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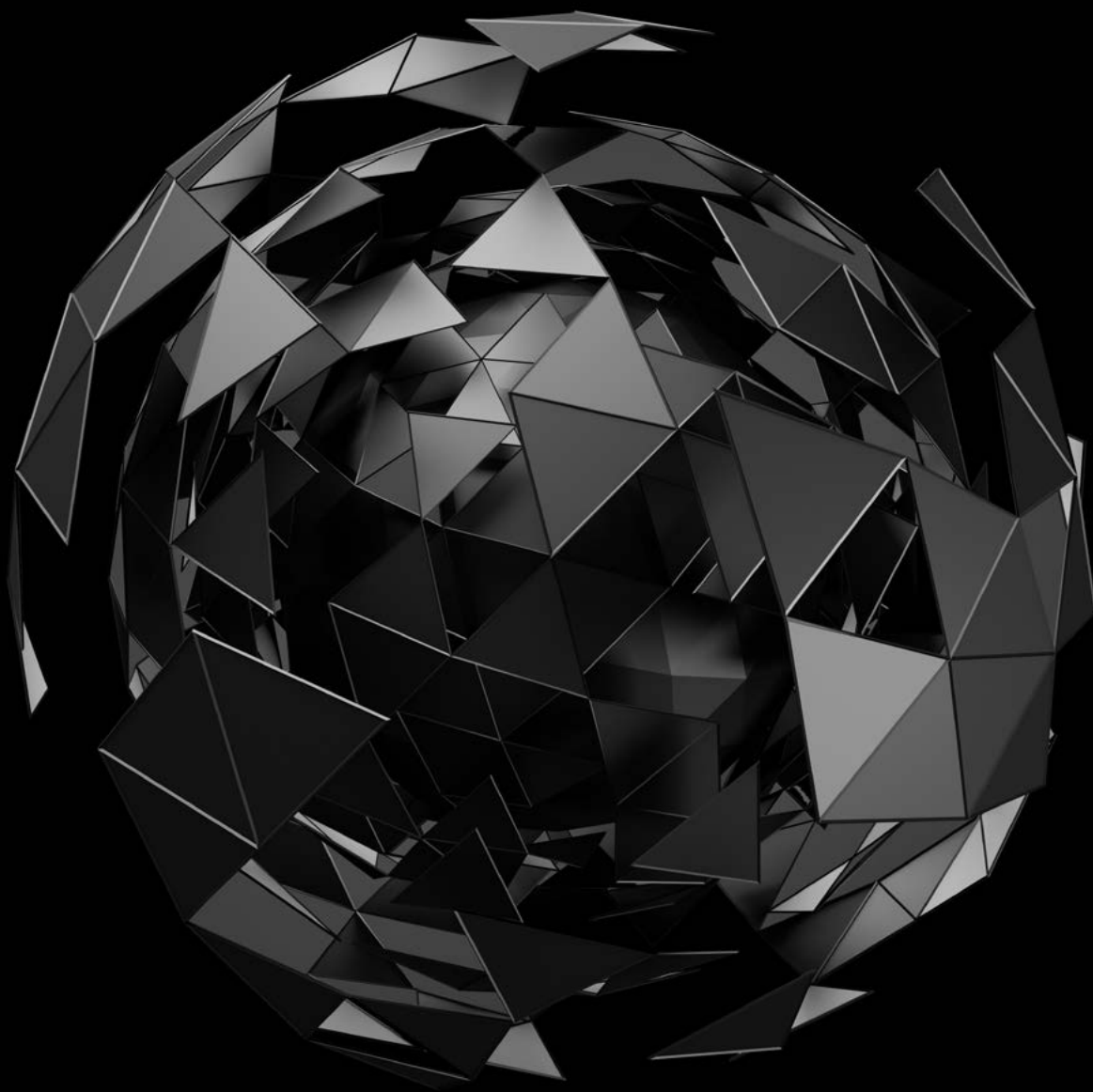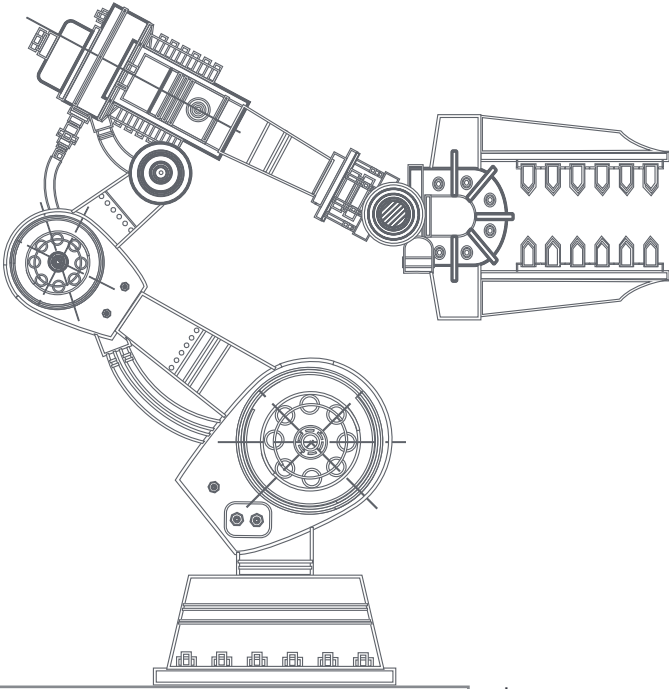
April 2017

