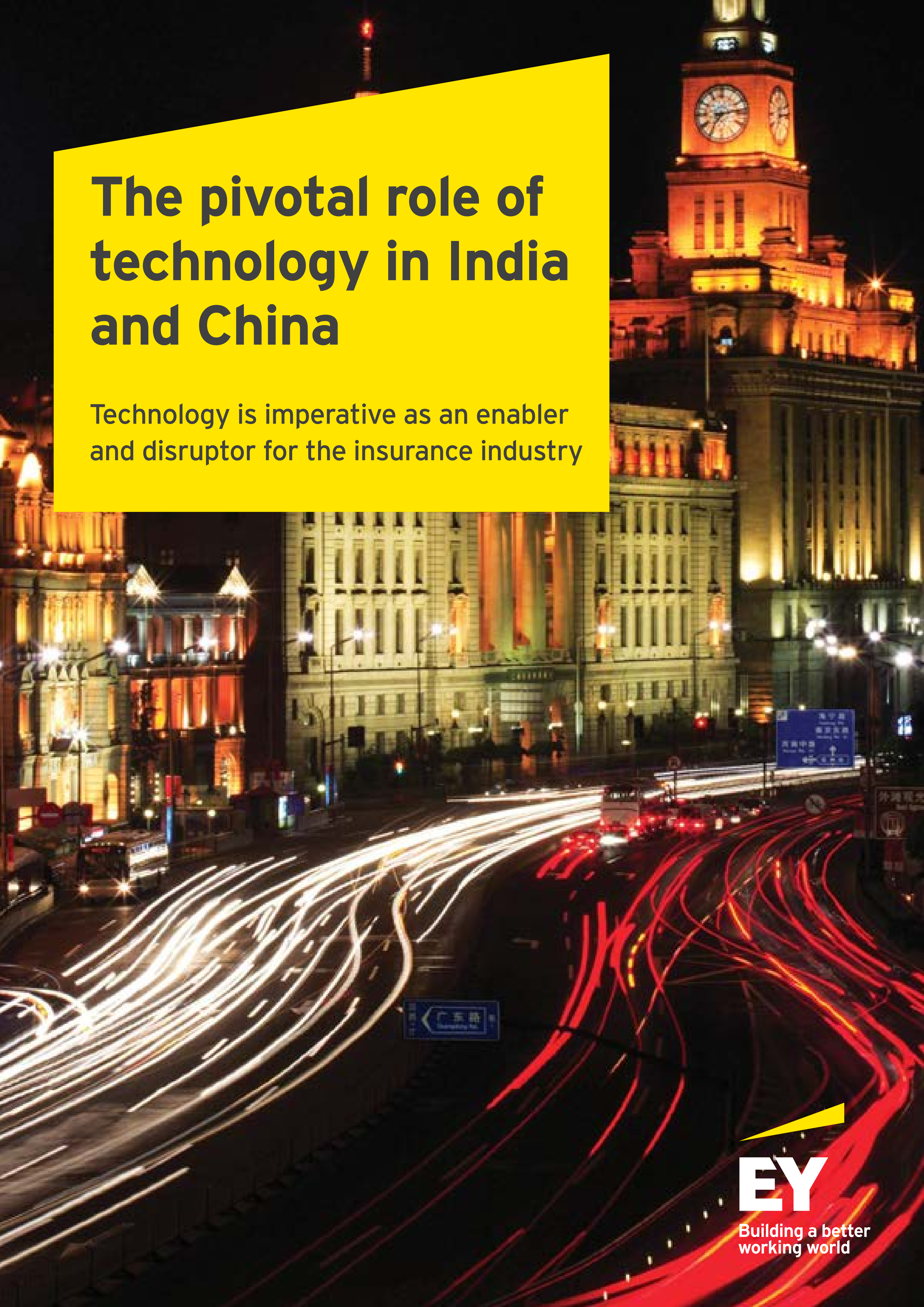


# The pivotal role of technology in India and China

Technology is imperative as an enabler and disruptor for the insurance industry

EY

Building a better working world

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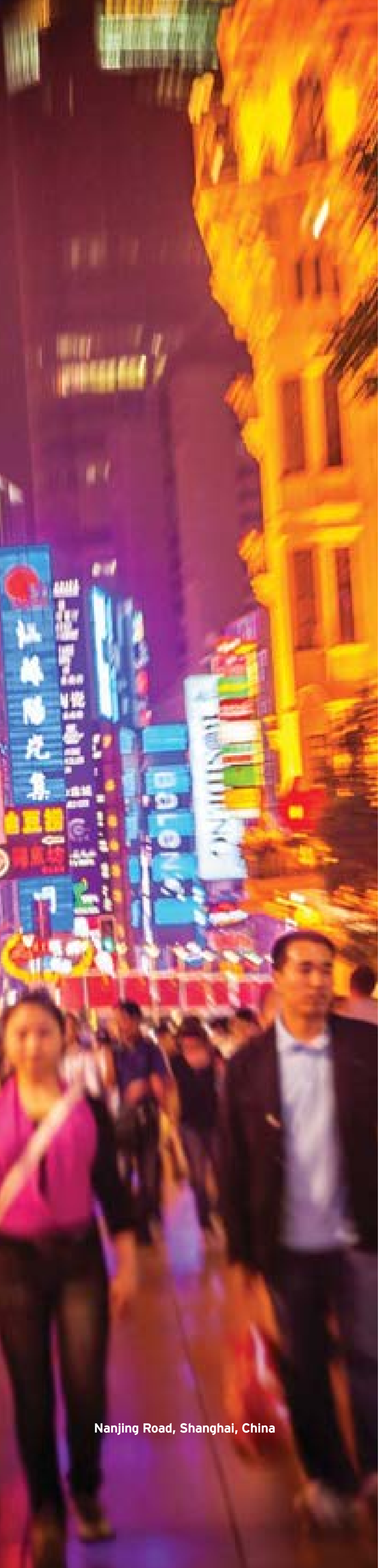


Nanjing Road, Shanghai, China

# Foreword

China and India are the second- and seventh-largest economies in the world, respectively, based on gross domestic product (GDP). As the two most populous countries, they account for more than one third of the world's population. However, India, with an insurance penetration of 3.44%, and China, with 3.57%[1], are well below the world average of 6.23%, indicating that both are significantly underinsured.

