



INSURING THE CONNECTED WORLD



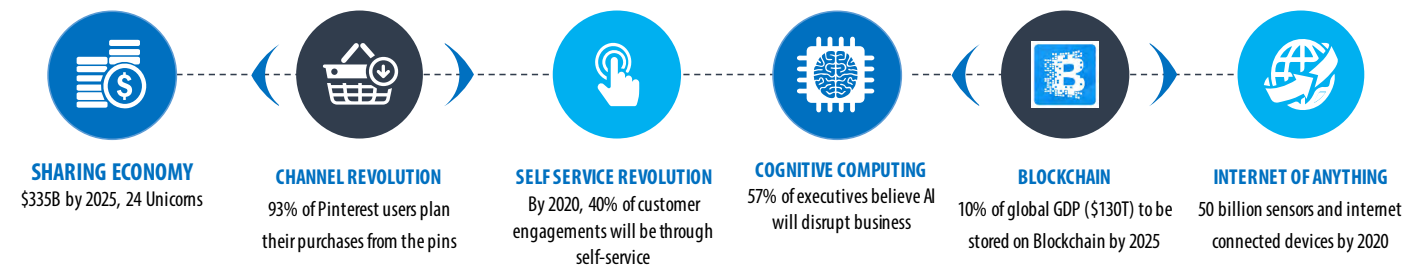
Executive Summary

Insurance industry has been shaping itself based on how other industries are coming up and how countries are streamlining the laws of their land in this era of globalization. The underlying ethos in this industry might not have changed but with advent of newer assets, newer risks and ever-changing customer behavior, the companies are working hard to stay ahead in the race. It has become necessary to be aware of the trends in the Insurance industry as a whole and align strategies for the journey ahead.

Among all the trends, buzz words, noises and quest for answers, it would be interesting to see how Internet of Things (IOT), with overall annual economic impact of about USD 4 to 11 trillion by 2025 (as estimated by the McKinsey Global Institute) would bring a sea change in making our systems and processes more lean, transparent and efficient across the Insurance value chain. A smart, well connected system is expected to result in a cleaner environment and better quality of life. For example, our smarter

homes and offices are capable in reducing energy expenditure and changing the inner ambience of a building to suit the tastes and needs of the residents/ audience, or offering preventive security service with real time surveillance, or delivering assistance by smart automobiles if required, by prompting to control the vehicle speed based on traffic and environmental conditions. As Insurance is one of the early adopters of IOT, such lists of interesting examples seem to be limitless as the industry moves forward.

Trends that will shape Insurance Industry



Sharing Economy is no longer the buzz word. With uprising of Airbnb-like models, is our industry ready to insure sharing properties and services? Many social applications like Facebook, Instagram, and Pinterest, etc., are working towards revolutionizing channels by integrating

commerce into them, so does that mean insurance consumers can purchase policies using 'Buy Pin'? Companies are re-thinking and re-designing processes and self-service applications both for internal and external customers. Does that mean, they are ready to cater to entire series of

demographic cohorts with 'Gen Z' on one end and 'Baby Boomers' on the other? With billions of sensors and internet connected devices, the real-time access to data is at our click-away distance. But are we ready to see an 'Uberization' (on-demand products and services) in insurance industry?

Overview of 'Internet of Things'

IOT is beginning to shape the future of many industries, by generating a wide variety and massive amount of data of myriad types, sizes and frequency. According to Domo's current research citing, more than 25 quintillion bytes of data is generated every day. This is indeed

an asset and creating lot of business opportunities in all possible sectors. Insurance companies are already at the epicenter of this huge ocean of data, which is increasing at an astronomical rate. Therefore, in days ahead, the success of the any insurer and its allied businesses will be determined by how and to what extent they use this asset to their advantage in creating more value to customers.

Growing at 32%

Internet of Things is expected to grow at about 31.7% each year until 2019

(Source: Technavio)

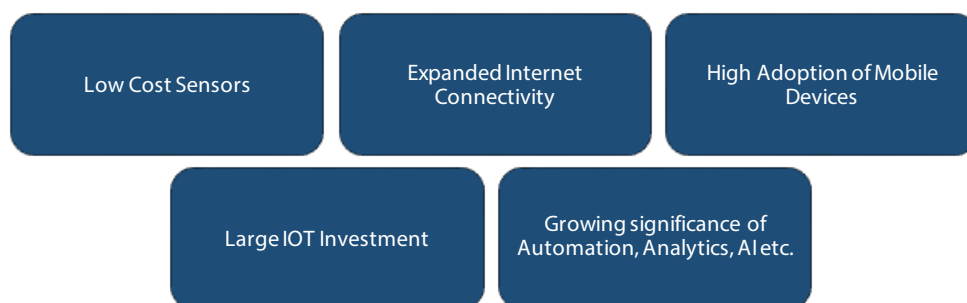
90% of new cars

90% of the new cars are estimated to be connected to Internet by 2020, as compared to only 10% in 2012

(Source: Telefonica)

Key Drivers in IOT

There are many drivers which are responsible for the growth of IOT. However, from technology perspective there are largely five drivers.