**Insurance disrupted through
Exponential Technologies**

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"Innovation distinguishes between a leader and a follower."
Steve Jobs

The rate of technological change is accelerating so fast that our ability to understand the implications of it has never been so challenging and so important.
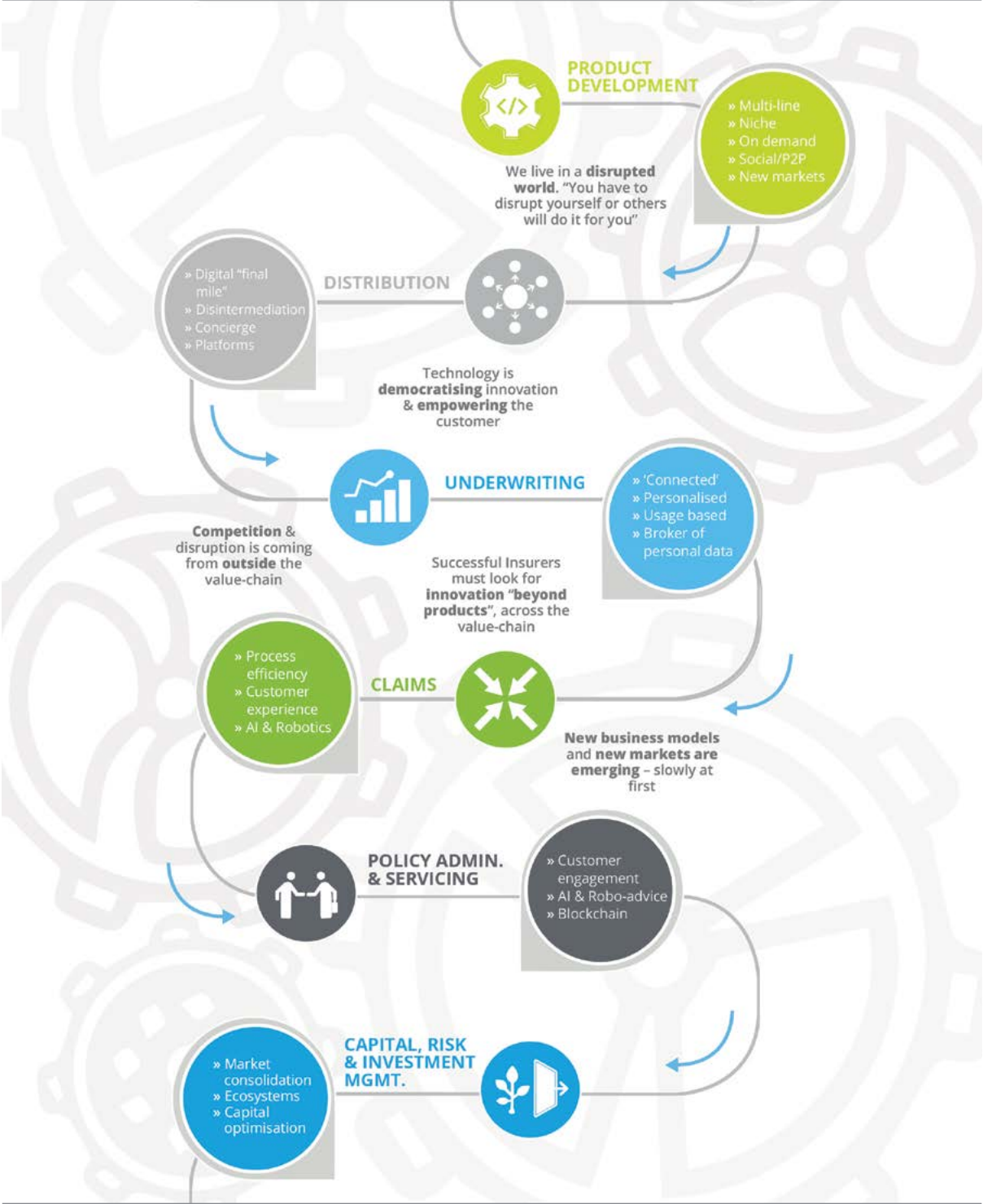
Startup companies unburdened by inertia or Wall St. expectations are growing faster than everand displacing incumbents in record time. Recognizing and embracing exponential opportunities sets apart successful leaders who shape the future of an industry from linear thinkers at risk of being disrupted.

