

# Insurtech for development: Emerging market trends

**An update**

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# Executive summary

This report provides a summary of the current state of insurtech in emerging markets. Investments in insurtech in underserved insurance markets are on the rise, which promises significant advancements in insurance penetration. This note assesses how well insurtech is addressing the insurance provider challenges in expanding insurance in emerging markets. It also provides an overview of the types of products that are offered, which elements of the product lifecycle insurtechs serve currently and which technology types dominate.

The analysis is based on a database of 292 insurtech initiatives that operate in 85 countries across Africa, Latin America and South-East Asia. Since 2017, when the database was first put together, there has been significant growth in the number of insurtechs: from 157 to almost 300. While there is increased activity in the space, we also recorded significant churn in initiatives, with almost a quarter of the initial insurtechs having to be removed due to inactivity. In fact, expensive distribution and hence not being able to reach scale remain the largest barriers to the expansion of insurtechs in emerging markets.

Africa shows the highest number of insurtechs compared to the other two regions, yet it experienced the highest churn. Africa is also the market where insurtechs replicate their initiatives more often across countries, which suggests that fewer solutions are tailored to the local context when compared to the other two regions. Asia dominates in the field of new data and analytics.

Six different categories of insurtechs were identified, of which digital platforms dominate the market. Most initiatives centre on the mobile phone as distribution mechanisms. Technical service providers (TSPs) build the majority of these systems to use their competitive advantage of being agile and at the forefront of technology to offer value-added services to the insurance industry. This is in line with the rise of virtual marketplaces in emerging markets that increasingly allow consumers to conduct their retail lives online. We expect this category to remain dominant in the future.

Vehicles, health, life and disability products are the most covered, with some innovations including behaviour-changing nudges, such as rewards for good driving or for reaching fitness goals.

Based on the overarching insights from the database, expert interviews and existing literature, we identify five key trends for insurtech in emerging markets:

- Insurtech applications are growing at a fast pace in emerging markets
- Most insurtech models increase the efficiency of, rather than disrupt, traditional insurance models
- Insurtechs are not necessarily expanding insurance reach yet
- Technical server providers (TSPs) are well placed to be catalysts of innovation
- Three business models are emerging:
  - Solutions: independent insurtechs that partner to deliver specific solutions
  - Growth: insurers that leverage technology to grow or become more efficient
  - Ecosystems: tech platforms that leverage insurance to create new digital ecosystems

# 1. Introduction

Over the past five years, insurtech has received considerable attention and ever-larger investment rounds in countries such as the United States, Australia and across Europe. In emerging markets, the insurtech space is less well understood, yet the need for insurtech is arguably even bigger than in the developed world.

*Severe market development challenges exist.* Voluntary insurance take-up is still very low. It is estimated that, in most developing markets, less than 10% of adults have insurance (EY, 2018). Insurance providers struggle to cost-effectively reach, acquire, service, collect premiums from, and pay claims to, consumers who have limited purchasing power. Prospective customers are often far from traditional financial sector infrastructure, cannot be served cost-effectively via traditional brokers or individual sales agents; moreover, they are likely not to be familiar with the insurance value proposition (Smit, et al., 2017).

*There is scope for technology to bridge the gap.* Technology is becoming increasingly sophisticated and promises to solve many of these challenges. In this note, we explore where technology has been able to make inroads in emerging markets, where gaps remain and how the landscape of insurtechs has evolved. We define an insurtech as an insurance value chain segment specialist, an insurance company or intermediary that utilises technology as its competitive advantage to either compete in or provide value-added benefits to the insurance industry.

*This note builds on, and provides an update to, a prior report and database* that we released in 2017 to explore the effects of insurtech on providers and consumers in emerging markets. The database takes the form of an [online](#) tracker that is continually updated. In this round, some additional analytical lenses were added, and some categories were updated to add depth to the analysis, given the evolving and growing nature of insurtechs.

*This note applies five analytical lenses to explore the role of insurtech:*

- **Geographic scope:** We explored the differences in trends between Africa, South-East Asia and Latin America, including specific countries.
- **Insurtech categories:** Six different insurtech categories allow for a more granular understanding of the technology applications. We analysed trends in growth and type of technology.
- **Challenges in inclusive insurance provision:** Given that emerging market insurers face exacerbated business challenges compared to more mature markets, we analysed how technology is currently overcoming the five most pressing challenges for providers in inclusive insurance provision.
- **Stages of the product lifecycle:** The insurance value chain or product lifecycle consists of five stages: product development, sales, premium collection, servicing and claims. We mapped the insurtech initiatives against these stages to show where technology is currently finding applications.
- **Insurance products that are using insurtech:** The product lens allowed us to understand which risks are mostly covered by insurtechs in emerging markets today and which remain underserved.

Box 1 provides an overview of the methodology and inclusion criteria for initiatives to feature in the database.

### Box 1: Insurtech database methodology and criteria

The database was compiled through a desktop scan of insurtech initiatives, supplemented by stakeholder engagement and expert interviews. While we cannot claim the database to be complete, we aimed to be as systematic as possible when searching for new insurtechs, using a list of pre-defined search criteria for the various popular search engines. This includes the different ways of spelling “insurtech” (e.g. InsurTech or insuretech), searching in local languages and specific countries, as well as searching for specific technologies associated with insurtech, such as parametric insurance. We also scraped accessible data from insurance incubators and accelerators. Initiatives were researched between February and April 2019. Conducting desktop research via the popular search engines can skew the results towards a particular region. There is a likelihood that especially Asian initiatives may be underrepresented given language and browser constraints.

An insurtech initiative is **included in the tracker** if it meets the following criteria: the initiative has technology at its core and applies this technology in insurance; it is currently active, i.e. it is operating in insurance and not dormant; it is operating in emerging markets but does not necessarily have to originate in emerging markets.

The following are **explicitly excluded from the tracker**:

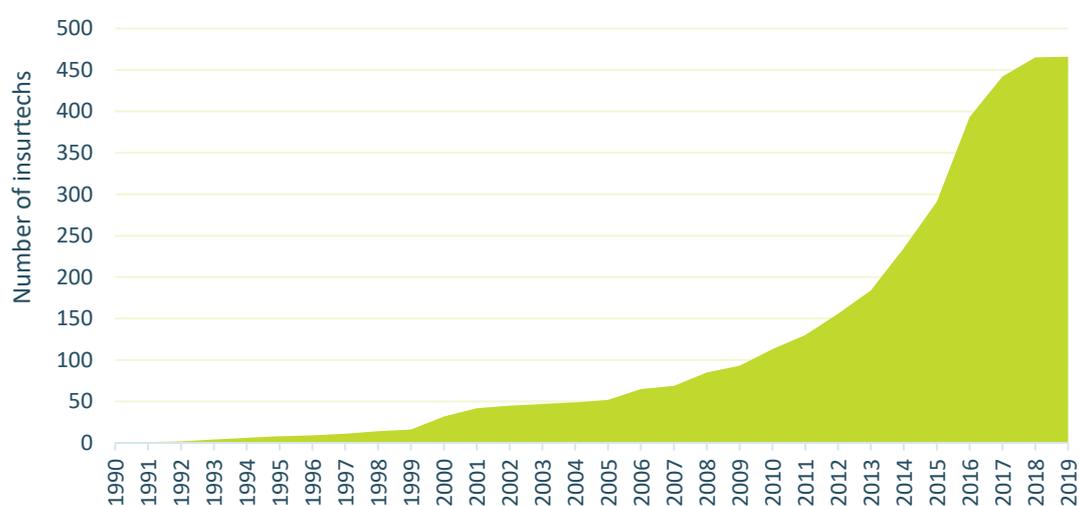
- Insurance companies that have taken to selling their products online on their own website, in addition to selling insurance offline (We only include insurance companies that exclusively sell their products online)
- Technology innovations that only provide a distribution channel for traditional cover (e.g. Uber offering insurance to its drivers would be excluded from the database, as it is not considered insurtech for the purpose of this note but rather as a new distribution channel.)

The rest of the note is structured as follows:

- **Section 2** outlines the insights from the tracker data across each of the five lenses.
- **Section 3** concludes on the overarching trends in insurtech in emerging markets based on the tracker insights, as well as expert interviews that were conducted between January and June 2019.
- **Section 4** outlines the key gaps that need to be addressed to more effectively implement insurtech, drawing on stakeholder interviews and literature.

## 2. Insights from the database

*There has been impressive growth but also considerable churn.* Figure 1 shows the accumulated number of insurtechs founded over time in emerging markets. 2014/2015 marked the start of an era of rapid growth – a trend that is expected to continue for the rest of 2019. The 481 initiatives that we included in the database are operated by 292 insurtechs (with many of the insurtechs operating in more than one country). Eighteen (18) insurtechs are present in more than five countries. The number of insurtechs increased significantly over the past two years: from the 157 identified in 2017 to 292 in 2019.



**Figure 1: Number of insurtechs over time, from inception**

Source: Cenfri Insurtech Tracker, 2019

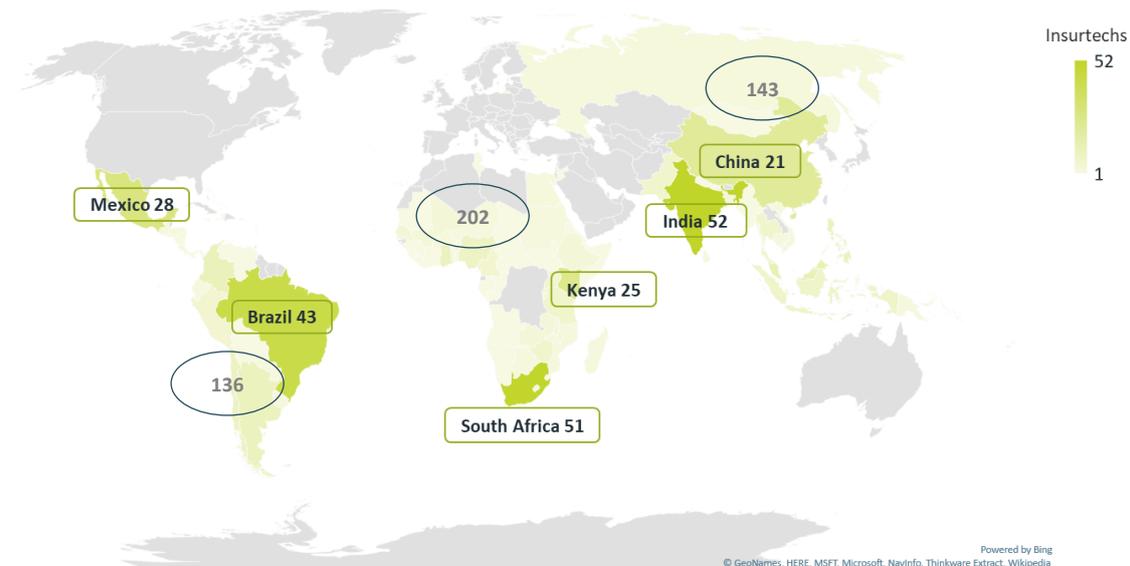
However, since 2017, 37 initiatives – representing almost a quarter of the original database – fell away due to inactivity. The majority of these were from Africa. While we cannot determine the reasons for inactivity and it may include mergers and acquisitions, the high churn rate reflects similar trends in other start-up sectors, which suggests a relatively immature market. On the one hand, we see high growth and investment into the sector with many new start-ups emerging in the space. On the other hand, the high churn rate indicates a tough environment to build sustainable businesses at scale.

This chapter considers some insights identified from these insurtechs to assist industry, investors and development partners to identify opportunities and solve challenges in insurance with emerging technology. It sets out findings according to geography, insurtech categories, insurance provider challenges, insurance lifecycle stages as well as product categories.

## 2.1. Geography

This section highlights the differences in insurtech penetration between Africa, Latin America and Asia (excluding Hong Kong and Singapore)<sup>1</sup>.

Figure 2 shows the distribution of insurtechs across these markets. All three regions show considerable growth in the number of insurtechs, which suggests that the appetite for technology in insurance is still growing and has not reached its peak. Each of these regions also has at least one country that positions itself as a clear hub for insurtechs, namely India, South Africa and Brazil.