We have selected these two countries for our emerging markets report because they are major economies with strong growth potential that are underserved by the insurance industry. Low penetration rates can be attributed to barriers for licensing private players, caps on the inflow of foreign direct investment, and lack of product innovation and consumer education.

The question is whether these countries will follow the path of steady and gradual growth in developed countries or leapfrog to a higher level of maturity. We have seen rapid growth in telecommunications, where both India and China grew from tele-densities of less than 10% to more than 80% in a span of 15 years. This was achieved by adopting the next generation of mobile platforms and largely bypassing the previous generation's landline technology.

Today, technology is transforming insurance in India and China. The advent of payment wallets, web aggregators, tablet-based selling and self-service through mobile apps are just a few examples of this transformation. Most of these innovations have leveraged the information and communication technology revolution.

In this paper, we examine how technology is enabling and disrupting the existing insurance value chain. We surveyed more than 200 customers in India to understand their usage of technology tools, interviewed more than a dozen key insurance company stakeholders, and conducted primary and secondary research of key industry technology developments in both countries.

We hope that you will find this report interesting and informative. We look forward to your feedback and to providing further insights into these increasingly competitive insurance markets.

**Rohan Sachdev**
EY Global Insurance
Emerging Markets Leader

**Jonathan Zhao**
EY Asia-Pacific Insurance
Leader

[1]Daniel Staib and Dr. Mahesh H. Puttaiah, World insurance in 2015: steady growth amid regional disparities, © 2016 Swiss Re.

# Executive summary

In the fast-growing economies of India and China, the insurance industry is benefiting from globalization through investment and changes in demographics through rising demand. Simultaneously, technology is enabling and disrupting existing business models.

Customer demands and expectations are rising, with wavering loyalty toward brand. Insurers are harnessing the power of technology and new sources of data to redesign the customer experience. The emergence of new players is altering traditional product development, sales and post-sales service. As the digital bar rises, insurers need to focus on customer loyalty, cost efficiency and profitability.

We provide an overview of how the adoption of digital initiatives and customer centricity are changing the operating model across the value chain for life and non-life insurers. India and China are driven by rapidly changing demographics, increasing income levels, high adoption of digital technology and a significant rise in insurance awareness. Both expect improved insurance penetration of 5% by 2020[2]. China should be the world's second largest insurance market by 2020[3] — and technology will play a pivotal role.

This report explores the insurance landscape in India and China and the role of technology both as an enabler and as a disruptor. As an enabler, technology is simplifying and automating the sales process by increasing insurance awareness via digital channels. As a disruptor, the Internet of Things (IoT) is driving usage-based insurance and pricing; robotics process automation (RPA) is promising significant cost savings by enhancing accuracy, scalability and compliance; and real-time analytics, e-commerce platforms and blockchain technology are emerging.

Many insurers are struggling to understand what it takes to remain relevant in these markets — unsure of whether to invest in innovation or adopt the solutions of new players. The growth potential in the next decade makes it imperative for the industry to develop customer-centric risk management solutions for a future based on next-generation technology.

[2] "Insurance Sector in India," India Brand Equity Foundation, August 2016.
[3] Cui Qibin Xu Chenhui, "China will become the world's second largest insurance market by 2020," Beijing Daily, 28 January 2015, via http://money.163.com/.

Tuk Tuk Taxi, India

# The emerging insurance industry in India and China

Economic, social and environmental factors in India and China are driving technology adoption. The rise in capital infusion, changing demographics, rising household income, urbanization and education levels have increased the need for insurance.

Yet, customers lack awareness of insurance products as risk mitigation tools. The mindset is to purchase life insurance as an investment along with mandatory non-life products (i.e., motor insurance). Inadequate sales techniques, lack of product knowledge and focus on short-term returns have led to negative customer perceptions — resulting in underinsurance and low penetration rates.

With evolving customer needs and changing lifestyles, existing product offerings fall short. Regulatory constraints and the ability of regulators to address changes effectively have been a challenge for production innovation — particularly in China, where regulations are comparatively more stringent than India.

Agency, direct business and brokerage are traditional channels in both markets. However, with changing demographics and growing adoption of mobile and online channels, digital sales are on the rise. Insurers need to educate customers, even in remote areas, on how insurance products can help manage risk exposures. This requires adopting digital channels and enablers to effectively improve insurance penetration and customer reach.

India, the world's fifteenth-largest[4] insurance market, had life and non-life premium income exceeding US$60 billion[5] in 2015. Yet, insurance penetration decreased from 5.1% in 2010 to 3.4% in 2015, due to a lack of customer awareness, product innovation and distribution channels. Expectations of 7.5%[6] annual growth in the economy over the next five years will be favorable for the industry.

With total premium income of more than US$370 billion in 2015,[7] China contributed 26%[8] of global insurance market growth last year. Insurance penetration and density continue to be low, particularly in rural areas where access to financial services is underdeveloped. However, urbanization and an expanding and aging workforce are contributing to steady growth levels. Market competition is expected to intensify and provide an impetus for technology to improve distribution channels and system integration.

[4] Swiss Re World Insurance Report 2014
[5] As per IRDAI
[6] IMF World Economic Outlook (WEO), April 2016
[7] China Insurance Regulatory Commission estimates for 2015
[8] Jiang Fan Yao, "2015, the national premium income reached 2.4 trillion yuan global ranking rose to No. 3," China Economic Net, via http://insurance.hexun.com.

Beijing National Aquatics Center, Beijing, China

# Role of technology as an enabler and a disruptor

With the changing demographics and increased usage of internet and mobile devices, the insurance ecosystem has evolved radically. Technological innovations have improved manually intensive traditional insurance processes and reconfigured business models.