Over the next five years, financial services and indeed all sectors of the economy will be dramatically disrupted, primarily by greater customer empowerment and technology driven innovation. Deloitte has evaluated the key trends impacting the insurance value-chain. Insurers need to understand these in order to position themselves to respond to the threats and opportunities disruption affords. Refer to Figure 1.0

The insurance sector is considered to be highly regulated, complicated, and impenetrable. This is no longer the case; more than ever, insurance start-ups are popping up and finding both funds and users within the space to give consumers more options than ever for every type of insurance experience or need one might have.

Figure 1.0: Disruptive Forces are Re-Imagining the Insurance Value-chain[1]

PRODUCT DEVELOPMENT

» Multi-line
» Niche
» On demand
» Social/P2P
» New markets

We live in a **disrupted world**. "You have to disrupt yourself or others will do it for you"

» Digital "final mile"
» Disintermediation
» Concierge
» Platforms

DISTRIBUTION

Technology is **democratising** innovation & **empowering** the customer

UNDERWRITING

» 'Connected'
» Personalised
» Usage based
» Broker of personal data

Competition & disruption is coming from **outside** the value-chain

Successful Insurers must look for **innovation "beyond products"**, across the value-chain

» Process efficiency
» Customer experience
» AI & Robotics

CLAIMS

New business models and **new markets are emerging** – slowly at first

POLICY ADMIN. & SERVICING

» Customer engagement
» AI & Robo-advice
» Blockchain

CAPITAL, RISK & INVESTMENT MGMT.

» Market consolidation
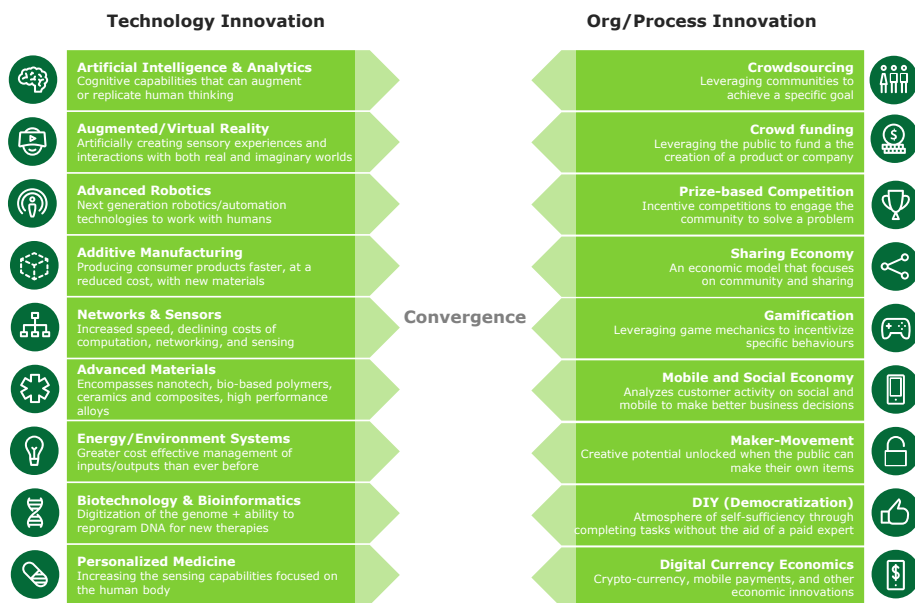» Ecosystems
» Capital optimisation