**Figure 2: Insurtech distribution in emerging markets, including the number of initiatives and hubs per region**

*There has been a large increase in the number of countries covered by insurtechs.* There are now 85 emerging countries that have active insurtechs, compared to 49 countries in the 2017 scan. This represents an increase of 73%.

*Africa has the most insurtech initiatives, but many are replicates.* Africa has 202 insurtech initiatives, followed by Asia with 143 and Latin America with 136. While Africa also has the highest number of additions since 2017 (88 compared to 52 in Asia and 50 Latin America), it has the lowest number of unique additions. This suggests that insurtechs operating in Africa opt to replicate their business models across countries more often than insurtechs in the other two regions do. While this phenomenon may be a positive indication of scalability, it could also be a concern, as it could indicate a tendency to develop blanket products or solutions that are not tailored to a local context and local consumer needs.

*India, South Africa and Brazil are frontrunners.* Figure 2 shows each region's hub: India has 52 initiatives, South Africa has 51 initiatives, and Brazil has 43 initiatives. This is not surprising given that those three markets also have the highest insurance penetration in their respective region. For an insurtech to scale, a well-established, existing insurance market can help to overcome the adoption barrier. Mexico, Kenya and China are the runners-up in each region, coinciding with the second-highest insurance penetration in each region. India, South Africa and Mexico saw the largest growth, with 25, 18 and 17 new initiatives added, respectively, since 2017. Together, these six countries make up almost half

<sup>1</sup> In our database search, we included all countries in Africa, Latin America and Asia. The only exclusions were Hong Kong and Singapore, given their advanced development status. Both Hong Kong and Singapore are insurtech hubs, i.e. if we were to include them the number of insurtech initiatives in Asia would be much higher.

of all insurtechs deployed in emerging markets. This highlights the necessity of supportive market and regulatory conditions to foster innovation.

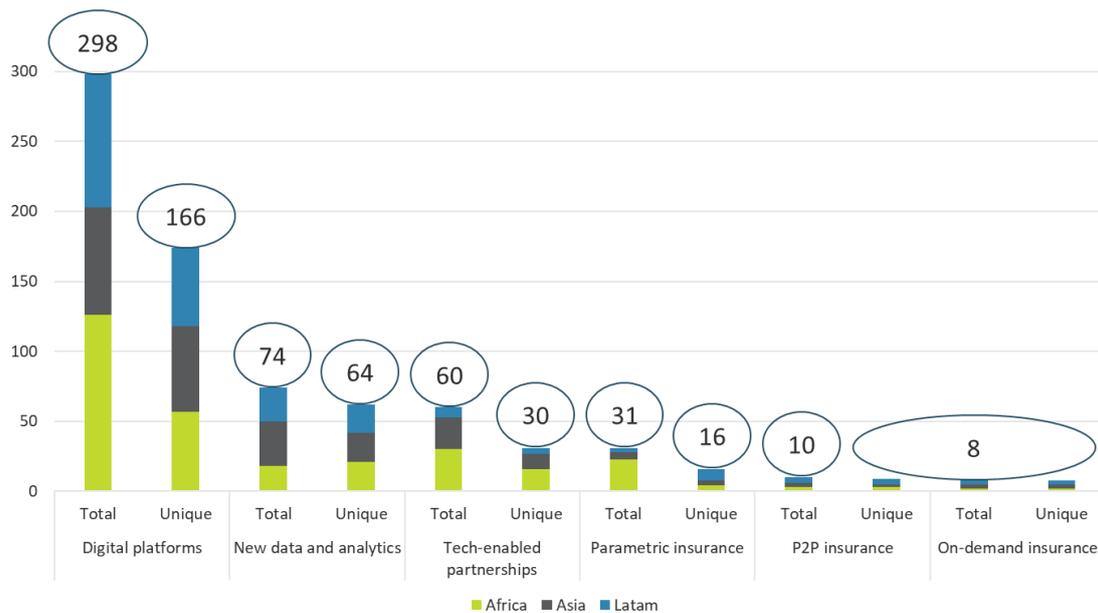
## 2.2. Insurtech categories

Insurtech has different types of technology at its core and can, therefore, come in many different forms. We have identified six categories of insurtech, each of which is outlined in Box 2. Each initiative in the insurtech database is assigned to only one category. While the categories may not be entirely mutually exclusive, we have categorised initiatives according to the technology that is at the centre of the individual insurtech offering.

### Box 2: Definitions of insurtech categories

- **New data and analytics:** New data, analytics and communication fill the information gap and allow new customer insights. New data and analytics initiatives collect and analyse data to inform insurers and TSPs about consumer needs and behaviour patterns. This includes both alternative data sources and new uses of traditional data points. This category is further split into chatbots, telematics, machine learning and artificial intelligence (AI), and smart contracts.
- **Digital platforms:** These platforms replace one or several face-to-face or human-based elements of the traditional insurance value chain with an online service. This online service is packaged as an online system that can be either consumer-facing or provider-facing, i.e. the platform is built to be accessed by insurance consumers directly or as a support for the back-end or front-end operations of an insurance provider. We distinguish between provider-facing and consumer-facing platforms.
- **Technology-enabled partnerships:** Partnerships for insurance delivery are not new, but the introduction of technology makes it possible to include retailers, mobile network operators (MNOs), banks, virtual marketplaces and others in the partnerships. Initiatives are included in this category if a partnership includes the insurer, distribution partner and TSP. The central technology in this category is the mobile phone, without which these partnerships would not be possible. TSPs are increasingly key to connect the insurer and emerging distribution partners. Previously, these distribution partners were largely mobile networks, but they are increasingly also platforms and other virtual marketplaces.
- **Parametric insurance:** Unlike traditional insurance, which assesses losses on a case-by-case basis, parametric insurance offers policyholders a pay-out based on the analysis of a data index across a geographically defined space, which has inbuilt triggers for when the index indicates a risk event has occurred. Digital technology enables the system to collect the indicator data in a systematic and detailed way, and it transmits the data to the insurer. Smart contracting is applied to automate and streamline the pay-out process to save costs. It is currently exclusively found in agricultural insurance.
- **Peer-to-peer insurance:** Peer-to-peer (P2P) platforms offer solidarity grouping for individuals who have the same insurable needs. Peer groups (such as families, friends or owners of houses or cars) team up to absorb one another's risks, with everyone contributing premiums to insure one another's losses. This system relies on digital technology to connect the individuals with one another on a digital platform or marketplace independent of location.
- **Demand-based insurance:** Demand-based insurance relies on risk-modelling technology to pick up on triggers by a consumer for insurance provision. Demand-based products are individualised covers, often triggered in real time for either a limited amount of time or priced according to usage only.

Figure 3 shows the breakdown of the different insurtech categories, both showing the full list of initiatives ("Total") and the unique number of insurtechs ("Unique").

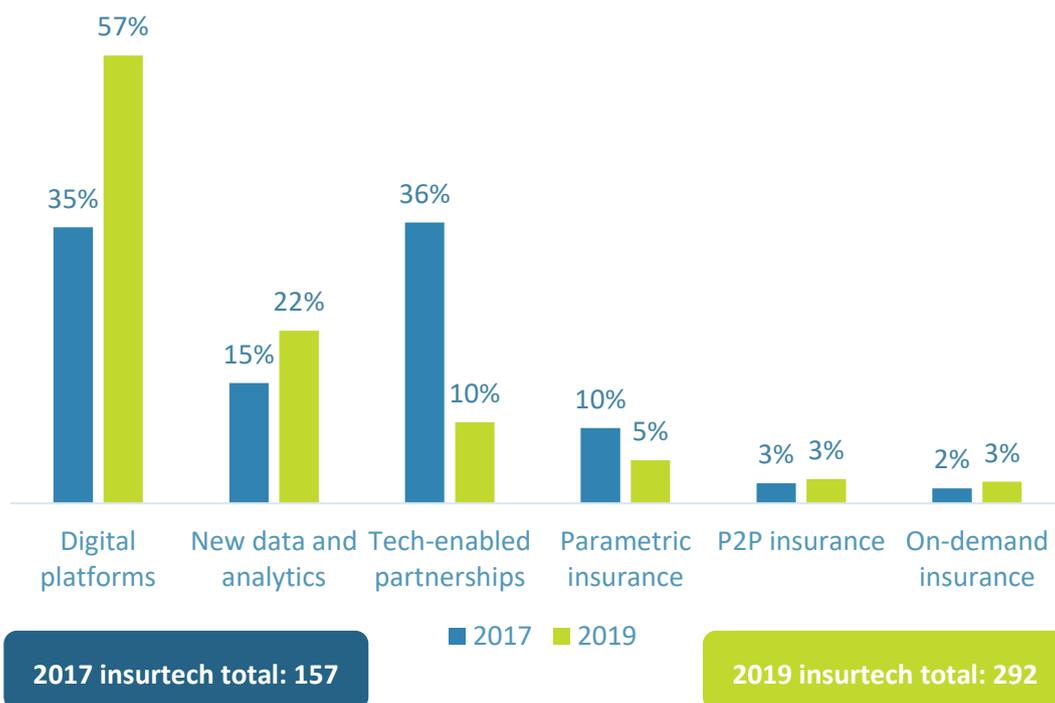


**Figure 3: Insurtech categories by region**

**Digital platforms dominate, followed by new data and analytics and technology-enabled partnerships.** Digital platforms are by far the most common category in all three regions, with a total of 298 digital platform solutions. Given that there are almost 300 digital platforms in total, this suggests that digital platforms lend themselves to replication across different countries. New data and analytics, with 62 initiatives, is the second-most popular category, followed by technology-enabled partnerships (27). Parametric insurance, on-demand initiatives and P2P platforms – all of which hold the promise to disrupt insurance with their non-traditional business models – are far less prevalent, with 16, 9 and 7 initiatives, respectively. Thus, the analysis shows that technology does not have to be transformative to be useful for insurance. In fact, insurtech in emerging markets mostly finds application in specific problems that insurance providers face, rather than completely transforming the insurance industry.

**Africa dominates technology-enabled partnerships and parametric insurance, while Asia leads new data and analytics.** Figure 3 shows that Latin America and Africa show the highest number of digital platforms, while Asia has a larger number of new data and analytics initiatives. Africa is a leader both in parametric and technology-enabled partnerships. Given the high penetration of mobile money in the region (GSMA, 2018), the latter trend is not surprising.

Figure 4 shows how the percentage share of insurtechs per category has changed since the first scan in 2017.



**Figure 4: Category comparison between the updated database (2019) and the original database (2017) as a percentage share of the total database**

Digital platforms surpass tech-enabled partnerships in number. Figure 4 clearly highlights how the rise of the digital platforms as a share of all insurtechs increased from 35% in 2017 to 57% in 2019. The share of technology-enabled partnerships has decreased by a similar margin, which suggests that digital platforms are increasingly favoured over complicated partnerships with MNOs. Parametric insurance also decreased in significance compared to 2017, while new data and analytics insurtechs could increase their share.

The following sections unpack each category in more detail.

### 2.2.1. Digital platforms

*It is critical to streamline existing business models.* Digital platforms are by far the most common type of insurtech across all three regions. They have seen the largest growth, also in terms of replication across different countries. This suggests that insurers are increasingly orientating themselves towards a digitised, online consumer segment and that they are becoming more comfortable with outsourcing their data hosting and analytics to third parties that have a competitive advantage.

Box 3 provides an overview of the two main business models classified as digital platforms, namely consumer-facing platforms and provider-facing platforms.

#### **Box 3: Overview of consumer- and provider-facing digital platforms**

In the case of **provider-facing platforms**, the insurtech builds and hosts partial or end-to-end, often white-labelled, business management software for insurers, reinsurers and/or brokers, and often includes a consulting component in its service offering. This type of insurtech is popular given its purpose of reducing operational costs for providers. TSPs are better placed than insurers to build such solutions, given their competitive advantage in agility, access to the newest technologies, and capabilities. Insurers themselves are often hamstrung by legacy systems and a lack of expertise.