There has been a gradual shift from an agent/broker-driven seller's market to a digitally driven buyer's market. Insurers are seeking digital transformation to remain relevant in a competitive arena. Key stakeholders have different expectations:

- **The tech-savvy customer** expects customizable products and a convenient buying and servicing experience over digital channels. Using web aggregators for product comparison, buying through different channels, real-time access to view and amend coverage online, and ability to click on a picture of a damaged vehicle in the claims process are examples of customer-facing technology.
- **Agents** are improving customer engagement through lead management solutions, handheld devices for quick quotes and financial tools to develop need-based propositions.
- **Insurers** are leveraging technology to issue policies and mobile apps for claims surveyors and back-office automation; customer segments and needs-based value propositions are being defined.

As an enabler, technology is driving rationalization and automation of internal processes, scalable systems and applications. Policy servicing has transformed to an activity independent of location and time zones. With real-time access to policy data and virtualization of processes, customers interact over multiple channels and seek instant gratification. Digitization in claims management has become critical to customer experience and retention.

Simultaneously, technology is disrupting the market, though at a slower pace for insurers than other financial services providers. Technological innovations are radically changing the way products are developed, sold and serviced. New IT management practices are driving accountability by syncing adopted technology to business objectives. Striking a balance between investing in innovation and efficiently managing business as usual has become a key imperative to maintain market leadership.

In China, approximately 80% of customers[9] are influenced by social platforms and want to switch from their existing insurance provider. In India, social media influence for decision-making is still limited to 11% of customers. Purchase decisions are driven by an insurer's trustworthiness and product pricing.

[9] Yang Rui, "Sunshine, Taikang to seize micro-circle of friends," CBN channel via http://www.yicai.com/news/3719115.html.

## Role of technology across the insurance value chain

The adoption of technology for product design, customer service and underwriting risk assessment varies for insurers in India and China, and it is often inadequate to meet customer needs. The role of technology across the insurance value chain is categorized by its impact on customers, agents and insurers.

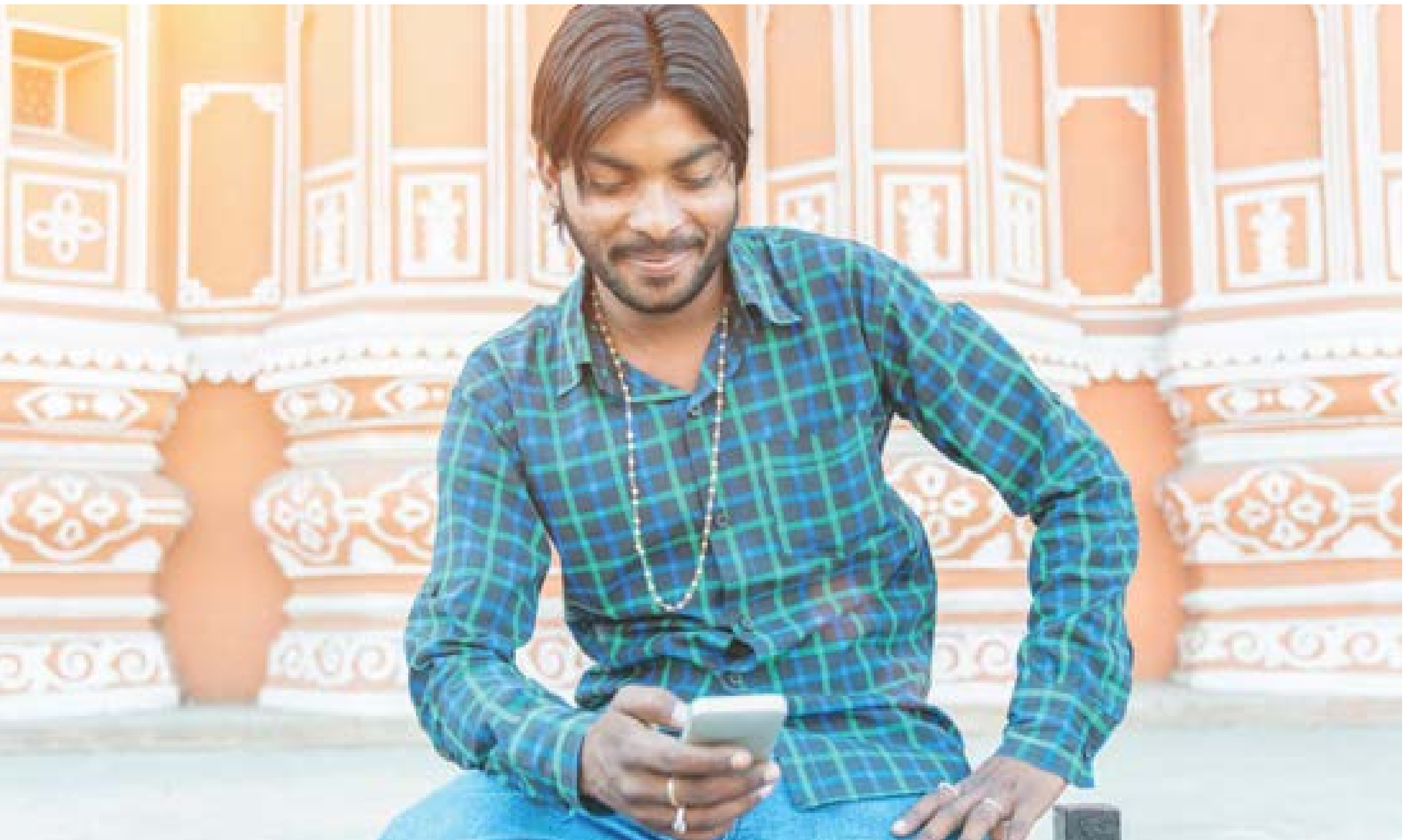
### 1. Product design

India and China have been slow to adopt technology for product innovation, but with growing demand for customizable products for various customer segments, we expect insurers to accelerate product development on digital platforms in the coming years.

| | |
|---|---|
| Customer | **Digitally enabled tailor-made products.** To satisfy diverse customer needs and demand for convenience, insurers are making customized product offerings available at the click of a button. A configurable core insurance platform, combined with responsive and flexible front-end touch points, enables instant customer gratification. |
| Agent | **Over-the-counter (OTC) products.** Need for simplification and quick issuance of policies has stimulated rapid development of pre-underwritten products with a simplified issuance process. Advanced rules-driven platforms at the point of sale have led to STP products and reduced turnaround time. |

**New initiatives in product design:**

- 51% of Indian customers surveyed who purchased insurance online opted for term insurance. Often referred to as a vanilla product, term insurance has a similar demand in the Chinese online insurance market, too.