Exponentials in Insurance

We live in an era of unprecedented change, driven by rapid and exponential evolution of disruptive technology and game-changing ideas. These disruptors are not decades from reality —many have already realized mainstream adoption across multiple industries (e.g., 3D printing), while others aren't far away (e.g., nanotechnology, driverless cars). While individual technologies and organizational enablers have the power to disrupt existing business models or even entire industries, their real power emerges when they converge. A diverse set of exponential technologies and organizational enablers are converging and disrupting the "old" way of doing business.

Some of the key exponential domains[2] that are emerging in the market place are below.

Technology Innovation

Artificial Intelligence & Analytics
Cognitive capabilities that can augment or replicate human thinking

Augmented/Virtual Reality
Artificially creating sensory experiences and interactions with both real and imaginary worlds

Advanced Robotics
Next generation robotics/automation technologies to work with humans

Additive Manufacturing
Producing consumer products faster, at a reduced cost, with new materials

Networks & Sensors
Increased speed, declining costs of computation, networking, and sensing

Advanced Materials
Encompasses nanotech, bio-based polymers, ceramics and composites, high performance alloys

Energy/Environment Systems
Greater cost effective management of inputs/outputs than ever before

Biotechnology & Bioinformatics
Digitization of the genome + ability to reprogram DNA for new therapies

Personalized Medicine
Increasing the sensing capabilities focused on the human body

Convergence

Org/Process Innovation

Crowdsourcing
Leveraging communities to achieve a specific goal

Crowd funding
Leveraging the public to fund a the creation of a product or company

Prize-based Competition
Incentive competitions to engage the community to solve a problem

Sharing Economy
An economic model that focuses on community and sharing

Gamification
Leveraging game mechanics to incentivize specific behaviours

Mobile and Social Economy
Analyzes customer activity on social and mobile to make better business decisions

Maker-Movement
Creative potential unlocked when the public can make their own items

DIY (Democratization)
Atmosphere of self-sufficiency through completing tasks without the aid of a paid expert

Digital Currency Economics
Crypto-currency, mobile payments, and other economic innovations

In this article we will focus on some of these exponential domains which are making an impact on the Insurance sector such as the following:

Artificial Intelligence & Analytics
Cognitive capabilities that can augment or replicate human thinking

Advanced Robotics
Next generation robotics/automation technologies to work with humans

Networks & Sensors
Increased speed, declining costs of computation, networking, and sensing

Sharing Economy
An economic model that focuses on community and sharing

Digital Currency Economics
Crypto-currency, mobile payments, and other economic innovations

Rise of conversational chatbots

Companies have used chatbots for customer service for a number of years, typically to replace or assist live agents in call centers or as an alternative to point-and-click interfaces for customers visiting websites. Now, a number of factors are ushering in a new era for chatbots.

Advances in cognitive technologies are making it possible to provide increasingly accurate and relevant automated dialogues. For example, speech recognition software has made advances in reducing word error rates, and machine translation has improved thanks to deep learning techniques. Improvements in speech and language processing technologies are making chatbots more capable, expanding their potential applications across the enterprise.

An article published in Forbes magazine a few years back had identified "app fatigue"—a declining willingness among consumers to install and use new mobile apps[3]. At the same time, messaging has emerged as a dominant online activity, Allianz and RBC Insurance in Canada have been using AI-powered chatbots to improve operational efficiency[4]. Some of the Indian Financial services aggregators like Bankbazaar.com, policybazaar.com, and Easypolicy.com are finding that chat-bots are helping them reach out to thousands of customers and increase their conversion rates[5]. With natural language processing and artificial intelligence, the chatbots are able to hold more intelligent and pleasant conversations all through the day and night.