**Consumer-facing platforms** are built to be accessed online by a consumer for ease of use and convenience. The platform can take on various roles:

- **Online broker:** Online brokers enable price comparison services, uniting different coverage options from different providers on one central platform. The consumer can choose the best available options based on basic information he or she provides online. The insurtech handles most payment and paperwork for the consumer on the platform depending on the software suite and either provides links to an insurer's website or has embedded the sales process on its own platform. The insurtech benefits from the commission paid by insurers and the large amount of data it can harvest on potential consumers.
- **Online insurer:** There is a rise in insurers that handle all insurance value chain segments completely online and that do not have any offline offerings. Advancements in machine learning, AI and computing power allow insurers or TSPs to design products and processes that do not require face-to-face interaction. This decreases operational costs and allows for seamless and quick interaction with the consumer.
- **Dedicated app/website to handle parts of the insurance lifecycle:** Some insurtechs are specialised in building suites that can handle parts of the insurance process for consumers. Via apps or websites, consumers can upload, for example, evidence to support claims via video links or voice recognition technology. This type of insurtech model is enabled by improved machine learning and AI solutions that can automate processes and analyse non-traditional data.

## Provider-facing platforms

*Provider-facing platforms are the original insurtechs.* In our scan, we found 67 provider-facing platforms, which operate 149 provider-facing digital platform initiatives. This category is one of the longest-serving business models, with many solutions already developed in the 1990s to help insurers manage their backend costs. As the high number of initiatives versus insurtechs shows, this type of insurtech initiative is replicated most easily across countries, meaning that many provider-facing platform insurtechs can operate in multiple countries at once. The advent of open application programming interfaces (APIs), cloud computing and AI for (near) real-time data analysis has enabled TSPs to establish themselves as champions in insurtech and cement their position as essential elements of the insurtech value chain in emerging markets.

*End-to-end software-as-a-service solutions for insurers act as insurance market makers.* Many of the provider-facing platforms support the digitisation of insurers' processes and cover the full product lifecycle. [Dotxml](#) provides a cloud-based backend transaction engine setup to reach the mass market in five African countries. Their system supports the delivery of insurance and other products, including health, savings, transport and payments. [Zingsure](#), operating in four African countries, provides a USD-denominated insurance product that reaches scale by working with group structures, including faith-based groups. [Inclusivity Solutions](#) both offer a digital platform that is stand-alone and link distribution partners (e.g. mobile operators), insurance companies and emerging consumers with their platform to deliver digital insurance solutions that meet consumer needs. They are operational in four African countries.

*There are software solutions that streamline existing insurers' processes.* These insurtechs do not provide a full end-to-end solution, but they support more than one product's life stage. [DreamTekis](#) is operational in 11 countries in Africa and Asia. Its insurance system covers agency, underwriting, policy, claims and reinsurance with integrated accounts management. [Weecompany](#) was the first health insurtech in Mexico and Latin America and

provides a fully digital backend platform for health insurers. The platform aims to increase profitability by optimising operational and administrative processes. [Sistran](#) operates in 13 Latin American countries. Its backend solution (branded SISE) automates a range of systems. One of the key value additions is the Insurance Product Designer, which enables customised insurance policies. The system is also able to integrate various communications channels.

*A range of provider-facing digital platforms focus on the digitisation of sales of insurance.*

Examples include [Bradesco Seguros's API Handbook](#) and [Bia Platform](#), which are both operational in Brazil. The former provides access to the insurer's ecosystem through an open API. The latter develops app integrations that can incorporate the sale of microinsurance by using gamification. Some insurtechs support sales by digitising brokers' systems, for example [Vayon Mobi](#) and [Agentemotor](#). [Vayon Mobi](#) in Brazil provides a mobile-based system that allows brokers to onboard customers digitally with up-to-date information from the insurer. [Agentemotor](#) in Colombia has a similar application that focuses on the sale of motor insurance and that allows the comparison of insurance products within five minutes.

*Insurtechs provide specialist claims management solutions.* The claims experience is one of the most important touchpoints for building trust with customers. Realising this, some insurtechs have worked to streamline this process. Examples include [MedMisr](#) in Egypt, who handle medical claims. They also have a searchable medical network database to show where clients can receive discounts. [MAPFRE – CATCLAIMS](#) in Puerto Rico provides a stable platform able to manage the vast number of claims that insurers need to process after a catastrophic event.

#### **Box 4: Company focus: eBaoTech**

[eBaoTech](#), headquartered in Shanghai, was founded in 2000 as a provider of software solutions for insurers. It has a business presence in more than 30 countries globally, including 11 emerging markets in all three regions covered by the Insurtech Tracker.

It offers two provider-facing solutions. This first, eBao Cloud, is a platform with open API integrations for middlemen, including brokers, agents, affinity channels and other insurtechs. The second, eBao Software, is a core system for insurance carriers, which facilitates the connection of conventional and digital channels of insurance. There are three variants of eBao Software: the GeneralSystem Suite, LifeSystem Suite and GroupLife Suite, which specialise in the insurance categories of general, life and group life respectively.

## **Consumer-facing platforms**

*Consumer-facing platforms are enabled by digitisation.* We found 99 unique consumer-facing platforms, most of which are in Latin America. This category has seen the largest number of new additions since 2017. Sixty-five percent (65%) of consumer-facing platforms offer price comparison services. Due to advancements in micropayments (i.e. the availability of direct, low-cost, high-ease point-of-sale payment options), this business model is becoming more lucrative over time. Some more advanced platforms, such as [Balloon Insurance](#) in Cameroon, have broker licences. While not as common yet, fully digital insurers and insurtechs that focus on digitising specific elements of the consumer journey are also on the rise. They appeal to those consumers that are comfortable with accessing financial services online, without face-to-face interactions, and that are digitally and financially included. Many of these insurtechs are still in the start-up phase, and it remains to be seen

whether they can capture a large-enough share of the increasingly digitising population in emerging markets.

***Insurtechs provide price comparison services.*** A number of insurtechs help to inform customers by making information from different insurers available on one platform for comparison. Examples of these include [africargroup](#), which is primarily a car sales platform that is operating in 40 African countries. It also provides a comparison of motor insurance offerings. [Bajatusseguro.com](#) provides comparison services for a range of insurance products in Mexico, including options for businesses. [Easy Insurance](#) in Pakistan also offers price comparison of a range of insurance products.

***Some insurtechs operate as online insurance brokers.*** These insurtechs offer additional services to clients, including advice on appropriate insurance and direct sales of insurance, rather than directing them to insurers to complete purchases. [Compara online](#) provides comparison services of a range of financial services, including credit options as well as insurance with a presence in Brazil, Chile and Colombia. [Covela](#) in Mexico brokers insurance products for MSMEs online. [PolicyStreet](#) offers online brokering in Malaysia; it offers a range of curated products – from pet insurance to employee benefits.

***Some insurers provide complete online solutions.*** These are complete online insurance offerings that replace many of the traditional brick-and-mortar components with digital services. [Wibe](#) in Mexico offers vehicle insurance. The platform includes the ability to add additional covers to existing insurance as well as a reward programme, Auto CLUPP, for good driving behaviour. [Klimber](#) is an online platform that offers life insurance in Argentina. [Simply](#) in South Africa offers life insurance products for individuals and for businesses. They also offer insurance to domestic workers, an often overlooked market. [Acko](#) is a licensed non-life insurer in India, which offers vehicle, gadget and travel insurance. This includes integration with a number of partners, including e-hailers and bus ticketing platforms. They have cashless claims settlements and no paperwork during sign-up or during the claims process. [ZhongAn](#) is China's first truly digital insurer that sells and processes claims online, offering property insurance. Building off user bases from Tencent and Alibaba who came together with Ping An to form ZhongAn, they have developed a substantial ecosystem of solutions for customers.

***There are insurtechs that focus on digitising specific components of the insurance consumer journey to make it more efficient.*** [4-Sure](#) in South Africa provide a platform for communications around the claims processes, linking the insurer, service providers and customers. [Auto Chilango](#) in Mexico provides a vehicle management platform for customers that digitises and centralises all paperwork. [Reliance self-i](#) streamlines claims by using video streaming to validate claims in India. [Reliance HMO](#) in Nigeria focuses on sales of health insurance. It offers access to chats with doctors that can provide prescriptions for simple over-the-counter medication as an add-on service.

### Box 5: Company focus: Compara Online

[Compara Online](#) currently operates in Argentina, Brazil, Chile and Colombia. It launched in Chile in 2009 as a comparison service for insurance. In 2013, it acquired CortaContas, a Brazilian credit and insurance comparison lead generation site. In 2018, it expanded into Argentina by acquiring ComparaMejor and also entered Colombia. In November 2018, Compara Online reported having two-million visits per month on the platform, of which 20% were from Colombia, 35% Chile and 45% from Brazil. They report to have 250,000 active users per month (Bolaños, 2018).

Compara Online is a registered insurance broker, which allows customers to purchase insurance from Compara Online directly. The insurance products offered differ per country. Chile offers a full range of products, including vehicle, health and life insurance. In Brazil, customers can purchase travel, life and vehicle insurance products. In Colombia, vehicle, travel, pet, life and funeral products are available. Finally, in Argentina, customers can only buy travel insurance. In addition to insurance products, customers are also able to compare credit options.

## 2.2.2. New data and analytics

*Within the new data and analytics category, we found 64 unique initiatives, and the four most commonly found types of technology were:*

- **Machine learning and AI:** With 25 initiatives, these are the most commonly applied technologies in the new data and analytics category. Most of these are operating in Asia. The rapid developments in these two mechanisms bring the most innovation to the insurtech sector in emerging markets. Machine learning and AI are mostly applied in product development, sales and claims processing, including for fraud detection.
- **Telematics:** With 20 initiatives, this is the second-most common technology application within new data and analytics. Telematics is currently applied almost exclusively in vehicle and health insurance, given their reliance on tracker devices such as wearables. Similar to machine learning and AI, most telematics insurtechs are found in Asia.
- **Chatbots:** We found 15 unique chatbot initiatives, equally distributed across regions, increasingly embedded in third-party platforms, and constantly learning from users to increase convenience. In sales, chatbots have gained immense popularity over the past four years, with many new insurtechs launching in this category.
- **Smart contracts:** The four smart contract applications we found are all working with blockchain to enable automatic claims pay-out.

Box 6 provides further detail on the four types of technology within the new data and analytics category.

### Box 6: Overview of new data and analytics business models

**New data and analytics** applications entail either the collection of *new types of data* that can inform insurance products and the insurance lifecycle or *analytical tools* that enable insurance providers to make better decisions as well as decrease their operational costs. Given the many different facets covered by this category, we split it into four distinct technology applications:

- **Machine learning and AI:** Advances in machine-learning capabilities and artificial intelligence sophistication have enabled an ever-increasing number of use cases in insurance for this type of technology. Machine learning and AI underpin most insurtechs in some form or the other, but some TSPs specialise in offering advanced solutions in this field. They programme software that can analyse big data from non-traditional sources, such as satellite imagery, video imagery, data

from wearables or behavioural data from mobile phone companies for tailored, more granular risk assessment and automation.

- **Telematics:** Technology enables the Internet of Things (IoT), i.e. the ability of two electronic devices to communicate with each other independently over distance. Their main purpose is to gather information and insights on the consumer. The data is collected in real time and is used for behavioural nudges to change risk behaviour (e.g. a reduction in premiums to reward good driving behaviour) and to assess new risks and products. It is also used for claims processing and fraud detection.
- **Chatbots:** These AI applications mimic face-to-face interactions either via a chat or via a virtual assistant. The underlying algorithms are often able to learn from the person they are interacting with, so they improve themselves over time. Chatbots can reduce operational costs significantly and are often embedded in digital platforms for sales and servicing.
- **Smart contracts:** Distributed ledger technologies such as blockchain, combined with the increase in computing power, have enabled the establishment of smart contracts in insurance. While we only found four initiatives active in emerging markets and three of those are still in pilot stage, these insurtechs show promise in considerably reducing providers' operational cost. Smart contracts are triggered by a risk event and automate the claims process. They enable pay-as-you-go insurance products and improve the customer journey due to automated pay-outs in the event of claims. They can also create trust, given the transparency provided by distributed ledger technologies.