## 2. Marketing and sales

Though insurance sales are largely driven by agents, China and India have the world's highest number of internet users, surpassing developed countries such as the US, Brazil and Japan. With mobile phone subscribers crossing the one billion mark in both countries, insurance sales are largely online.

| | |
|---|---|
| Customer | **Digital information availability:** With a gradual shift from a mono-channel to multichannel distribution model over the last two decades, insurers seek to provide customers with clarity and consistency in products across channels: bancassurance, agency and online portals.<br>**Digital branding through social media interaction:** Social media (e.g., Twitter, Facebook and YouTube) is driving higher brand recall. Insurers are closely tracking metrics such as hashtag trending, retweets, brand positioning and new followers to develop customer profiles. |
| Agent | **Adoption of lead management solutions:** Fragmented applications and a silo approach to tracking commissions and prospects are being replaced by lead management tools that enhance transparency. Insurers are using algorithmic lead allocation and geo plugins to enable better sales propositions in shorter time frames.<br>**Real-time dashboards for channel performance:** Management information systems and advanced analytics provide quick and insightful views of key performance indicators (KPIs). Dashboards for management reports, agency sales and underwriting product performance are driving strategic decision-making.<br>**Cross-sell via customer mobility solutions:** Understanding customer needs, preferences and buying behavior by analyzing data from multiple sources enables insurers to cross-sell products. Through mobile apps, agents can view customer portfolios in real time. Indian insurers such as ICICI Lombard General Insurance Co. have launched such initiatives.<br>**Financial planning tools:** Handheld devices for real-time quote generation and financial planning are used by agents to prepare needs-based propositions for their customers, helping balance their short- and long-term financial goals.<br>**Digitally enabled sales process:** Sales-enabled point-of-sale tools (tablets and mobile apps), portals for e-applications and electronic document uploads offer an efficient mechanism for agents and front-line sales teams to capture details and provide real-time quotes. This reduces turnaround time and improves quote conversion ratios. |
| Insurer | **Digital touch points enabled by collaboration and service centers:** Insurance distribution, specifically in rural India and China, has been a challenge. Insurers and governments are tapping this segment, including collaborating with a common service center (CSC). Lean mobility solutions combined with portals are leveraged by these service centers at the point of sale, facilitating wider insurance penetration. |

**New initiatives in marketing and sales:**

- IndiaFirst Life has introduced a device named "magic board" for their sales channel to source new policies. Products are sold end-to-end by issuing policies on the spot,[10] eliminating the need for manual scanning and documentation.

[10] "IndiaFirst Life launches MagicBoard; takes customer delight to the next level," IndiaFirst Life Insurance, 3 October 2012.

## 3. Underwriting and pricing

Automated underwriting tools and accurate pricing mechanisms achieve a quick and smooth sales process, competitive market positioning and price comparisons. Insurers are using analytics to improve their pricing models, adopt a prudent underwriting approach and implement usage-based insurance through telematics.

| | |
|---|---|
| Customer | **Competitive pricing via online platforms:** Web aggregators provide a convenient platform for insurers to increase online sales and product options. In India, with IRDAI regulations, only authorized web aggregators have the authority to compare services and rankings to attract customers. |
| Insurer | **Process optimization through STP:** A smooth flow of transactions without duplicating efforts and manual handoffs is the result of seamless automation, integration and validation throughout the user transaction process. Automated underwriting rules are enabling STP of underwriting and new business processes for simple products such as motor and term life. |

**New initiatives in underwriting and pricing:**

- Among consumers interviewed, nearly 38% of Indian customers and 90% of Chinese customers prefer purchasing insurance online over other channels. Reasons cited include ease of use, better understanding of product features and transparency in pricing.
- Adoption of aggregators by Indian customers for online purchase is low (only 6%). Customers buy insurance directly from insurers' websites. This trend is observed in both countries, causing insurers to rethink the value of aggregators.
- Taikang Life has developed an underwriting rules engine, including standardized and tailored rules for different products, regions and risks. This rules engine enables the STP underwriting and issuance of products.[11]
- Most consumers surveyed use online tools to gather information and compare quotes of insurance products. This is followed by online purchase and renewals, with service requests being the least important activity conducted via online channels.

[11] http://www.firsttech-soft.com/insurance_financial/insurance_case_read.php?id=12


High speed trains in Haerbin train station, Haerbin, China

## 4. Customer servicing

Insurers are looking for innovative ways to engage customers and generate loyalty — sometimes with "do it yourself" offerings. Customer servicing is the key point of post-sales contact.

| | |
|---|---|
| Customer | **Digital service differentiation:** Going beyond the usual policy servicing standards and providing digital service differentiation, personalized interactions, and anytime, anywhere service have become common across the industry.<br><br>**Customer engagements using big data:** Insurers leverage data from disparate sources to segment users and target them for personal engagement.<br><br>**Tying technology to rewards:** Insurers are developing rewards and online wellness programs using nutritionists to prescribe diets, conduct health counseling and provide health check tools online. |
| Agent | **Digital options for policy renewals:** Renewal retention is a key aspect for insurers due to the higher cost of acquiring new customers. Insurers are leveraging digital options such as automated personalized renewal reminders via SMS and emails, offering instant renewal options using online channels and enabling payments using digital wallets to increase retention rates. |
| Insurer | **Cloud-based solutions:** Cloud-based platforms, applications and business processes enable insurers to obtain the scalability to store an ever-increasing volume of data while maintaining costs, and permit easier deployment of new applications to end users.<br><br>**Automated business processes:** Business process automation strategies are reducing TAT and increasing savings. KPI depends on efficiency, effectiveness, value add and process control. Through automation, insurers can achieve these objectives and move toward their long-term goal of automating virtually all processes. |

**New initiatives in customer servicing:**

- Cigna TTK's "ProActiv" Living Program has both online health and wellness initiatives.[12] It provides health checkups and targeted online health assessment, incentivized with health and wellness discounts. Participating customers earn points that enable them to increase benefits or reduce their premiums.
- Purchasing insurance via SMS with zero documentation and no manual intervention was unthinkable even two years ago in India. However, new social security schemes launched by the Indian Government in 2015 can be subscribed to via SMS.[13]
- BMC Control — M is helping ICICI Prudential Life Insurance Co Ltd optimize their "on time" batch cycle completion process.[14] This eliminates human error by automating reporting on batch job timelines and providing easy access to production systems — enabling the company to meet global standards for security and audit compliance.