DBS, Singapore's largest bank and a leading bank in Asia, is working with US-based Kasisto, a spin-off from the creators of Siri (Apple's voice assistant), to deliver AI powered conversational chatbots[6]. Kasisto is a startup that aims to transform the consumer banking experience with artificial intelligence. DBS customers can also pay bills easily via this service. For example, by simply texting "Can you please pay my mobile bill?" the request will be processed, but not before identifying the correct payee.

Fintech payments startup **Payjo**[7] has launched its product Recharge Bot, an application virtualization platform for recharging prepaid phone accounts through Facebook messenger. Right now they have partnered with Airtel and Vodafone.

Wearables and IoT
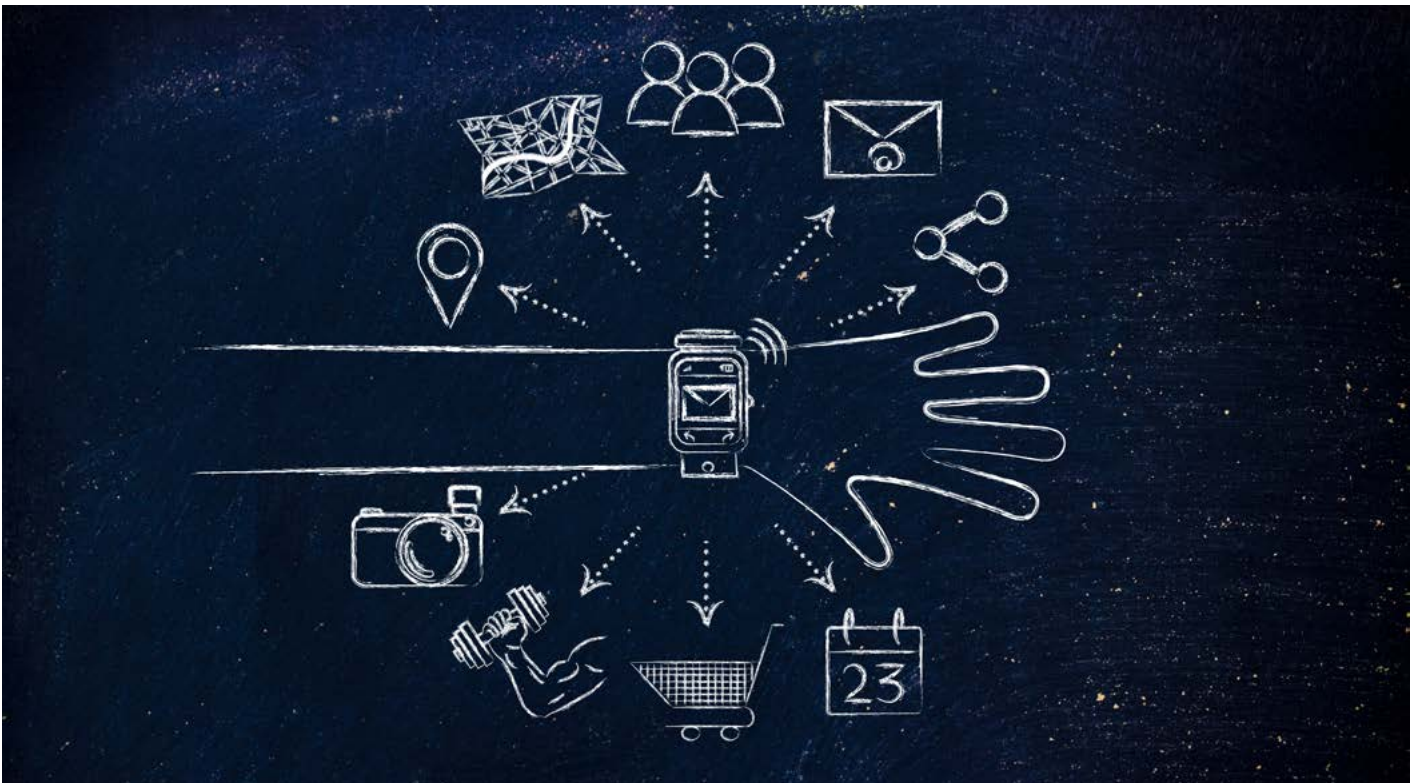
Wearable technology has become an increasingly popular trend over the past few years, providing consumers the chance to live happier, healthier, and more convenient lives. According to IDC Asia, India's wearable market was up by 42% in the second quarter of 2016 — over 567,000 units of wearables were sold[8].