- **Low Cost Sensors:** With the advent of modern technologies, the production of sensors is becoming cheaper. Additionally, a steep competition in manufacturing of sensors is also bringing the price down.
- **Expanded Internet Connectivity:** The high speed internet has acted as an enabler to send the data across all corners of the globe in very less span of time.
- **High Adoption of Mobile Devices:** The handheld devices are one of the catalysts to promote high adoption of IOT by providing the interface to notify and engage with the users on the go.
- **Large IOT Investment:** Different industries have conducted researches and found that IOT is going to promote and create new businesses for them.
- **The growing significance of automation, big data analytics:** The role of actionable knowledge and thus data as a key business asset and the various technologies which enable IOT to achieve information-based outcomes and provide a fertile ground for innovation.

\$ 7.1 Trillion by 2020

IDC has predicted that the worldwide IOT market will grow from \$ 1.9 trillion in 2013 to \$ 7.1 trillion by 2020

IOT across Insurance Value Chain

Value Chain

Depending on today's market dynamics, insurance industry is looking to follow a robust value chain with a futuristic outlook

by embracing newer technological advancements. In recent times, it has been observed that in most of the insurance transformation programs, Internet of Things has started playing a vital role in empowering various business capabilities by offering

immense effectiveness and efficiency. Therefore, it is important to recognize "How IOT enabled technologies" have started percolating through the insurance value chain, thereby sharing the outcome with community at large.



Need Identification & Product Development

Tracking consumer behavior trend and ensuring penetration even in micro segments are important to come up with usage based on-demand products. Trov, the 'Tinder of Insurance', provides on-demand insurance products. Trov permits customers to create a list of all their belongings and insure them on an as-needed basis for a short duration and therefore eyeing towards a utilitarian IOT based insurance solution.

With growing change in demographic needs, there is a massive shift from 'Fits-All' product to tailored products based

on needs. Therefore there is a sharp rise in newer categories, like special insurance for newer assets (like drones, robots), individuals residing in risk prone areas, smart cargo insurance for goods which are connected, health insurance policy where the premiums will get adjusted based on the lifestyle of the customer, premium determination using IOT data by providing cyber insurance products. Recently, taxi-hailing company, Uber, has already planned to launch a commercial aerial taxi service in Dallas and Los Angeles by 2023. This is an

UBI

Usage Based Insurance (UBI) policies will reach 15% market penetration in 2020.
(Source: EY)

Sharp rise in newer categories like cyber insurance

Growing popularity of usage-based on-demand products

exciting news for insurance companies as they would surely align their products and services for this line of business.

Marketing, Sales & Distribution

Insurance being an intangible product, marketing plays a significant role in differentiating this solution-based product. Insurer follows several product positioning techniques to drive the attention of their customers. With the advent of IOT, the insurer can look forward to reap the benefits of connected products by offering 'Product Bundling' like Connected Home service. IOT sensor-based products like 'smoke alarms' or 'cctv camera' (for burglary detection) can be bundled with property insurance product as an offering to provide safety and security to the customer. Liberty

Mutual has partnered with Google's Nest to implement the 'smoke alarm' which is expected to reduce the occurrence of fire risk thus helping in minimizing the premium paid for home insurance.

Current trends show that insurers are using online space for its insurance distribution. This new modus operandi will eventually help the next generation insurer to reap the benefits of the newly developed social networking group commonly known as virtual business affinity group who by virtue of their relationship will create a bigger pool of insured with similar risk retaining capacity. Friendsurance, is an

insuretech player actively operating in virtual business affinity group for the claim related adjustments. Cover, Policy Genius and Insurify are few more insuretech player who are actively utilizing this disruptive ecosystem space and reducing the distance between the insured and the insurer.

Interesting bundling of connected products

Rise of virtual business affinity groups

Underwriting & Risk Management

Underwriting, the process of determining an applicant's risk, is a probabilistic approach. Hence, better the accuracy better becomes the product pricing, estimation of necessary reserves and risk management. But in today's data-driven world, with the emergence of newer risks, the real challenge lies in exploiting the explosion of data generated by IOT

to contextually customize premium calculation and risk assessment based on the customer, asset and business.