[12] Sangeetha G., "Health insurance firms use tech to promote wellness," mydigitalfc.com, 5 July 2015, © 2015 Financial Chronicle.
[13] "Send SMS to Join Pradhan Mantri Suraksha Bima Yojana," Pradhan Mantri Yojana.
[14] "CUSTOMER SUCCESS: BMC Software Enables ICICI Prudential Life Insurance to Automate Business and Operational Processes," BMC Software, Inc., 15 December 2011, © 2011 BMC Software, Inc.

## 5. Claims management

An effective and efficient claims function is critical for profitability and customer satisfaction. Well-designed mobile apps are enabling customers to self-register their claims, thereby reducing TAT and improving the customer experience, with China leading the way. As both countries face high claims ratios in motor and health insurance, further digital initiatives are required to improve the process.

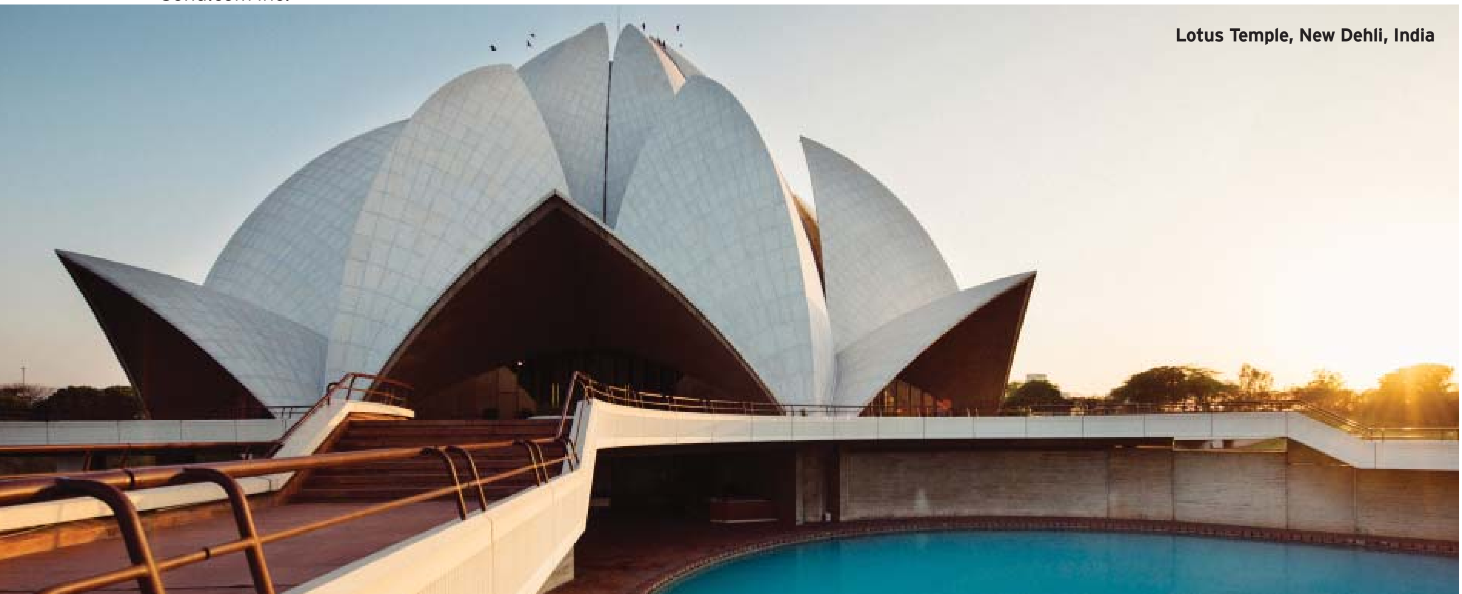
| | |
|---|---|
| Customer | **Self-service claims intelligence in claim adjudication:** Insurers are building intelligent workflows using decision-support systems, such as rules engines, to feed a significant volume of claims through the auto-adjudication process with minimal manual intervention. |
| Agent | **Mobility-based value-added services:** Companies are enhancing their claims process to build goodwill for their brand. Non-life insurers are establishing relationships with repair shops and roadside assistance providers. Mobility-based claims tools for adjudicators and investigators enhance turnaround time and control fraud. |
| Insurer | **Analytics-based fraud detection:** Insurers are using predictive data analytics for fraud detection. Multiple approaches, including a rules-driven system and machine learning, are being utilized to detect suspicious claims. |

**New initiatives in claims management:**

- Chinese insurer Ping An Insurance Co. collaborated with WeChat to offer customer services such as one-click renewal, claims status tracking and coupon redemption for car-washing services through customers' cell phones. Each customer links to one exclusive customer service representative via WeChat — anywhere, anytime.[15]
- CPIC launched a pilot of claim automation for small cases in May 2016. After the transformation for authorization configuration, process and system, the process from reporting to case closure takes 39 minutes.[16]
- Chinese customers have a higher adoption level of insurer-provided mobile apps to conduct transactions. Only 31% of Indian customers use mobile apps to transact, view policy details and for servicing needs, yet 88% use websites and portals.

[15] Nian Yue, "Ping An Insurance opened direct WeChat platform," Sohu.com Inc., November 2013, © 2016 Sohu.com Inc.

[16] "Taibao auto insurance claims injury small automation," Pacific Property Insurance Shanxi Branch Zhou Miao, via Sohu.com Inc. © 2016 Sohu.com Inc.