The insurance sector will need to stay up-to-date with wearable device trends, shifting the way they create products and pricing structures.

In a variable premium product, Cigna TTK Health Insurance Co launched its **pay-as-you-workout** concept[9], where it is offering to charge its policyholders less if they

manage to burn out more in calories. In the General Insurance space, Bajaj Allianz General Insurance Co had also launched a variable premium products with its **pay-as-you-drive** motor insurance policy, enabled by telematics technology.

Fitsense is a data analytics platform working with insurance companies to personalize life and health insurance for anyone with a smartphone or wearable device[10]. Fitsense was created to help lower insurance costs and improve risk ratings. By taking the data from a user's wearable (like Fitbit or Jawbone), insurance providers can make more accurate risk predictions based on actual data which will reward users who live healthier lifestyles with

lower insurances costs and premiums. We are seeing this trend being adopted by India Insurers as well.

Another health insurance company called **Oscar** rewards its members by giving $1 for each day they walk a targeted number of steps, as measured by a free wearable fitness tracking device made by Misfit Wearables[11]. They provide around-the-clock access to free televisits with physicians, free checkups, and cash incentives for getting a flu shot.

On-demand insurance

The gap between covering everything every time and covering precisely the risks faced at a certain moment called for a new type of insurance. Insurtech companies specialize in covering only those risks faced at a certain moment. There are a number of ways to apply on demand insurance products:

- Activate a travel insurance at the very moment a flight ticket, cruise, or Holiday is booked

- Car insurance that does not need payment when the car is not used

- Pay-as-you-stay insurance that only insures the time spent in an apartment

Sure is an innovative personal insurance app that enables travelers to purchase on-demand policies up to the time of their flight takeoff. It gives air travelers peace of mind by providing life insurance for specific durations (the length of a flight) 12. This focus on **micro duration** is different than a general life insurance policy since it is only enacted during air travel. The app provides its users with policy cost in real time. AXA Insurance launched UK's first 'on-demand' insurance cover, through its partnership with Silicon Valley start-up Trov[13]. **Trov** is an on-demand insurance platform that lets users buy insurance for specific products, for a specific amount of time. It enables its users to choose which of their belongings to cover and for how long. It also allows users to file their claims through the app.

The sharing economy

The concept of the sharing economy surfaced roughly 15 years ago. Since then, it has disrupted many industries by redefining their core business models. Its impact has been felt primarily in the transportation industry, which includes ride-as-a-service and ridesharing; home and office space sharing; and workforce and services on demand. The disruptive changes brought about by the sharing economy cross industries is causing a ripple effect for insurance providers as well.

Lemonade is an Insurance startup that borrows from the on-demand, sharing-economy ethos of Uber and Airbnb, with plans to take on the highly regulated and firmly entrenched insurance sector[14]. The company is one of a few startups offering peer-to-peer (P2P) insurance, which operates by pooling insurance premiums from people who know and trust one another. That pot of money is used to pay members' claims, and members then keep any unused cash.

UK-based financial services startup **Bought By Many** targets underserved insurance markets[15]. Groups of people with niche insurance needs join together to buy insurance policies at a lower cost or those that are better tailored to their needs. Acting as an intermediary, 'Bought By Many' negotiates with insurance companies to obtain deals for the "buying collective." These new insurance companies in the fast-growing P2P segment are using crowdsourcing and social networking to create a shared insurance experience. It has to be seen if P2P insurance will work for the Indian insurance market. On the surface, the easiest customer segment to access for P2P might be the urbanites and SME owners who would already be familiar with the concept of insurance and simply be looking for a more cost effective and trustworthy way to buy it, the largest opportunity is clearly the uninsured Indians. To effectively access the uninsured, education programs that help to empower communities through P2P insurance will need to be run through development banks and other non-governmental organizations.

