT technology to offer dental insurance. Customers receive a 'smart' toothbrush that tracks how well customers take care of their teeth and provides personalized insurance plans based on this teeth-brushing data. In doing so, the firm claims they can offer rates up to 25% cheaper than competitors – a deal customers are sinking their teeth into.

4. Digitization

Insurance companies are adopting digital strategies. Not just for savings and efficiency, but for increased customer satisfaction with a whopping 61% of customers confirming they prefer to check their applications online. Of course, transitioning from paper trails to online-only isn't easy. According to *McKinsey*, nine out of 10 insurance companies say they're struggling

to develop the technology infrastructure they need, blaming legacy software and the sheer magnitude of their IT systems.

5. Artificial Intelligence (AI)

Where do we start? AI and machine learning have the potential to impact every aspect of the way insurance businesses are run, **making almost every process more efficient.** Specialized functions such as fraud prevention, anti-money laundering, underwriting, and pricing are set to be overhauled using this transversal tech. Meanwhile, the data collection opportunities AI provides will help companies achieve automation (robo-advisors are incoming) and enhanced personalization. Of course, AI isn't mature yet, and a human touch is still needed to help it do its work. But companies that fail to adopt AI now may find themselves left behind by the time autonomous versions appear.

6. Shift Technology

Shift Technology offers AI-based anti-claims-fraud detection software. The company developed their automation solutions specifically for the insurance industry and the unique challenges insurers face.

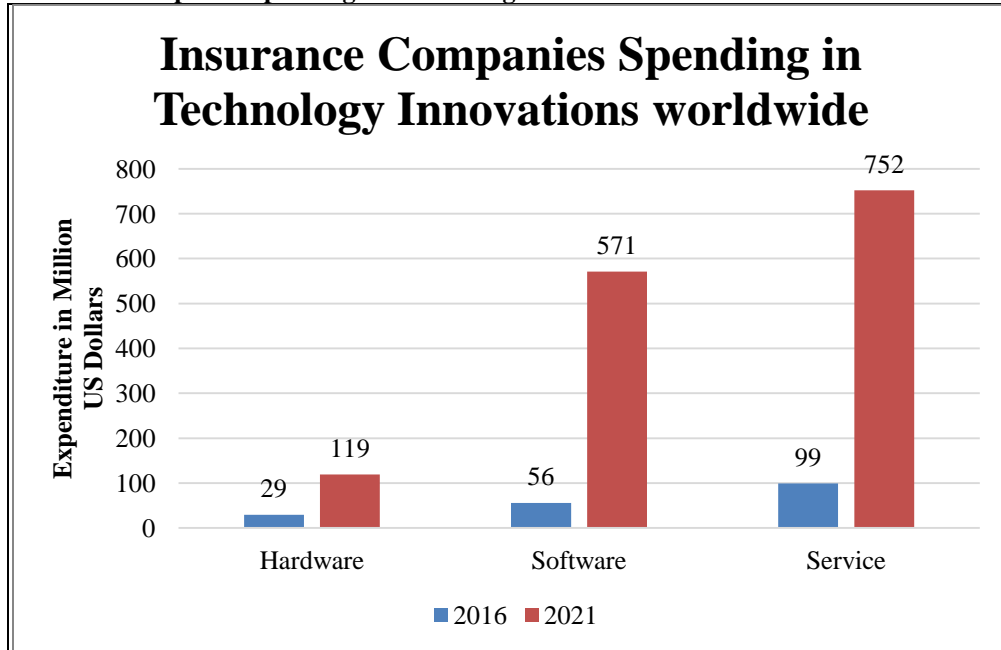
7. Block Chain

Block chain enables the creation of a digital ledger that can't be altered. Using this technology, insurers can reduce the admin costs that come with reviewing claims and checking payments made by third parties – block chain ensures all of this information is shared, fraud-protected, and easy to verify. According to PWC, **block chain could particularly benefit reinsurers** – reducing the steps involved in the process and leading to potential savings of USD \$5-10 billion worldwide. For example, reinsurers in healthcare could cut costs and save time using smart block chain contracts to quickly verify consumer data and insurance history, reducing the back and forth that's commonly involved.

8. Insurance Tech

To understand insurtech's potential impact, it is important to understand exactly what it is. Simply put, insurtech is the technology that lies behind the business of insurance. That technology includes "big data," i.e., the mining, analysis, and utilization of tremendous amounts of previously uncategorized data; "machine learning," which is the application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed; the Internet of Things, which is essentially the interconnection of everyday objects through data transmittal (for example the thermostat in your home telling your watch the current temperature).

Insurance Companies spending on Technological Innovations worldwide in 2016 and 2021



V. STEPS TO BE TAKEN BY THE INSURANCE COMPANIES

Insurance companies have to take the following steps to embark on this journey:

- Be more agile with IT strategy and architecture.
- Monitor new trends and innovations in the technology, data and analytics space. Educate themselves and conduct a strengths, weakness, opportunities and threats (SWOT) analysis
- Establish a presence in the innovation ecosystem through FinTech hubs, technology platforms, workshops.
- Partner with start-ups and disruptors and build pilot solutions.
- Based on the above actions, launch changes in the marketplace quickly. Iterate based on customer feedback.
- Ultimately, the biggest change required is in the organization’s culture and mindset.

VI. CONCLUSION

These technologies are already being used by insurers in a variety of ways. A number of startups focus on using advanced data analytic tools to more accurately determine risks, detect fraud, and identify coverage expansion opportunities in specific micro-segments of various industries. Some trends include expanding insurance distribution in rural areas, Indian companies

expanding operations overseas, and increased online selling of insurance products. However, frauds, high lapse-ratio, and unfavorable changes in macroeconomic factors, such as trade breakdown, unemployment, and uncertainties in the regulatory landscape could be characterized as key challenges to the industry growth.

The growth will come from a number of factors, including higher demand for retirement products such as pension and annuity, along with low availability of government-sponsored social security mechanisms and rising awareness of retirement planning and growing urbanization.

The sector will also witness growth due to factors such as the younger ones in the demographic chart opting for pure protection plans, push to increase insurance penetration in rural areas, product innovations, rise of multiple channels, and continued tax benefits. “CARE further expects regulatory changes and government initiatives to aid in the further penetration of insurance products in the medium term,” it said, while highlighting challenges, including low income of individual agents, and low persistency ratio to continue to persist in the segment. “These challenges would need to be addressed to improve the depth and spread of the industry,” it stressed. The country’s life insurance sector accounts for about 75 per cent of the overall insurance premium. The total premium grew by a CAGR of 10.3 per cent in fiscal year 2017-18 to ₹4.58-lakh crore, from ₹1.56-lakh crore in FY2006-07. In contrast, the global life insurance industry grew at a CAGR of 0.8 per cent during the calendar years 2007 to 2017 and reached nearly \$2.7 trillion in market size

(insurance premium volume) in 2017, from \$2.5 trillion in 2007.

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