Currently, the insurance companies are embracing smart ecosystem thereby looking to make better use of data coming from every possible sources and predict as accurately as possible based on the profile of the case on a real-time basis. That's how organizations are looking to reduce

risk pool over time by making the risk assessment more deterministic and accurate in order to benefit both Insurer and Insured.

Interesting bundling of connected products

Rise of virtual business affinity groups

Client & Policy Management

The significance of Client and Policy Management lies in achieving and maintaining a lower operating cost with efficient policy processing. Currently, policy management issues have been largely reduced by improving process quality and reducing the policy process cycle time. In the current scenario, many insurance companies are out-sourcing many of their back office processes, close book of business, etc., so that they focus only on core activities like policy creation, policy binding, endorsement, renewals, etc., thereby increasing the digital footprint along the way. For example, the insurance giant, Allstate have already started using AI enabled smart agents like Amazon's

Alexa, to connect with their customer in a delightful way. On one hand, customers at the comfort of their home can get required information from these agents just by asking basic queries like details about nearest agent, office using zip code search, etc., and on the other hand, the front desk employees of insurer can use these devices to get relevant information like premium due, policy details, KYC details, of the customer just by asking the right questions.

Client experience in a delightful way (voice enabled)

Newer ways of customer engagement through mobile devices

In travel industry, by using IOT devices like Geographical Information System (GIS) and Global Positioning System (GPS) one can reveal the level of customer engagement and client management enabled by high scale digital platform happening in today's life. At the present scenario, the brand equity of a cellular phone is not confined only to make or receive calls, rather the devices are made efficient to assist the travelers and the travel insurers to reduce travel related mishaps, delayed flights and many more. By monitoring the data of a particular flight route the travelers can be informed about potential delay or can be provided with an alternative option which will help the insurance company in return to avoid the probable claims due to delay.

Claims Management

The traditional insurance claim process takes weeks or months to settle a claim with lot of follow-ups from the customers. But in today's fast paced and tech savvy world everyone wants the result right away avoiding countless paper works. Insurance companies are also dealing with challenges from fraudulent data and fraud claim cases which needs lot of extra time, money and man power to validate these cases.

Insurance companies are making use of sensors to know the occurrence of a risk and trigger messages back to them, policy holder and the service providers, with options to raise an incident and track the claim. Drones are being used to access

the damage and transmit information. Erie Insurance has been using such Unmanned Aerial Vehicles for property inspections in the event of a damage claim. These are some of the ways IOT is increasing the efficiency of the claim process thereby enhancing the customer experience by faster claim settlement.

Interestingly, when a customer's car (cladded with smart system) meets with an accident, the damage and tamper detection sensor system (developed by NASA's Langley Research Center), integrated with other IOT devices send the messages to various stakeholders and at the same instance raise a claim incident. These days, customers are notified with the state of the claim process

through the mobile apps, right from the claim initiation to closure. Such initiatives reduce the claim processing time through a hassle free claims settlement.

€2.5 billion

According to France's fraud bureau, ALFA (Agence pour la lutte contre la fraude à l'assurance), 15% of the claims paid, which is between 4% and 8% of premium collected, are fraudulent and amounts to about €2.5 billion.

IOT leading to better risk assessment and faster claim settlement

Renewal and Retention

As most of the insurance companies focus on acquisition of new customers, the retention rate for them take a toll, and it stubbornly hovered at about 80 percent, which means 20 percent of customers end their relationship with one carrier and move on to another after having only a year-long relationship. As the retention of an existing customer is very cost effective, insurers are focusing on retention strategies more.

Traction in quality personalized content and reduction of friction through seamless service are the two primary