Blockchain

Blockchain is a distributed ledger that is broadly discussed as a technology with huge innovation potential in all areas of financial services. To date, it is largely in the banking arena where Blockchain use cases have been identified. However, the Blockchain technology also offers potential use cases for insurers that include innovating insurance products and services for growth, increasing effectiveness in fraud detection and pricing, and reducing administrative cost. Smart contracts powered by a Blockchain could provide customers and insurers with means to manage claims in a transparent, responsive and irrefutable manner[16].

For Blockchain to succeed, there is a critical need of a community whose members can collaborate and learn from each other since this is a nascent and emerging area. Realizing this importance, some Indian insurers have taken the lead and formed an informal community on Blockchain. This informal consortium is exploring use cases such as checks for agent recruitment, detecting AML violations, improving customer outreach for unclaimed amounts, managing cost of medicals, and curtailing claims fraud[17].

Robots are here
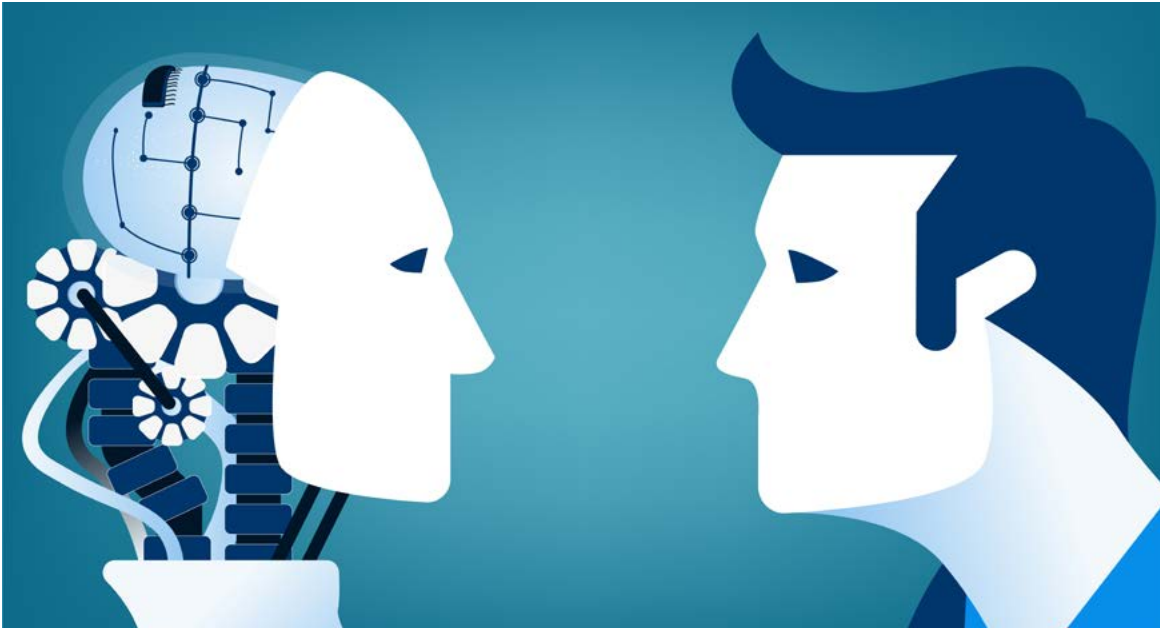
The Digital revolution has come to Finance. Automation technologies are challenging the traditional workforce and Robotic process automation (RPA), is becoming a top priority for insurance CFOs.

As the focus on cost and efficiency increases, traditional cost reduction levers alone are no longer adequate for today's challenges. Computer-coded, rules based software that automates manual activities by performing repetitive rules-based tasks are helping businesses improve the effectiveness of services faster and at a lower cost than current methods.

One of the common use case has been around accounting close, which is a rules-based process, conducted across multiple locations often requiring multiple handoffs that involve the following:

- Predominantly manual close processes

- Lots of emails and spread sheet-based communications and calculations

- Lack of end-to-end process visibility

Leveraging RPA for automating this process offers a number of benefits such as the following:

- Reduced cycle time for sub-ledger and close activities

- Automated workflow

- Centralized operations to gain efficiencies

- Decreased operating cost with FTE labor cost reduction

- Improved consistency and quality of financial data

Several insurers like Aviva are deploying robotic process automation initiatives and are offering to train employees for alternative jobs in the company for those who admit their job could be automated[18].
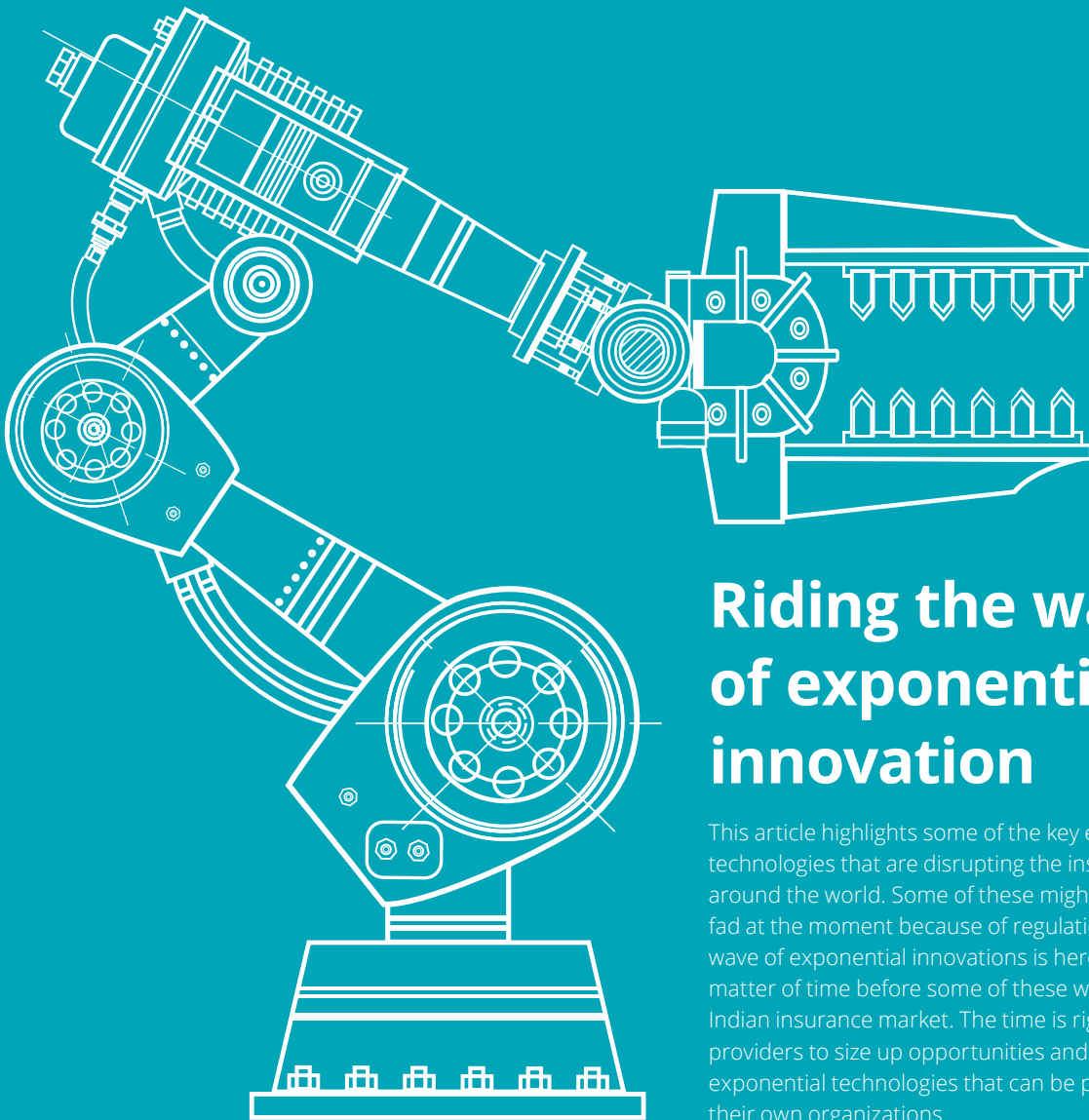
Riding the wave of exponential innovation

This article highlights some of the key exponential technologies that are disrupting the insurance sector around the world. Some of these might seem like a fad at the moment because of regulations, but the wave of exponential innovations is here and it is a matter of time before some of these will enter the Indian insurance market. The time is right for insurance providers to size up opportunities and identify the exponential technologies that can be put to work in their own organizations.

Credits

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