*Insurtechs are specialising in the use of machine learning and AI applications to understand customers.* Machine learning and AI's strength lies in the analysis of large datasets and in identifying trends and correlations coupled with predicting behaviour. The applications are wide, and many insurtechs provide specialised solutions to a wide range of sectors, with insurance just being one of the applications. [Cignifi](#) operates in five countries in Latin America and Asia. It uses big data to provide insights on customers that would otherwise lack sufficient background or credit histories to make them a clear market opportunity. This allows insurers to run more effective marketing campaigns. [Earnix](#) provides a product personalisation software suite for both insurance and bank products by means of its 3D Personalization Suite. It currently operates in Brazil and Chile and uses AI to analyse data to ensure that it offers its customers the right product at the right price and at the right time.

*Machine learning and AI can process a range of data types, including visual imagery.* This has been applied to the streamlining of claims processes by Bdeo and Ping An. [Bdeo](#) in Mexico uses AI to automatically and autonomously process documentary evidence (e.g. photos) to prevent fraud and save costs for its asset insurance products. [Ping An](#) in China uses AI in the resolution of car insurance claims. This includes initial reporting, the submission of digital pictures, loss assessment and document handling. [Aerobotics](#) in South Africa uses AI to analyse satellite and drone imagery for early detection of pest and disease detection on crops.

*Telematics is used to track driver behaviour to get more accurate risk assessment of drivers.* This is either through specific telematics solutions or trackers being added to vehicles or through the use of gyroscopes and accelerometers in mobile phones. Examples include [Raxel Telematics](#), who has collated data from smartphone telematics to provide insights on driving behaviours around the world. [Direção em Conta](#) in Brazil uses telematics to assess and reward good driving behaviour. [Jooycar](#) in Chile provides telematics solutions for insurers to provide them with insights on customers.

***Telematics are also being utilised to better track health developments using wearables.***

This is often incentivised by providing rewards for reaching certain activity levels. Examples include [GOQii](#) in India, which tracks a range of health indicators as part of a preventative healthcare solution, which includes advice from a coach and a doctor to meet specific health targets. This information is then used to negotiate cheaper health insurance.

***The lowering costs of measuring data has allowed new innovative applications of telematics to better manage risk.*** While the main two applications have been in vehicle and health, other niche examples can also be supported. For example, [Lumkani](#) in South Africa uses heat sensors and local data-sharing to help warn residents of fire outbreaks in high-density informal settlements where fires are prone to spread quickly.

***Some insurers have developed their own chatbots as part of their service offering.***

Examples include [Denkim Insurance](#) in Kenya, which, as an online broker, has a chatbot that integrates into messaging apps, including Facebook. [Arvi](#) in India is a chatbot solution aimed at millennials who prefer to engage online. The chatbot uses a mix of data and AI to guide customers in making their insurance decisions. [Kakau](#)'s chatbot Anna helps to facilitate smartphone and home insurance purchases in Brazil.

***Some insurtechs are chatbot providers that provide solutions to a range of sectors including insurance.*** Examples include: [FinChatBot](#) provides an AI-powered chatbot for financial service providers, including insurance in Kenya and South Africa. [Niki.ai](#) is an AI-powered chatbot that is also able to converse in Hindi with a range of applications in India.

***Smart contracts help to facilitate the creation of trust.*** For example, when contracts include partners across the globe such as [IBM, AIG and Standard Chartered](#) who piloted a multinational smart contract. The pilot had a master policy written in London, which was applied to local policies in Kenya, Singapore and the US.

***Smart contracts lower costs, thereby enabling microinsurance products.*** This includes the use of [Etherisc](#) to pilot agricultural insurance in Sri Lanka. [Consuelo](#) facilitates health and life insurance backed by Mexican mobile payments company Saldo.mx. [Pal network](#) provides personalised, pay-as-you-go microinsurance products with automated claims in Malaysia.

***New data and analytics initiatives hold much promise for emerging markets.*** In countries with very low insurance penetration, any access to more types of data, coupled with the newest tools to analyse this data cost-effectively, can enable more tailored insurance products to consumers, identify new consumer groups and drive scale in uptake. Yet, compared to its potential, new data and analytics as an insurtech category is still underdeveloped in emerging markets. There is a vast amount of data available for analysis; yet, besides traditional product development, the data remains underutilised. In many cases, the potential for new data and analytics models is limited by the extent to which people live their lives digitally and the potential to monetise what is measurable. We expect to see more developments in this space in the coming years, especially if countries and insurtechs manage to fill the capacity gap.

### Box 7: Company focus: Earnix

[Earnix](#) was founded in 2001 in Israel. It operates in Brazil and Chile as well as in Western Europe and North America.

Earnix provides a product personalisation software suite for both insurance and bank products through its 3D Personalization Suite. The suite has three components. The first component is Earnix Detect-it, which uses machine learning to identify trends that suggest life events that require different financial products. This allows banks and insurers to offer relevant products to customers without prompting. The second component of the product suite is Earnix Price-it. It is an end-to-end pricing solution that facilitates pricing decision deployment and documentation of decisions regarding pricing decisions. The last component of the suite is Earnix Personalize-it. This allows users of Earnix to offer customers products personalised to their needs.

### 2.2.3. Technology-enabled partnerships

In technology-enabled partnerships, the TSP is usually the driving force in a three-way partnership between an insurer/underwriter, a distribution partner (such as an MNO) and the TSP. In the 2017 version of the tracker, technology-enabled partnerships mostly entailed m-insurance partnerships. For emerging markets, these partnerships were the first to reach critical scale, and mighty insurtechs have formed as a result, attracting sizeable venture capital investments. Many partnerships had to be dissolved over the years, and country operations shut down, as it is a tricky business model to get right in the absence of scale. In 2019, typical distribution partners are shifting to go beyond MNOs to include others such as virtual marketplaces. In light of the dependence on the TSP's technology for products to be viable, our stakeholder interviews suggest that some markets could consider introducing licensing requirements for TSPs or enabling regulatory frameworks such as cell captive licences<sup>2</sup>. While the TSP positions itself as the connection point between the distribution partner and insurer, the distribution partner typically owns the consumer-facing communication interfaces and pay-out mechanisms and hence can have substantial partnership power.

*Even though the relative share of tech-enabled partnerships has fallen significantly, they are still reaching a large number of customers.* There are 27 unique technology-enabled partnerships, most of which can be found in Asia and Africa. Very few exist in Latin America. Compared to 2017, the share of technology-enabled partnerships fell from 36% to 10%. There is large churn in these models. Stakeholder interviews suggest that this is partially due to partnership challenges and difficulty in reaching scale in the uptake of voluntary products beyond embedded freemium products. Yet, tech-enabled partnerships remain the most successful insurtech category in terms of reaching a large number of customers.

*Stakeholder interviews suggest that MNOs (given their size and engagement with clients) can have substantial negotiation power,* which can limit the ability of insurers and TSPs to

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<sup>2</sup> The cell captive is a uniquely South African construct that emerged in the early 1990s as a way for entrepreneurs or organisations with an insurance business concept to participate in the insurance market without obtaining an insurance licence of their own. Under a cell captive arrangement, a cell captive account is created on the books of a licensed cell captive insurer (the promoter) and a cell owner buys a special class of shares in the cell captive insurer to capitalise that cell. By virtue of such ownership and subject to the conditions agreed in the shareholder participation agreement, the cell owner can draw dividends on the proceeds of the cell, obtain underwriting from the cell captive insurer and benefit from a number of other services provided by the promoter. The cell owner can also act as binder holder to the cell captive insurer. While first-party cells essentially self-insure, third-party cells sell insurance to external businesses or individuals and are the focus of this study (Hougaard, et al., 2018).

achieve their goals through such partnerships. Therefore, a number of models have limited the functions they assign to the MNO so as to increase control. In some markets, technology-enabled partnerships have failed due to partnership and operational constraints.

*Virtual marketplaces are a growing insurance partner.* While in the past TSPs focused on MNOs as main distribution partners, stakeholder interviews and research suggest that digital platforms are increasing in popularity (Makavuzza, et al., 2018). While these have not yet reached the same scale as MNOs, we expect this to change in future, given the significant number of virtual marketplaces emerging.

*There is a move towards bundled products.* Stakeholders suggest that the most common policy distributed through technology-enabled partnerships, the life insurance policy, will expand to a broader suite of bundled products to better meet the needs of consumers and to attract more customers.

*Insurtechs use MNOs as partners to expand the reach of insurance,* often through the use of free loyalty insurance products as an introduction to insurance for customers. [Bima](#) has 15 initiatives in all three regions covered by the Insurtech Tracker. [MicroEnsure](#) has 11 initiatives in Asia and Africa that use partnerships with MNOs to distribute insurance. [Cassava Smartech](#) has initiatives in five African countries.

*While this insurtech category is dominated by MNO partnerships, a few FSP partnerships also reach scale.* These include partnering with banks to provide credit life by MicroEnsure in both [Bangladesh](#) and [Pakistan](#). As a payments provider, [Alipay](#) provides health insurance as a loyalty product to customers. Digital credit and remittance providers offer potential for future scale.

#### **Box 8: Company focus: aYo**

aYo was launched in 2016 as a joint venture between MMI Holdings and MTN group to provide microinsurance in Uganda and expanded into Ghana in 2018. aYo has two main products: Recharge with care and Send with care both provide life and hospital cover. Hospital cover provides a pay-out in the event that the customer spends at least one night in hospital due to an accident. The Recharge with care product is activated via USSD and either life or hospital cover is selected. Customers then increase their cover every time they purchase airtime, with cover lasting 30 days. The Send with care product provides cover on money sent via mobile money. At a fee of 5% of the amount sent, hospital and life cover are received for three times the value of the amount sent via mobile money. Claims are paid monthly for a year for the insured amount. The cover can be linked to a school to ensure payment of school fees (aYo, n.d.).

#### **2.2.4. Parametric insurance**

Parametric insurance, or index-based insurance, often targets the most vulnerable who suffer substantial losses due to climate-related risks. In our sample, this business model is currently found almost exclusively in agriculture. Most covers relate to crop insurance due to extreme climate risks, but there are also solutions around earthquake risk. All 16 active initiatives rely on some form of donor support, and the business model has yet to prove profitable. Our stakeholder engagements suggest that this is largely due to distribution and payments challenges as well as uncertain basis risk. Yet, these types of insurtech hold much potential in emerging markets, as they target vulnerable, often small-scale, farmers in hard-

to-reach areas. In times where climate shocks are becoming more severe, this business model will face considerable challenges going forward, but it has also a lot to gain from the rapid advancements in technology related to collecting more accurate and granular data. Box 9 speaks to the different kinds of technology that are required.

#### **Box 9: Overview of the technology models in parametric insurance**

Parametrics relies on two types of technology. On the one hand, data measurement equipment in the form of satellite imagery, drones, granular rainfall measurement systems, etc., are necessary to build strong indices, related products, and processes. On the other hand, parametric insurance relies on distributed ledger technology, such as blockchain, to facilitate automatic pay-outs.

Parametric insurance also relies on partnerships for distribution, mostly via mobile phones. Without such partnerships, automated pay-out mechanisms will not function and one of the main value propositions falls away. Similar to technology-enabled partnerships, TSPs are the main driver of these partnerships. Apart from building the back-office and USSD-enabled consumer-facing systems, TSPs focus on brokering partnerships between insurers, agricultural aggregators and MNOs.

***Africa dominates, yet distribution challenges are hard to overcome.*** Nine of the 16 initiatives mentioned above can be found in Africa, five in Asia and three in Latin America. Many initiatives are still in pilot stage, and we have seen considerable churn since 2017 with many not making it past the pilot stage. The relative share of parametric insurance initiatives compared to the other five categories has halved since 2017: from 10% to 5%, emphasising the difficulty of building a sustainable business model around these initiatives.

***Several challenges exist with this business model.*** While parametric insurance has the advantage of quicker pay-outs, it does not cover the actual event loss, but rather the approximate loss. This introduces what is known as basis risk, where the trigger index does not perfectly correlate with the underlying risk exposure, resulting in a situation where a policyholder suffers a loss but does not receive payment. To mitigate this risk, the current generation of parametric insurance products often uses double-trigger events or staggered pay-out structures that allow for partial pay-outs for a lower category climate event and progressively higher pay-outs for stronger events (Singer, 2019). Stakeholder interviews also suggest that finding reliable third-party reporting agencies can be difficult, particularly when operating in emerging markets. Another obstacle to the expansion of parametric insurance is the lack of awareness and understanding among prospective policyholders. Lastly, parametric insurance has other limitations, including that it is hard to see how it can be widely applied in other areas, such as casualty insurance (Singer, 2019).