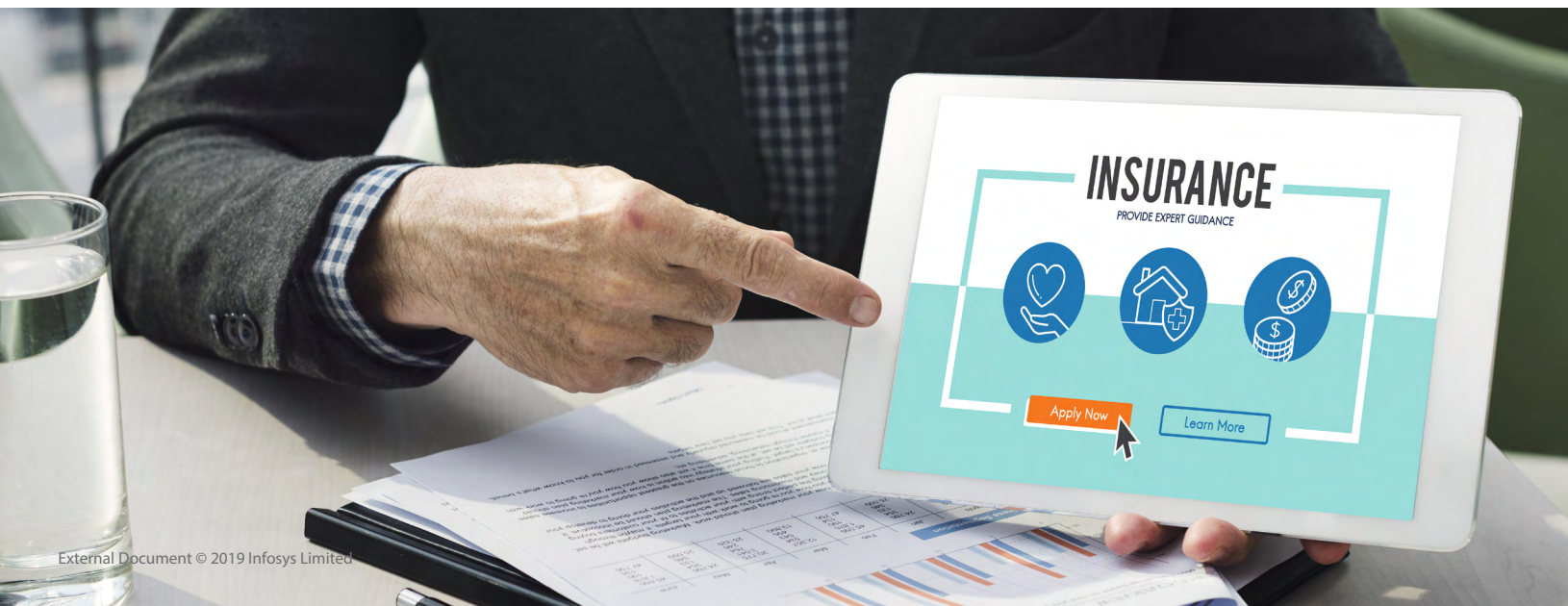
factors leading to better customer experience & better affinity between customers and the brand.

Personalized Content: With the help of IOT, insurance companies are able to provide customized information after analyzing real time data of factors like location, weather, time etc. and user behavior. Therefore, the business models like "pay-as-you-live", "pay-as-you-drive" are the popular success stories of quality personalized contents to lure customers ensuring better retention rate.

Seamless Services: IOT technologies such as NFC (near field communication)

enable customers to access unique digital content as mentioned above directly from their smartphone or other channels thereby reducing unnecessary friction by eliminating extensive processes and paper work. Thus NFC-like technologies are bringing extraordinary customer experience to audiences.

Better customer experience & brand affinity driven by personalized content and seamless service for higher renewal and retention rate



Conclusion

Heraclitus, a Greek philosopher, said, "Change is the only constant in life." The world around us is changing every moment. This phenomenon is primarily driven by disruptive technologies like IOT, Artificial Intelligence, Blockchain, Robotic Process Automation, etc. In this context, IOT is also expected to complement various implementations using these advanced technologies. As we have seen how in recent past IOT has been one of the game-changer in various insurance capabilities, offering competitive edge to insurers. Starting from emerging business models and multi-channel distributions strategy to smart pricing and innovative product bundling, quicker and transparent claim settlement process, insurance companies need to catchup with customers' ever changing demands. Insurance giants will also collaborate more and more with the insurtechs on IOT led implementations to address the emerging challenges and opportunities. Even though the tussle of 'data ownership' among various stakeholders will continue to hinder the implementation of IOT driven Insurance Industry, having a single & complete view of the customer is going to be a reality with the help of advanced analytics and platformification. This is going to be a game changing area for both the customers and the business. 'Cyber risk' and 'Fraud' will still top the priority chart for the insurance companies dealing with high velocity of dataflow by the wave of disruptions like Connected Home, Connected Car, and Connected Health, etc. It will be interesting to see how companies focus more time and money in the field of data security and fraud protection while aiming to build an effective and efficient IOT environment. To add to the list of possibilities, automation and machines agents (Bots) will take up more and more mundane work from us, leaving us to think smartly about our connected and transparent future in a constructive way.



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