Lotus Temple, New Dehli, India

## Technology as a disruptor to business models

While disruptive technologies are game-changers for the insurance industry, capital is a concern and a roadblock. Technology-led disruptions in India and China include the following:

- **IoT drives usage-based insurance and other applications**

  This includes helping reduce claims severity for traditional insurance products by monitoring covered risks and providing real-time data for risk management. The potential use of unmanned aerial vehicles and drones in insurance is huge for risk assessment, risk monitoring, loss prevention and loss assessment. Many insurers are in the early stages of using telematics, though China overcame a major hurdle when the China Regulatory Commission removed pricing restrictions in June 2016.

- **RPA enhances accuracy, scalability and compliance — resulting in cost savings**

  Software robotics is in the initial stage of evolution, with capability limited to rules-based, defined activities. Robotics extends the benefit of technology to areas usually reserved to manual, cost or time-intensive and error-prone processes. Approximately, 30% to 40% reduction in cost can be achieved for high volume rule-based tasks.

- **In-memory data grids (IMDGs) and real-time analytics**

  IMDGs offer a powerful platform to host fast-changing, in-memory data and run data-parallel computations. These are integrated into operational systems and perform real-time analytics on live data in milliseconds. Users directly interact with data in memory, which reduces response time and provides self-service access to needed information.

- **Insurance data exchange and bundling on e-commerce platforms**

  Insurers are collaborating with third-party data service providers for better policy-related decisions, and with telecom providers, travel portals and e-commerce firms for alternate insurance product distribution. Distribution strategy and product pricing is undergoing a significant change based on adoption of these new alternate channels.

- **Change in C-suite strategy**

  The primary challenge in digital transformation is not technology but people. There is a shift in the way IT initiatives are aligned across the organization. Accountability roles are changing with business-led technology transformation. The Chief Digital Officer is emerging to develop business strategy for a digital world.

- **The advent of blockchain**

  Currently, blockchain is mostly used for Bitcoin payment technologies. However, insurers are expected to build platforms using industry standards to cover the value chain from customer wallets to client-driven applications. Blockchain has the potential to eliminate error and detect fraud by providing a decentralized digital repository to verify customer and client-related transactions.


Old Shanghai tea house area with lanterns, Shanghai, China

The People's Insurance Co. of China (HK) Ltd. and China Life Insurance are investing in unmanned aerial vehicles, satellite remote sensing technology and geographic information systems for agricultural insurance. Leveraging new technologies will reduce investigative costs and improve accuracy.[17]

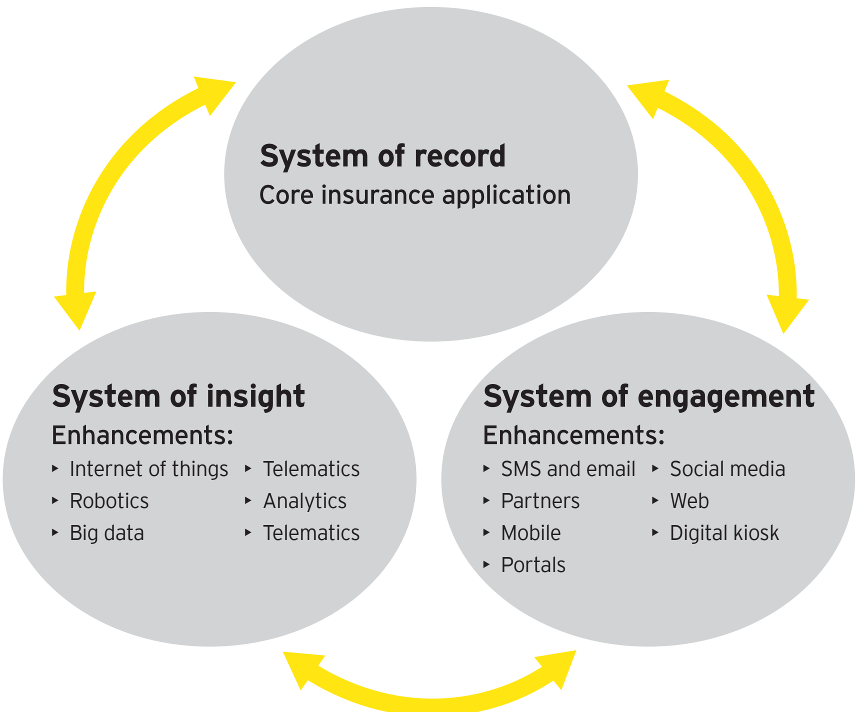
[17] http://jx.cnr.cn/2011jxfw/xyjj/20150720/t20150720_519257138.shtml

# Adopting technology architectures

Insurance, an industry driven by information, has always leveraged technology to increase process efficiency and effectiveness. In the past, technology was more of an enabler to automate existing manual processes. Folders, registers and ledgers were replaced by databases and software. Gradually, the role changed to that of a driver.

The industry is now being swept by another digital wave, shifting from products to customers. The advent of smartphones and social media has created an overload of information and new players such as FinTech firms. Thus, the role of technology as an enabler and driver has become that of a disruptor. This evolution is explained from three perspectives, as shown in Figure 2.

Figure 2: The journey of technology from being an enabler, driver and now a disruptor.




## System of record

These systems store transactional data and stakeholder information. Data may take the form of information captured, documents scanned and archived or any historical information stored during transaction processing. Systems of record have matured from decentralized to centralized to virtualized architectures. Centralization of the core application and adoption of cloud services for non-core applications will help insurers reap benefits of real-time data availability and cost efficiency.