***The majority of weather-index insurance products make use of satellite imagery data.*** Stakeholder engagements suggest most make use of open-source data to which they add analytics to provide the insurance product. [Pula Advisors](#) operate in six African countries. [PlaNNet Guarantee](#) operates in five African countries. [WorldCover](#) operates in three African countries. However, one of the most successful parametric insurance products has been the Indian [Pradhan Mantri Fasal Bima Yojana](#), which is backed by the Indian government. One of the key determinants of its success is embedding it in a credit product.

### Box 10: Company focus: OKO

[OKO](#) originated in Israel, graduating from The Hive's accelerator programme in Tel Aviv in 2017. The first product was piloted in Mali in 2018 in partnership with Orange and underwritten by Allianz.

OKO provides a turnkey weather-indexed solution for crops. This is done in partnership with weather data suppliers and underwritten by a locally licensed insurance company. Satellite imagery and weather forecasting are used to simplify and automate claim management, thus creating low-cost crop insurance for smallholder farmers.

## 2.2.5. Peer-to-peer (P2P) insurance

P2P insurance models mean to disrupt the traditional insurance space and rethink the insurance lifecycle by placing the consumer in the centre to increase trust. Some of them replicate older, mutual models, while others focus on new needs. These needs include divorce cover, kidnapping insurance or pet insurance, for instance. Lemonade, a US-based P2P insurer, made large waves when it successfully introduced this model in the US in 2016. While Lemonade is cautiously showing success in the US, P2P insurers in emerging markets still have to prove themselves in the long term. Yet, the growth in this category suggests that there is ongoing interest in this space, promising disruption compared to traditional insurers. Box 11 provides a more detailed overview of the business model.

### Box 11: Overview of peer-to-peer insurance

P2P models generally target those that are already digitally included or that are interested in the simplicity or novelty of the innovations such models bring. Using the latest machine learning and AI technology (such as blockchain and smart contracts, and behavioural data), P2P insurtechs are able to tailor products to the individual, facilitate seamless claims pay-out based on consensus in the risk group, and promise payback of any unclaimed insurance premiums. One advantage is that they can leverage social networks as a driver for insurance uptake. Self-selection decreases their operational costs and risks, and the transparency increases consumer trust. The emerging market P2P initiatives in our sample cover a broad range of risks, from pet insurance to mobile-phone covers to divorce insurance in China.

*The number of initiatives doubled in two years, off a low base.* P2P and demand-based insurance are the newest categories of insurtech. The first initiatives appeared in 2014. The database lists eight unique P2P insurtechs, up from four in 2017. Given that most insurtechs in this category are still young, it is hard to judge whether they will be successful in the long run. South Africa, with three initiatives, is at the forefront of this movement.

*As emerging insurance models, some peer-to-peer solutions utilise emerging payments technology.* [Teambrella](#) in Argentina, Peru and Russia uses Ethereum wallets. Claims are also validated by team members' votes. [Protectiq](#) in Russia uses blockchain to facilitate P2P payments and bypass intermediaries.

*Some peer-to-peer solutions return unpaid claims to policyholders.* These platforms take an administrative fee for the running of the platform. The remaining premiums are used to fund the risk pool. If funds remain in the risk pool at the end of the year, the excess is returned to the policyholders. To ensure risk pools are not exhausted, they also reinsure the risks to

ensure that policyholders are not liable to risk. Examples include [Pineapple](#) and [Granadilla](#), both based in South Africa.

#### Box 12: Company focus: Teambrella

[Teambrella](#) was founded in 2015 with headquarters in Russia. The platform currently operates in six countries, namely Argentina, Germany, the Netherlands, Peru, Russia and the USA.

Teambrella provides a digital platform for customers to share risks with an administration fee charged on claims payments. Teambrella does not underwrite or contract an insurer to underwrite teams thus does not require an insurance licence, as it simply facilitates peer-to-peer contracts (Teambrella, n.d.). The platform is structured in teams that insure each other. To ensure this is fair, each member provides the same cover they receive from another member.

The cover value is calculated by the Teambrella platform through the use of Ethereum wallets. These wallets require authorisation by the owner and teammates to allow payment. An individual has cover in proportion to the money in their wallet, and claims are limited to the sum of the team members' wallets. This means that large claims by other team members can erode the amount that participants are covered for.

When a risk event occurs, the claimant initiates a claim on the platform on which the team votes. The team decides how much should be paid for the claim. Once a decision is reached, payment is made directly to the claimant's wallet from the rest of the team.

### 2.2.6. Demand-based insurance

Given that many existing and potential insurance customers face income constraints, such as low, irregular and/or seasonal income, on-demand products whose cover lasts for a predefined time or specific event are appealing. Similarly, only paying for what was actually used, when used, makes products more tangible and addresses hyperbolic discounting and other biases. Box 13 offers an overview of the business models. Demand-based insurance is not very common in emerging markets, at least outside the vehicle insurance space, but we expect this type of insurtech to become more relevant over time. It has the potential to reach scale if it is designed well and meets consumer needs better than traditional products. [Toffee](#), from India, for example, offers "bite-sized" insurance and allows for the de-bundling of comprehensive products to create new products wherever possible. Toffee has partnered with traditional insurance companies to create these products and is essentially setting up a future customer base for these larger companies. It works with nine major insurance providers and underwriters such as Apollo Munich and Ergo to provide these tailor-made policies. It targets urban millennials in particular, with covers such as bicycle theft insurance, backpack insurance and a cover for dengue fever, which are all easy to administer and understand.

#### Box 13: Overview of demand-based business models

Our demand-based insurance includes two separate business models:

**Pay-as-you-use products** charge the customer a premium based on how much he/she uses an asset. This currently mostly applies in vehicle insurance, i.e. the premium depends on how many kilometres were actually driven in a month.

**On-demand products** insure the individual for a limited period. Machine learning, as well as telematic advancements allow these types of cover to be sold in seconds, usually via the mobile phone. Its most useful application is for sales, premium collection and claims processing. Smart

contracts are used to ensure automatic pay-out, e.g. in the case of flight delay insurance, the pay-out is triggered automatically as soon as the system detects a predefined delay threshold.

*Of the eight initiatives we found, demand-based insurance can mostly be found in vehicle, accident and travel insurance.* The pay-as-you-go model lends itself mostly to car insurance. All demand-based insurtechs are still young and still need to reach scale, yet the number of insurtechs in this category doubled since the 2017 database scan. Given the lower profits due to smaller policies, and the potentially higher risk for insurers, it remains to be seen whether this business model is suitable for emerging markets. It will be vital that infrastructure advancements support the reach of this type of cover, e.g. mobile data and network and the digitisation of funds need to develop at the same pace, or it could affect customer value. This is a constraint for a number of insurtech categories.

*These insurtechs allow customers to purchase life and accident insurance for as short-term as 24 hours.* This makes insurance more affordable, as the time covered is short, but it also runs the risk of adverse selection. Examples include: [Go Cover](#) in South Africa who provides cover from 24 hours to 30 days. [Zong](#) in Pakistan has daily premiums.

*Pay-per-use insurance products allow premiums to be scaled to the use of the product, usually vehicle use.* [Thinkseg](#) and [CityMile](#) both operate in Brazil. They price insurance premiums according to the distance driven in a month as well as driving behaviour.

#### **Box 14: Company focus: Toffee**

[Toffee](#) launched in 2017 in India with health and general insurance products. Toffee is a registered insurance intermediary, which allows it to create products underwritten by insurers and earn commissions on sales.

Toffee focuses on small insurance products with two of their most popular products being bicycle and backpack cover. It has partnerships with nine insurers and over 15 channel partners. The channel partners include Wildcraft, Eko India Financial Services, Hero Cycles, Firefox Cycles and TI Cycles. In 2018/2019, Toffee sold 70,000 policies and received over 600 claims, of which 99% were paid (Sharma, 2019).

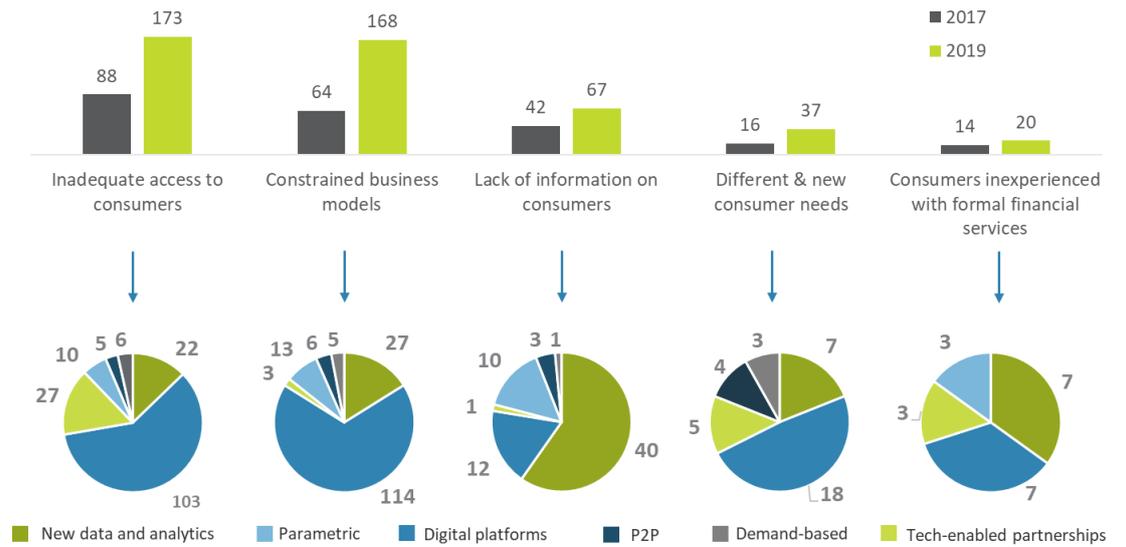
## **2.3. Challenges addressed**

This section focuses on understanding how insurtech is alleviating emerging market challenges faced by providers in inclusive insurance. Box 15 provides an overview of the definition of each challenge. Similar to the 2017 scan, we found that the majority of insurtechs are aimed at solving constrained business models as well as bridging the challenge to access consumers via the creation of user-friendly processes on handheld devices. Technology so far plays a fairly limited role in meeting consumer needs for non-traditional products, and especially in helping consumers to understand the concept of insurance, i.e. bringing more consumers into the formal sector.

### Box 15: Five core challenges in inclusive insurance

- **Lack of information on consumers:** Low-income consumers engage less often with the formal sector than traditional, higher-income insurance consumers. Coupled with lower official documentation ownership and lower formal employment observed in the low-income space, this affects the amount and quality of consumer data that insurers can obtain. Reliable information on asset ownership, health and claims behaviour for insurance purposes is vital for adequate risk profiling, product design, sales, servicing, payments collection and claims assessment.
- **Lack of access to consumers:** Traditional insurance generally relies on branches, brokers, agent networks and aggregators such as employers for insurance distribution. Physical touchpoints and aggregators are largely concentrated in urban areas or areas with a large number of high-income individuals or commercial enterprises. The reality, however, is that a high proportion of the microinsurance target market is unbanked (over two billion adults worldwide), self or informally employed and/or engaged in farming and live in rural areas. This makes it difficult to reach this target market to sell policies, provide post-sale service, collect premiums and pay out claims.
- **Different and new consumer needs:** Products designed and priced for mainstream insurance markets often do not meet the specific needs of low-income consumers (Churchill, 2007). Designing products and processes to meet these needs requires a tailored approach, informed by target market realities. This includes consideration of the risk events that will be most appropriate to cover (i.e. cover for assets not traditionally covered by insurance, such as individual livestock), the manner and timing of premium collection (seasonal versus monthly) and what documentation is needed to verify claims.
- **Consumers inexperienced with formal financial services:** Low-income consumers often have lower literacy levels and are generally less familiar with the formal insurance concept (Churchill, 2006). This poses a challenge at multiple interaction points along the product lifecycle, given that the information provided to the consumer needs to be adequately packaged.
- **Constrained business models:** Low-income consumers have, by definition, limited incomes and therefore struggle to afford expensive insurance premiums. This is often compounded by the unpredictability of this target market's income streams. Insurance premiums, therefore, need to be adequately priced to be affordable and attractive to this consumer segment. A low-premium environment constrains business models for insurers, requiring low costs and high volumes for the business case to be viable. The traditional approach to insurance delivery, however, involves costly infrastructure (both front and backend).