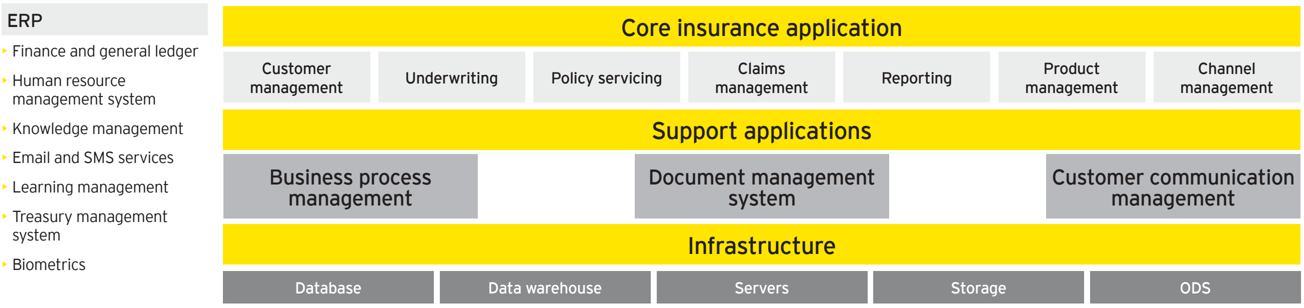
Insurers transitioned from manually processing policies to gradual computerization. This approach resulted in IT infrastructure that was difficult to administer due to increased costs of manpower, hardware, software licenses and support. There was duplication of effort, inconsistent data and multiple sources of information for a single data entity. Systems had to be modified and tested at multiple locations; therefore, product launches needed longer turnaround time.

These challenges led to centralized IT transformation to replace smaller, process-focused specialized systems – decreasing the technology footprint. Insurers embarked on internet-related initiatives, resulting in integrated core applications; enhanced customer self-service capabilities; improved management reporting, analytics and fraud management; and shorter time to market for new products and compliance.

Insurers in India and China have their own IT architecture based on their operating models. The trend is toward centralized architecture, deriving value from an integration of applications and virtualization of IT resources. Consolidation has led to high-volume transactions that require larger server and storage capacity, as well as increased network bandwidth across applications. Insurers are adopting

**The state-owned Life Insurance Company of India has more than 100 centers to manage core policy administration data. However, it has a centralized online data store that consolidates an abridged version of information across these data centers to enable services (anytime, anywhere) at various customer touch points.**

Figure 3: System of record




cloud suites for better visibility, monitoring and control of enterprise resources through virtual machines.

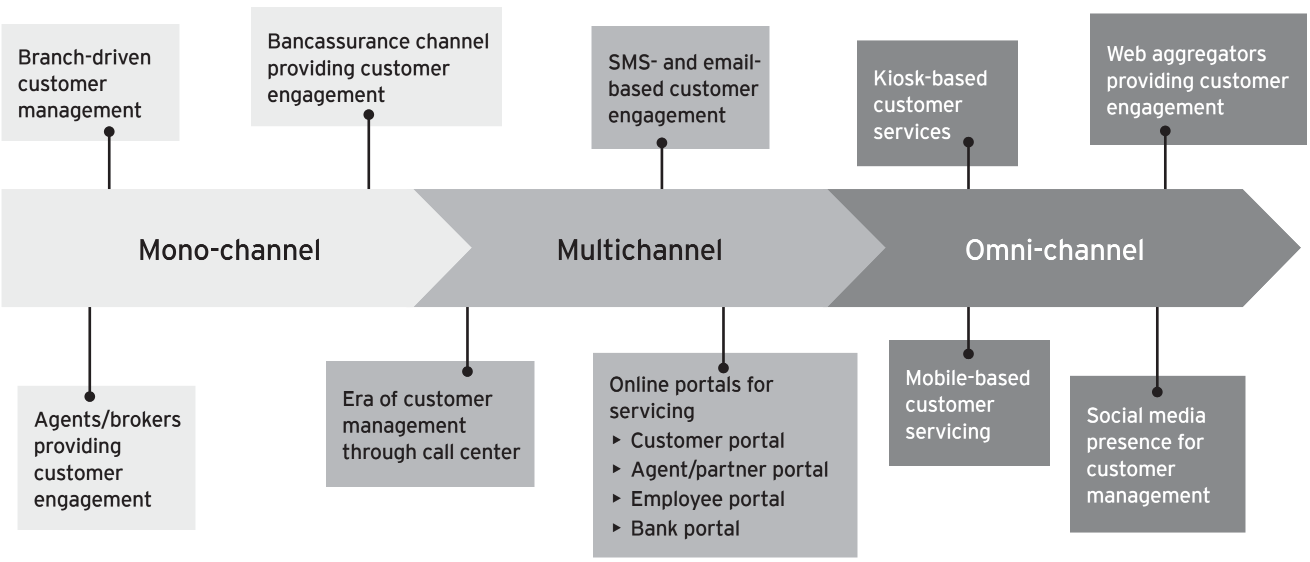
## System of engagement

Systems that engage with a customer have evolved, maturing from mono- to multi- to omni-channel, as shown in Figure 4.

Historically, insurers in India and China adopted a mono-channel approach with three touch points for customer interaction: branches, agents/brokers and banks. This involved high logistical, manpower and IT system maintenance costs to drive efficiencies. With a multichannel approach, customers no longer need to complete elaborate application forms or walk into a branch to service a policy. Online purchase and self-servicing capabilities are enabled through websites, SMS and portals.

We observe that customers shop through web aggregators and prefer agents when negotiating premium prices. Therefore, aggregators are not as relevant, as the quote-to-policy conversion ratio is low — emphasizing that companies are cautiously investing. Internet connectivity is low in India and China, though this is expected to change with demographic shifts in the market.

Figure 4: Evolution of engagement from mono- to multi- to omni-channel



**As an early mover, one major insurer launched an e commerce portal, becoming the first life insurance company in India to offer life insurance for purchase over the internet.**

Mobile connectivity is predicted to increase to 200 million, with 624.7 million smartphone users in India and China respectively by 2016[18]. The one-size-fits-all service model is shifting to a self-service model. Insurers are heavily spending on such services – in the range of 2% to 5% of their premiums.

Insurers are now focusing on omni-channel capabilities, which will provide customers, distributors and advisor groups with contextualized information and tools – ensuring that communication is uniform across channels.

## System of insight

Systems of insight range from day-to-day reporting systems to more sophisticated analytics tools and solutions. These systems track business functions and are capable of configuring model scenarios for processing transactions and decision-making (see Figure 5).

Expanding service channels and increased automation have led to challenges, such as multiple systems and processes to collect, store, maintain and utilize data. Insurers are adopting dedicated analytic systems for day-to-day reporting and real-time information to achieve greater efficiencies. We refer to these as systems of insight.

Traditionally, MIS was used for regulatory and periodic business reporting. Now, insurers monitor the health of their business by tracking KPIs with data warehouse and reporting tools. The use of "mined" data has improved understanding of business issues, leading to better, more informed decision-making.

Business intelligence (BI) has become crucial to every aspect of the insurance value chain – creating opportunities to cross-sell and up-sell products. Most insurers have adopted this approach and are using big data analytics as well to encompass a new generation of software and architecture.

Telematics and the emergence of smart devices in cars and wearables for tracking fitness is leading to applications such as "pay as you drive" and "pay as you live" for premium pricing. Social media also provides a rich source of data, which insurers use for operational processes such as underwriting, claims, marketing and subrogation.

## Future outlook for technology adoption

We expect insurers across India and China to adopt technology in the next one to five years, as shown in Figure 6.

[18] From Ministry of External Affairs, Government of India

Figure 5: The move from MIS to business intelligence to predictive analytics

**Management information system**

- Standard business reports
- Ad-hoc reports
- Query drill down

**Business intelligence**

- Statistical analysis
- Tactical analytics
- Operational analytics

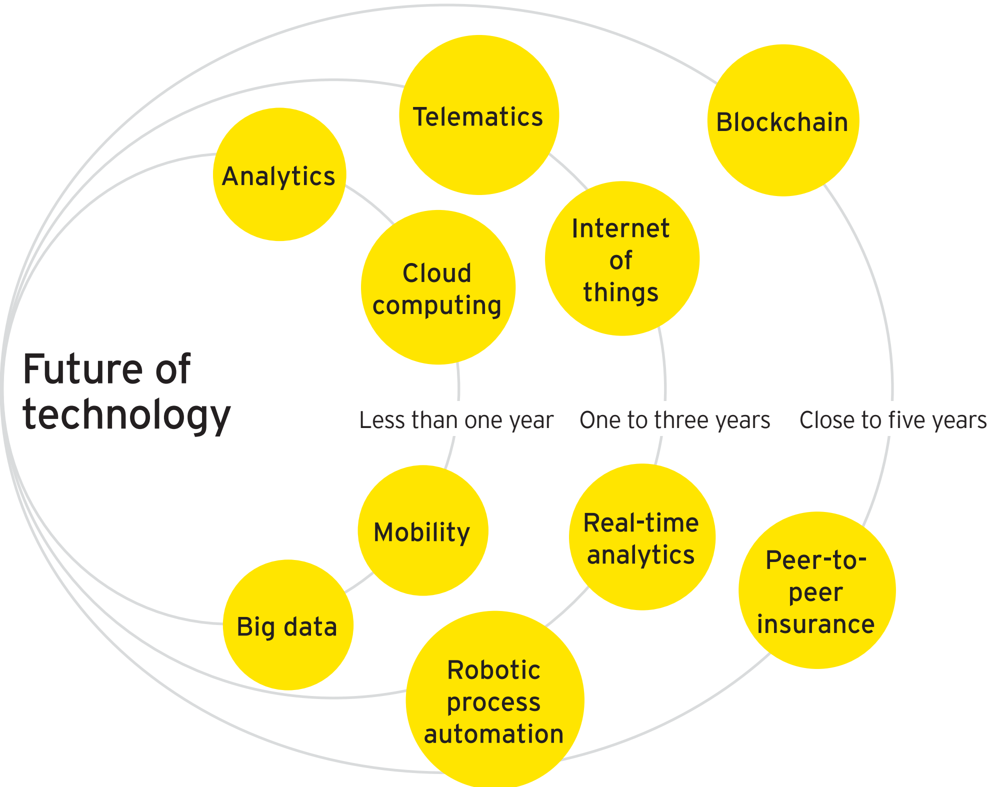
**Predictive analytics**

- Telematics
- Internet of Things and social data
- Big data

**Focus on policy life cycle**

**Focus on harnessing data**

Figure 6: Future of technology adoption in insurance




**Less than one year**

- Rapid advancements in mobile technology, application software and connectivity reshaping insurance markets
- Convergence of social media and cloud computing with big data analytics

**One to three years**

- Adoption of usage-based insurance in motor insurance
- Robotics process automation could become mainstream
- IoT to lead to an explosion of data with connected cars and wearable devices
- With capability of real-time data analytics, insurers to be better equipped to personalize customer experiences

**Close to five years**

- Disruptive technologies such as blockchain likely to be widely adopted
- Peer-to-peer insurance, already a disruptor in China, likely to become more widespread across both India and China

# Conclusion

Technology presents a wide range of options for emerging markets such as India and China. In less than a year, rapid advances in mobile technology, application software and connectivity are expected to reshape the insurance industry. In three years, robotics will become a buzzword, and in five years, disruptive technologies such as blockchain and FinTech will be adopted and transform traditional processes that exist today.

While there are trade-offs between opportunities and risks, we believe that insurers will realize strategic long-term benefits by participating in these emerging markets and taking advantage of their strong growth potential.

With increasing capital infusion and the arrival of new technologies, insurers continue to adopt digital solutions to improve customer experience and maintain profitability. Customers, agents and insurers have unprecedented access to information and digital tools, which will drive transformation. Insurance awareness and penetration will pose significant challenges, as there is a wide gap in both India and China.

Yet, the rising population, changing demographics and unprecedented economic and technological expansion will encourage insurers to innovate, establish a foothold and remain relevant in these markets.

In the digital age, we believe insurers in India and China will need these capabilities:

- Use new technologies to create revolutionary business models to support the distribution and deployment of new products and services
- Simplify and automate internal and external processes for better performance and cost efficiency
- Provide an omni-channel experience to customers anytime, anywhere and on any device
- Use data with analytics and business intelligence tools to help decision-makers make quick, informed decisions
- Create a connected workplace where employees have tools to connect, communicate and collaborate will internal and external stakeholders

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