Figure 5 shows the breakdown of each challenge, both in terms of growth since 2017 and how each challenge is currently addressed by insurtechs.



**Figure 5: Challenges in inclusive insurance in emerging markets and insurtech categories**

**Insurtech enables increased access to consumers.** Given low margins, the most prevalent challenge that insurtechs address is that of providers struggling to access large groups of consumers to achieve scale while managing costs. As Figure 5 shows, insurtechs that address this challenge by offering access to customers are the most common. This is mostly driven by consumer-facing platforms that offer broker and comparison services online and that are mostly accessed via a mobile phone or a tablet. The mobile phone also plays a central role in technology-enabled partnerships that largely function on a USSD-basis and do not necessarily need smartphones or high-quality connectivity. This enables insurers to target especially the uninsured and underinsured in emerging markets through basic life, disability, health and funeral covers.

**The cost of delivering insurance in emerging markets can be significant.** Recent market diagnostics found that expense ratios of over 80% of premiums are common even in innovative markets like Ghana and Kenya (Thom, et al., forthcoming). Figure 5 shows that the largest increase in the last two years has occurred in insurtechs that help to reduce operational costs of doing business (see “Constrained business models”). Provider-facing digital platforms are the most typical model to reach viable scale in partner models; however, many traditional insurers are increasingly using a wider variety of insurtechs to improve efficiency. New data and analytics also focus on this challenge on a large scale, especially focusing on big data analysis for process optimisation and accurate product pricing. Some insurers, such as Discovery in South Africa, are opening their APIs to offer insurtechs the best value proposition to solve pressing provider challenges. The advantage of these insurtechs is that their technical solutions do not necessarily only apply to insurance but can be used in other financial services as well. Furthermore, the systems can accommodate a wide range of products, and hence appeal to a wider range of providers, which improves the business case for the insurtech as well as financial provider groups.

**Insurtechs are less impactful in meeting people’s needs and bringing them into the formal system.** Although the main value proposition for technology in insurance lies more on the supply side to solve distribution and operational challenges, less growth has been experienced in the insurtech initiatives that relate more directly to empowering the customer. In the absence of in-depth demand-side surveys and information on potential consumers, only a few initiatives focus on bringing more consumers into the formal insurance system by understanding their needs or prioritise literacy efforts. However, the

slight increase in initiatives that aim to develop tailored products and to understand the consumer better via behavioural data is a sign that customer centricity is becoming increasingly important.

## 2.4. Lifecycle stages

A similar product lifecycle, comprising five stages, applies to most types of insurance across the globe. The insurance lifecycle describes how a product is developed and distributed to a customer. Technology can be applied to each of the five stages in the product lifecycle, which are described in more detail in Box 16. This section explores how insurtechs in emerging markets make use of technology to enable a more seamless transition between the different stages or make one or more of the stages more efficient. While most insurtechs focus on the sales stage of the product lifecycle, machine learning and AI initiatives have considerable application in claims processing. Advancements in payment platforms for improved premium collection make the customer journey more seamless and increase provider profitability.

### Box 16: Definitions of the product lifecycle stages

The product lifecycle describes the different stages in the delivery of insurance products to consumers from a supply-side perspective. The process comprises five stages, as shown in Figure 6:

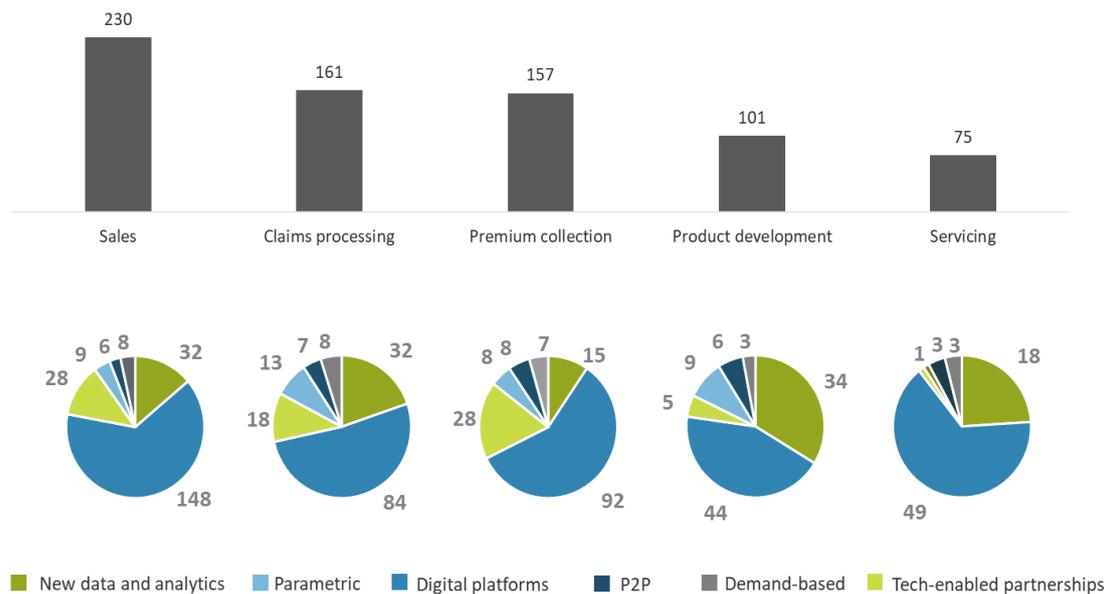


**Figure 6: Insurance product lifecycle**

Source: Smith, et al., 2011

- **Product development** refers to the process involved in designing and pricing the insurance product.
- **Sales** refers to the process of reaching consumers and extending the insurance product to them. It involves the disclosure of information to the consumer and the acceptance of the policy contract by the consumer, provided that he or she meets the relevant requirements.
- **Premium collection** refers to the systems and mechanisms in place to facilitate the payment of insurance premiums by consumers.
- **Servicing** is done in the back-office of an insurance provider once a policy is sold. It refers to the processing of an insurance policy and all communication around it, i.e. signing up the consumer, monitoring premium payments, sending out notifications, verifying information provided, handling consumer complaints, etc.
- **Claims processing** refers to all activities around the processing of an insurance claim. The claim needs to be lodged and verified before a pay-out is made to the consumer.

Figure 7 gives an overview of which stages of the insurance lifecycle the insurtechs in our scan cover as well as how each insurtech category serves each element of the lifecycle.



**Figure 7: Number of initiatives in each stage of the insurance lifecycle and insurtech categories**

As Figure 7 shows, sales, claims processing and premium collection are the most covered lifecycle stages. The different uses of technology are discussed in turn below.

#### Sales:

- **Automated collection of data required for client onboarding:** This shortens the sales process. For example, [ARCA](#) in Mexico provides vehicle quotes online using only the vehicle make, the model year and the customer’s zip code.
- **Easier and more reliable verification of client data:** By verifying client data, insurtechs can streamline the sales process. [Uniphore](#) is able to authenticate clients by using voice authentication.
- **Targeted sales efforts:** By targeting sales towards customers most likely to purchase the product, marketing costs can be utilised more effectively. This can be done by integrating into customer relationship management software with customer information as shown by [Cobalto](#)’s analysis of Chubb Insurance’s customer data resulting in a doubling of acquisition rates.

#### Claims processing:

- **Efficiency in claims assessment:** Smart contracts trigger pay-outs automatically when a risk event occurs, such as in the case of parametric insurance like [ACRE Africa](#).
- **Transparency in claims assessment:** This is one of the areas where P2P insurance has particular value. [Teambrella](#)’s team voting system lets groups vote before a claim is granted to make the claims assessment process as transparent as possible.
- **Fraud detection:** Technology can also be used to detect fraud. This includes the use of artificial intelligence in various ways, including [BDEO](#)’s automatic analysis of video data to assess claims.

#### Premium collection:

- **Embedded in airtime:** Technology-enabled partnerships, such as [BIMA](#), collect the premium via airtime, not requiring the insured to have a bank or mobile money account.

- **Mobile wallet solutions:** Examples such as [Bim Apeseg](#) provide a mobile wallet solution that includes an insurance payment option. These advancements in micropayment solutions enable more viable product lines for insurers.

*Given the importance of mobile phones as a distribution mechanism, the sales and premium collection components are covered by all technology-enabled partnerships.* This is one of their main value propositions in the absence of traditional aggregators and the high number of financially excluded in emerging markets. The improvements in machine learning and AI have enabled new data and analytics initiatives to play a leading role in product development and we expect to see even more granularity in the ability to tailor products going forward. Servicing is the most underserved of the product lifecycle stages.

*Provider-facing platforms often encompass the entire lifecycle.* A large proportion of provider-facing platforms span the entire product lifecycle to reduce overall operational costs. Consumer-facing platforms are also particularly focused on the sales component of insurance distribution and have benefitted from the improvements in the technology that enables micropayments. Therefore, digital platforms are the most holistic in enabling a reduction of operational costs for insurers in emerging markets.

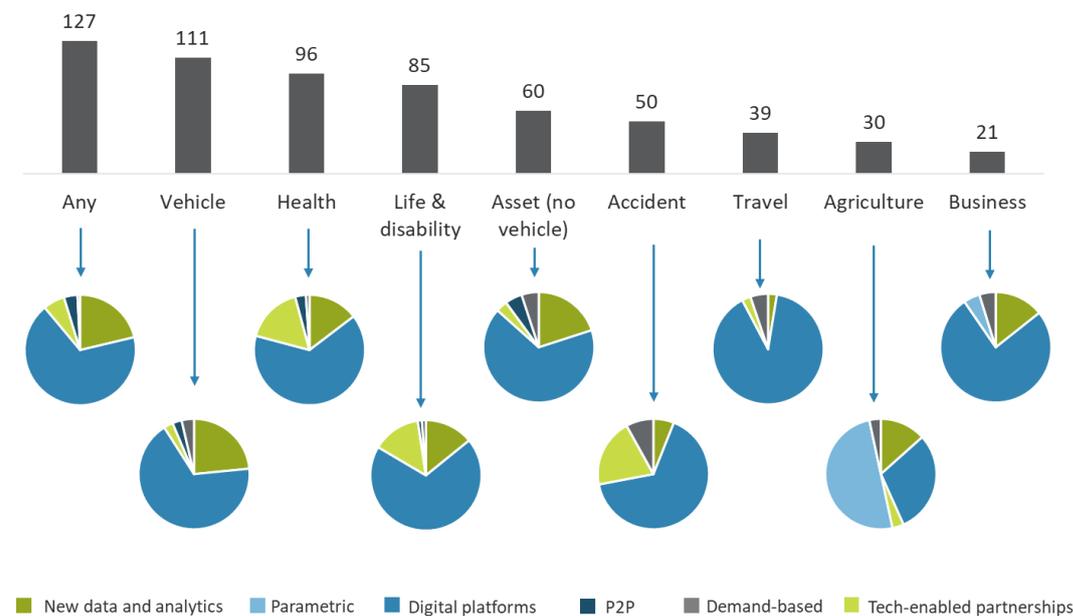
*Newer business models focus more strongly on product development.* Especially the newer models such as P2P and demand-based insurance use their insights gained through machine learning and AI to adjust products more so than traditional models, such as technology-enabled partnerships, which are more focused on distribution. Given the limited uptake of insurance in emerging markets, improvements in product design can be a strong sales driver for consumers and put P2P and on-demand insurtechs in a better position than traditional models. This trend is similar in claims processing, one of the strongest determinants of a positive consumer insurance experience. P2P and on-demand initiatives use a better and faster claims process explicitly to position themselves as more customer-centric compared to incumbents.

*Some insurtechs impact the full insurance value chain.* They provide end-to-end solutions to insurers. These applications are found in most insurtech categories, most notably in provider-facing digital platforms. [eBaoTech](#) operates in 11 countries in all three regions covered and provides an open API for insurance carriers, brokers/agents, affinity channels and fintechs. [Charles Taylor Insuretech](#), which operates in six countries in Latin America and Asia, provides digitisation and consultation support, including an offering to completely digitise insurance. [Pal Network](#) in Malaysia provides personalised, pay-as-you-go microinsurance products, [Naked](#) in South Africa uses AI to run and manage policies, and [Matontine](#) in Senegal digitises savings groups.

## 2.5. Product lens

The types of cover available in emerging markets should ideally reflect the needs of consumers in such markets. Unexpected shocks that affect cash flow and keep many consumers in poverty traps can be mitigated with the right insurance cover. The database indicates that only vehicle, health, and life and disability covers are offered by insurtechs on a larger scale. Especially agricultural risks are not yet covered to the same extent, leaving farmers vulnerable. Most technology applications are actually product-agnostic and focus on supporting the underlying product lifecycle rather than on specific product types.

Figure 8 shows the number of initiatives that cover each insurance product. It furthermore highlights how each insurtech category applies to insurance products.



**Figure 8: Number of initiatives in each product category and insurtech categories**

*Insurtechs are mostly product-agnostic or cover vehicles.* Given that vehicle or third-party liability insurance is compulsory in many markets, it is not surprising that vehicle products are covered most prominently. Sensors in cars can pick up on driving behaviour and nudge drivers to adopt safer driving when coupled with messaging alerts. Furthermore, these telematics devices enable products, such as demand-based insurance that charges the premium according to how many kilometres were driven in a month. The high number of product-agnostic solutions suggests that insurtechs can solve underlying technology problems that apply across the whole range of products.

*Health products benefit from a range of different add-on services.* Health insurance has increased in prominence in many emerging markets. Not only do more insurtechs focus on preventative measures, such as consumer nudges for better health and driving behaviour, insurtechs focusing on health see the cover as complementary in a range of health-related tools, such as remote access to doctors and telemedicine. [A Well-Being Company \(AWB Health\)](#) in China provides individualised health products for corporations, including an indication of returns on investment on health improvement programmes that corporates implement. Discovery's [Vitality health](#) programme also prompts healthy behaviour in customers through a rewards programme for clients reaching weekly fitness goals, as well as offering discounts on life insurance products if goals are reached consistently. Telemedicine allows patients to access doctors' expertise remotely by using mobile technology. This potentially expands the reach of doctors to everyone that has a mobile phone. Examples that provide telemedicine include Bradesco Seguros's [Consultation through telemedicine](#) in Brazil and [Hello Doctor](#) in South Africa.

Box 17 lists further examples of insurtechs in the most prominent product categories.

#### Box 17: Product examples

**Product-agnostic insurtechs:** [Stonestep](#) operates in 12 countries across all three regions. It provides a microinsurance-as-a-service platform for a range of partners, including MNOs, retailers and other corporations offering a range of insurance products.

**Vehicle:** [Carsurance](#) in Egypt provides price comparison services for car insurance.

**Health insurance:** [GOQii](#) in India uses wearable technology to track a range of health indicators as part of a preventative healthcare solution. The GOQii ecosystem includes advice from a coach and doctor to meet specific health targets. This information is then used to negotiate cheaper health insurance.

**Life and disability:** [Microensure](#) has partnered with Jamuna Bank in Bangladesh to provide life cover to clients, based on the value of transactions the customers completed using point-of-sale devices in the previous month.

**Non-vehicle assets:** There are two broad categories that insurtechs cover within asset insurance. Firstly, home or household contents insurance. This includes an interesting application of telematics by [Matterport](#) who uses 3D imagery for better loss assessments. The second category is electronics or mobile-phone insurance. An example of an insurtech that offers electronic theft insurance (along with a range of others) is [Plug](#), which operates in Brazil. Plug provides a plug-in solution for e-commerce websites to sell insurance products.

**Accident:** While most insurtechs work by offering more than just accident insurance, [Mecubro](#) provides a comparison tool for personal accident insurance products. It operates in Argentina.

**Travel:** On the consumer-facing platform side, [Axa Go](#) has fully integrated travel insurance purchases into WeChat in China. On the provider-facing side, [Hepstar](#) provides a platform for travel insurance agents that allows them to personalise insurance products for their clients in South Africa and Mauritius.

**Agriculture.** There is a clear focus of parametric insurance to provide agricultural insurance: Pula Advisors operates parametric insurance initiatives in six African countries. India's government-supported [Pradhan Mantri Fasal Bima Yojana](#) provides crop insurance by using satellite imagery to monitor weather. [Etherisc](#) is also one of the few blockchain applications that is currently piloting agriculture insurance in Bangladesh.

**Business.** [Inzure](#) in Malaysia provides a platform specifically supporting businesses in purchasing insurance products.

***Digital platforms cover all product types, but they are less important in agriculture.***

Provider-facing platforms are mostly product-agnostic, as they build the plumbing behind an insurance lifecycle. Consumer-facing platforms, on the other hand, have a specific focus or a select suite of products that they offer on one platform. Increasingly, we are seeing consumer-facing platforms adding more product types to their price comparison services. The only product that digital platforms do not yet offer as strongly are agricultural products, which are mostly covered by parametric insurance initiatives. Offering agricultural products via virtual marketplaces presents an opportunity for insurers going forward.

***P2P and demand-based insurtechs are more prominent in the less covered product types.***

While technology-enabled partnerships mostly cover health, life and disability, P2P initiatives are mostly focused on covering assets. Given the group setup of this type of initiative, it remains to be seen whether it can find applications in life insurance going forward. Demand-based insurance finds useful application in short-term products such as travel and accident insurance, as machine-learning advancements have enabled better real-time insights and automated claims pay-outs.

# 3. Five emerging market insurtech trends

Based on the overarching insights from the database, expert interviews and existing literature, we have identified five key trends for insurtech in emerging markets:

- Insurtech applications are growing at a fast pace in emerging markets.
- Most insurtech models increase the efficiency of, rather than disrupt, traditional insurance models.
- As such, they are not necessarily expanding insurance reach yet.
- TSPs are well placed to be catalysts of innovation.
- Three business models are emerging:
  - Solutions: independent insurtechs that partner to deliver specific solutions
  - Growth: insurers that leverage technology to grow or become more efficient
  - Ecosystems: tech platforms that leverage insurance to create new digital ecosystems

Each of these trends is discussed in turn in the following sections.

## 3.1. Insurtech applications growing at pace

*Investment in insurtech market globally suggests high growth.* Willis Towers Watson (2019) report global insurtech investments of USD1.42billion in the first quarter of 2019 – the third quarter in a row with investments over USD1billion. Q1 of 2019 also recorded the highest number of insurtech deals on record.

*Emerging markets are increasing their share of the insurtech market.* While most insurtech deals (56%) between 2012 and 2019 occurred within the United States, this trend seems to be declining slowly as other markets are starting to find their footing in innovation. Not only has the total number of insurtechs in emerging markets grown substantially, but Brazil, India and South Africa are positioning themselves firmly as innovation hubs. Expert interviews suggest that many insurtechs establish operations in these countries before expanding to other countries in the region<sup>3</sup>.

*Insurtech growth is linked to insurance market development.* The emerging market insurtech hubs are all leaders in terms of insurance penetration in their regions. South Africa is the clearest regional leader, with an insurance penetration of 13.8% of GDP (significantly driven by pension policies). Insurance penetration is much less in India and Brazil, at 3.7% and 4.1%, respectively, but still above the emerging market average of 2%<sup>4</sup> (Swiss Re Institute, 2019). This suggests that insurtech development follows, rather than leapfrogs, insurance market development. Most of the countries in our tracker still have very small

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<sup>3</sup> Singapore was also highlighted as important hub for the Asian region but as it is not an emerging market did not form part of the Insurtech Tracker.

<sup>4</sup> Insurance penetration for the regions covered were Africa 1.8%, Asia 2.2% and Latin America 2.4% of GDP.

insurance markets where it is more difficult to find opportunities for insurtech, e.g. finding an insurance partner.

*Limited insurance penetration presents an opportunity.* The opportunities in emerging markets are significant. The low insurance penetration rates mean that insurtechs have fewer insurance legacy systems to deal with. This presents them with an opportunity to disrupt the market significantly, as customers' first experience of insurance could be through an insurtech rather than an insurer.

### **3.2. Insurtechs streamline rather than disrupt insurance (for now)**

*Digitisation of existing operations is a critical starting point.* Initiatives aimed at efficiency gains for insurers' operations are by far the most popular and still attract a large number of new entrants. Digital platforms currently constitute the majority (57%) of insurtechs, and the category shows the most growth since 2017. Digital platforms involve the movement from manual and/or paper-based systems and processes to automated, integrated and digital systems. As many insurtechs solve a technical problem aimed at insurer efficiency gains, they effectively solve problems that give the insurer a competitive advantage. Stakeholder interviews suggest that this wave of digitisation may be a necessary step on the journey to disruptive business models, as these require integrated and agile core processes.

*There is currently low uptake of disruptive business models.* Disruptive business models such as demand-based insurance or P2P that put the customer at the centre of the business model show significant growth. Yet, they remain the smallest share of the insurtechs in the Insurtech Tracker.

*Data analytics is the logical next step.* Compared to the developed world, the number of new data and analytics initiatives in emerging markets is still fairly low, constituting 22% of initiatives. There is still only a small number (25) of machine-learning and AI insurtechs. Currently the most popular and fastest-growing insurtech type is the digital platform, which represents 57% of the insurtechs in the Insurtech Tracker. These platforms will increasingly generate data that could be leveraged for product development and other lifecycle elements, but this data is currently underutilised due to capacity constraints and more pressing operational issues. As organisations more broadly digitise, the expected next step in market development would be increased utilisation of the data generated through innovative analytics.

### **3.3. Insurtech growth not yet expanding insurance reach**

*Insurance penetration remains low.* Compared to developed markets, emerging markets, on average, have a very low insurance penetration rate – an average of 2% of GDP for the countries in the Insurtech Tracker (Swiss Re Institute, 2019). Insurance rates have gone up in countries that have compulsory insurance, such as third-party liability insurance, or where there is a very specific consumer need, such as funeral insurance in South Africa. The relatively small population sizes that can afford the current insurance offerings coupled with the different regulatory requirements per country create headaches for insurtechs in emerging markets.

**Mobile network operators do not prioritise insurance.** MNOs have traditionally been important partners in expanding insurance reach in emerging markets. Notably, Tigo, in partnership with BIMA, has reached over 2.7 million customers. Of these customers, 70% were new to insurance (Millicom, n.d.). However, they have had to rationalise some activities and withdrew from Fiji in May this year (Consumer Council of Fiji, 2019). The diminished focus of insurtechs on technology-enabled partnerships (from 36% to 10% in the Insurtech Tracker) suggests that MNO partnerships are under strain, as most technology-enabled partnerships in 2017 were linked to MNOs. Stakeholder interviews suggest that insurtechs are increasingly looking into other distribution partners such as digital platforms, given that MNOs do not prioritise the marketing and rollout of insurance products.

**Online sales are becoming more pervasive.** The rise of digital platforms suggests that consumers are becoming more comfortable with online sales and the consumer experience has improved over time. This is also supported by an increase in customers purchasing goods and paying bills online. Almost a third of the world (29%) is estimated to have purchased goods or paid bills online in 2017, up from only 17% in 2014. Emerging markets still lag behind the developed world but are catching up rapidly (Demirgüç-Kunt, et al., 2018). More consumers than ever access insurance via smartphones and tablets, yet insurtechs in emerging markets largely still struggle with scale in sales. This is expected to change in future, in line with the rise in e-commerce activities in emerging markets.

**Insurtechs have limited focus on reaching new customers.** Stakeholder interviews suggest that insurtechs struggle with signing up new customers, especially those that have not had an insurance product before. This is also supported by the fact that the insurance challenge with the least insurtechs focusing on it is: barriers related to consumers that are inexperienced with formal insurance. Only 7% of initiatives have elements that solve challenges related to consumers overcoming the first hurdle of understanding formal insurance. By comparison, almost 60% of insurtechs focus on access to consumers and solve constrained business model issues for insurers, emphasising the push for digitisation and efficiency gains.

**In-person engagements remain important.** Technology has not been able to mimic first-touch face-to-face interactions that are crucial for insurance uptake. Chatbots are starting to emulate this experience such as the use of virtual reality to simulate an in-person interaction by PNB MetLife's [conVRse](#) platform. However, insurtechs mostly focus on consumers that already have an interest in signing up for an insurance product.

**Start-up insurtechs dominate in emerging markets.** More than half of insurtechs in the Insurtech Tracker were launched in 2015 or later, which shows that this is a high-growth sector. However, it is also a high-churn sector, as we found about a quarter of insurtechs did not survive in the short term or medium term. This is also reflected by the high number of insurtech incubators and accelerators that assist insurtechs with the various aspects of building a business. We identified 46 of these globally.

**The lack of digital scale undermines the ability to disrupt.** As most insurtechs are start-ups that support existing insurers to get scale, this results in insurtechs mainly competing over a small, digitised consumer base. The lack in scale therefore inhibits sustainable disruptive innovation, as success hinges on selling enough policies to generate profit.

New aggregators and TSP relationships are likely to drive more inclusion in the future.

### 3.4. TSPs catalyse innovation

*TSPs are positioned as drivers and enablers of insurtech growth.* TSPs can be considered the original insurtechs as most have focused on technology applications to support insurance before the term insurtech was even coined. As brokers of partnerships between distribution partners, insurers and underwriters, they fulfil an important matchmaking function in emerging markets. This role should not be underestimated. They own the integration of systems and build the capacity of insurance staff in many cases. As they are more established than most insurtechs, TSPs have more experience and a better understanding of local contexts. They are well placed to take centre stage in ecosystem development, building systems that can accommodate a suite of financial products rather than offering products in isolation.

*Leading insurers are investing in TSPs.* A number of leading insurers have recently invested in emerging market TSPs. This includes Axa X's USD96.6 million investment in [BIMA](#) at the end of 2017 (Leapfrog Investments, 2017), as well as MMI Holding's support for [Root](#) (MMI Holdings, 2018). Another noteworthy investment was the first tranche investment of USD1.5 million in Inclusivity Solutions by a consortium led by Goodwell Investments. The other investors included Umkhathi Wethu Ventures (in partnership with Allan Gray), RGAX and angel investors (Inclusivity Solutions, 2019).

### 3.5. Digital ecosystems on the horizon

*Two Chinese giants show the value of scaled digital ecosystems.* As mentioned, the rise of digital platforms is leading to greater data and analytics. Once data reaches a critical mass, it is possible that financial service providers, including insurers, could have enough data on customers to provide them with a range of services as and when required. These digital ecosystems can place the consumer at the centre of the business model and allow the individual to take up any service that relates to their life all in a centralised platform. In the context of insurance, this means that insurance options are built into interactions where insurance could be useful, such as travel insurance when purchasing travel tickets or motor insurance when purchasing a car. China has been at the forefront of the consumer-centric ecosystem movement. Zhong An is the largest insurtech in the world, with over 400 million customers and has sold over 10 billion policies (Accenture, 2019). Its rival, Ping An, has had the highest insurance brand value in the world since 2017, according to Brand Finance (2019). This shows that insurtech at large scale is possible if you have access to a vast number of consumers that have already digitised and if you structure your business model completely around the consumer. Zhong An uses behavioural data from more than 300 partnerships to identify moments in which the customer can use an insurance product. This type of customer-centricity has not been able to reach mainstream markets in Africa, Latin America and Asian countries outside China. In these markets, traditional insurers still have the biggest reach, and they focus on offering additional services to better serve existing customers.

*Virtual marketplaces are indicative of possible ecosystems emerging.* The exceptional growth of consumer-facing platforms in emerging markets suggests a move towards an ecosystem rather than a siloed approach to insurance distribution. Many of these platforms offer price-comparison services beyond insurance, such as car sales in the case of Africa's most replicated insurtech, [africargroup](#). [Comparaencasa.com](#) in Latin America also offers price comparison for loans and credit cards. This moves consumers closer to interacting with financial and other services from a central platform rather than a dedicated insurance-

specific platform. There is also a budding trend of embedding insurance price comparison and insurance product offerings more often in e-commerce websites.

***Ecosystem builders are moving beyond MNOs to include virtual marketplaces.*** MNOs used to be the primary partner for insurtechs outside the financial services sector. The decline in technology-enabled partnerships that are centred on MNOs suggests that platforms, such as e-commerce, are gaining increased traction with insurtechs. These platforms are well placed to leverage the digitisation of other aspects in consumers' lives and the demanded convenience that comes with this trend. We expect this to continue and increase over time as MNOs focus on other value-added services such as short-term credit. The ability to conduct micropayment transactions via the virtual marketplaces gives consumer more choices for payment compared to the mobile-money channel as the only mechanisms for sales, premium collection and claims pay-out. More payment options for consumers could give virtual marketplaces the competitive advantage over MNOs as distribution partners in the long run. Who will own the ecosystem is still to be seen.

***For emerging markets, it seems clear that the mobile phone will be a key component of the ecosystem.*** The potential of mobile technology to reach customers is significant. The average SIM penetration rate according to GSMA (2019) for the countries in the Insurtech Tracker is 96%, with 37 countries of the 85 countries having penetrations above 100%. GSMA also estimates significant smartphone growth over the next few years, with smartphone penetration expected to reach 66% in sub-Saharan Africa, 79% in Latin America and 82% in Asia-Pacific by 2025 (GSM Association, 2019).

***A key component of effective ecosystems is omnichannel communication,*** where engagements with customers on different platforms and media are coordinated to allow one seamless engagement by the customer. It is also an area where insurtechs have a competitive advantage. These include [Clickatell Touch](#), currently active in South Africa: a chatbot that provides an omnichannel solution with integration into most prominent social media, including WhatsApp and Facebook messenger. Similarly, [Digitech](#) provides a cloud-based omnichannel solution in Côte d'Ivoire and the Seychelles that also integrates payments solutions. We expect more integrated products and services in a financial services ecosystem, where insurtechs can scale by providing value-added services such as omnichannel communication or by linking directly into the ecosystem rather than going through insurers. This will be dictated by the regulatory environment. Amazon's Alexa has already undergone regulatory<sup>5</sup> compliance for health insurance in America (Bazzoli, 2019). Another important component of the digital ecosystem is low-friction payment options. Without easy digital payment options, the ability of a digital ecosystem to seamlessly offer a range of goods and services can be hamstrung, which requires a separate interaction to facilitate payments.

***Ecosystems enable different specialised niches for all insurtech categories.*** While not all insurtechs can be ecosystem owners, this does not mean that ecosystem development is the end of insurtechs. In contrast, ecosystems provide the scale that insurtechs have as yet been unable to reach in most emerging markets. A well-established ecosystem enables the development of numerous insurtechs, as insurtechs can access the ecosystem (through open APIs) at limited cost and can reach a large customer base. The prevalence of niche insurtechs is also evidenced by the fact that Zhong An has more than 300 partnerships. At this stage, it

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<sup>5</sup> Health Insurance Portability and Accountability Act (HIPPA) compliance

is unclear who will own these digital ecosystems , but the owners may have significant market power as a gatekeeper to many customers.

## 4. Gaps to be addressed

To unlock the full potential of insurtechs in emerging markets and to increase the uptake of formal insurance products, several challenges in the sector need to be addressed. These gaps can be overcome by a range of stakeholders, from regulators and insurers to insurtechs and TSPs. Three opportunities that can be addressed have been identified and are discussed in turn below.

*It is essential to understand each partner's position.* Insurtech relies heavily on partnerships, especially for distribution. In technology-enabled partnerships as well as consumer-facing platforms, it is common that a party other than the insurer or insurtech owns the customer. MNOs or virtual marketplaces allow insurers and/or insurtechs to link into their systems to access a wider range of customers. Given the reputational risk for the insurer in such partnerships, it is therefore essential to understand each partner's interest in the venture and align expectations. Managing these partnerships with different priorities presents an opportunity for TSPs to play a role as a dealmaker and relationship holder. Understanding partners' positions is also crucial with regard to legacy systems. Integration costs and lack of capacity can be a deterrent in an insurer's decision to partner with an insurtech. Insurance penetration is so low in some countries that legacy system changes are not viable. Many solutions in insurtech focus on the technology and not necessarily on the problem that the insurer faces, as insurtechs did not cater for solutions at different levels of development. This creates a disconnect between what is really needed and what is an exciting technology deployment. The realities of the market still centre significantly on moving from purely paper-based to electronic backend systems in many countries. There is an opportunity for insurtechs to assist in the development of digitisation in such markets. Yet, there is also pressure on the insurers to update their legacy systems in order to be able to compete in the long run, given that insurtechs and ecosystem owners are increasing in importance.

*Regulators in emerging markets have the responsibility to create conducive regulatory environments to expand the access and use of insurance while adequately protecting consumers and the economy from risk.* Clear guidelines can go a long way in creating an innovative, growing insurance market.

- **Digital payments regulation:** Micropayments are crucial for insurance and should be accompanied by appropriate consumer redress mechanisms to increase trust and protect consumers from predatory practices. Digital payments regulation should also allow electronic signatures to ease the burden of needing to sign insurance policies face to face. This can also drive the trend towards fully digitised insurance offerings.
- **Digital identity is key:** In an increasingly digital world, digital identity is the gatekeeper that can either include or exclude individuals. Know-your-customer (KYC) regulation needs to be risk-based instead of rules-based to ensure that the burden of providing identity documentation is kept to a minimum and increases access. Emerging markets, on average, have a far lower rate of consumers that own the relevant documents to activate relevant policies and/or to open bank and mobile-money accounts. Insistence on proof of address, for example (which has proven to be useless in risk mitigation, especially in emerging markets) currently excludes 200 million to 300 million Africans from the formal financial sector (Cooper et al., 2018). In the absence of full

implementation of the risk-based approach, a tiered KYC system with transaction and balance limits can ease the regulatory burden for consumers in the interim.

- **A regulation for innovation framework** should be in place in each country to clarify the process around product approvals and allowing new players to enter the market. This does not have to be a formal sandbox, but it can include a structured approach to test-and-learn, for example. This allows the regulator to assess risks over a longer period in a controlled environment before issuing approvals. Providers have assurance around timeframes and requirements of the framework, which could be a strong driver to enter a previously underserved market. The regulator needs to strike a balance between encouraging innovation and mitigating risks for the market.

*Stakeholder interviews, as well as literature, suggest that there is a big gap of information on insurable risks in many emerging markets.* As discussed in Section 2.3, one of the main challenges that providers face is the lack of information on potential consumers due to their limited interaction with the formal financial system. This limits a provider's ability to build a viable business case without investing a lot in market research while also limiting the types of cover that providers can offer due to the restricted information that is available. The resultant policies may not meet customer demand. Coupled with low customer awareness around formal insurance provision in emerging markets, the lack of market information poses a risk to the scalability of formal insurance. It is therefore crucial to improve information systems and access to data in emerging markets.

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#### **About Cenfri**

The Centre for Financial Regulation & Inclusion (Cenfri) is a global think-tank and non-profit enterprise that bridges the gap between insights and impact in the financial sector.

Cenfri's people are driven by a vision of a world where all people live their financial lives optimally to enhance welfare and grow the economy. Its core focus is on generating insights that can inform policymakers, market players and donors who seek to unlock development outcomes through inclusive financial services and the financial sector more broadly.

#### **About FSD Africa**

FSD Africa is a non-profit company that aims to increase prosperity, create jobs and reduce poverty by bringing about a transformation in financial markets in sub-Saharan Africa (SSA) and in the economies they serve. It provides know-how and capital to champions of change whose ideas, influence and actions will make finance more useful to African businesses and households. It is funded by the UK aid from the UK Government. FSD Africa also provides technical and operational support to a family of 10 financial market development agencies or "FSDs" across SSA called the FSD Network.