

Breaking Boundaries

How InsurTech is moving beyond insurance

Startupbootcamp
InsurTech

pwc

05

Executive
summary

07

Reaching new parts
of the value chain

10

Securing value
from data

13

Enabling new propositions
beyond insurance

19

Customer experience
outside insurance sets
the standard

21

InsurTechs continue
to enhance insurers'
operations

22

Innovation, talent
and diversity

29

What's next for
InsurTech

31

Closing remarks
from Sabine

Our Key Findings include:

1

61% of the >1000 applications to Startupbootcamp come from startups outside insurance

Collaboration with startups from adjacent industries gives insurers the opportunity to access new revenue

Startupbootcamp applications bring in startups spanning agriculture, health, cyber-security, the sharing economy, wealth management, transport, and more. This gives insurers the opportunity to access new revenue streams, for example in prevention services. 80% of SBC partners surveyed believe the future of insurance is prevention.

2

AI is the primary technology for 41% of applicants

Startups can provide access to new data sources and offer new ways to bring value from data

Artificial Intelligence is the primary technology for 41% of Startupbootcamp applicants. The clear challenge is how to integrate with insurers' existing technology. Some insurers are taking the approach of setting up new 'greenfield' technology.

3

84% of surveyed Startupbootcamp partners are interested in creating cyber-security offerings

Insurers and startups are increasingly looking at new products and services

Startups bring expertise to insurers in new areas of interest. Applications from startups in cyber-security have tripled over three years, with 84% of surveyed SBC partners stating interest in creating a solution in cyber.

4

5% of applicants are focused on customer interactions

Applications from startups focused on front-end interactions have dramatically fallen

In 2016, 36% of applicants were solely about improving customer interactions and relationships. In 2018, this has fallen to just 5%. This is not to say that insurers are have stopped caring about the customer. Insurers are looking for meaningful ways to improve the experience of their customers, often through omni-channel approaches.

5

20% of applicants support operational improvements

Operational improvement continues to be a key area

The pressure within insurance to keep costs low fuels the large proportion of startups with a focus on improving the operational efficiency of startups. Insurers are becoming more open to work with startups supporting efficiency

6

InsurTech has pushed insurers' innovation agenda

Innovation moves from Proof of Concepts towards scale

InsurTech has brought an influx of technology talent into the industry. This new talent has brought a change in culture, whilst innovation in insurance is moving from watch and learn, towards executing proof of concepts and scaling them in the business.

7

23% of startup applications had female founders/co-founders

Gender diversity has improved but has a long way to go

Startups with female founders/co-founders has risen from 16% in 2017 to 23% in 2018. However, application data shows that men are five times more likely to hold a Chief Technology Officer position, whilst women are twice as likely to be Chief Marketing Officers.

8

Disruption will come from scale-ups working with reinsurers

Tech giants are not the only competition

As well as competition from tech giants, mature startups with specialisms in different parts of the value chain have the potential to come together to launch their own greenfield venture. In this scenario, we expect these scale-ups to work directly with first mover reinsurers to provide capacity. This could cut insurers and slow moving reinsurers out of the mix.'

Executive Summary: InsurTech is “Insur”Tech no more

Over three years of Startupbootcamp InsurTech, the narrative surrounding InsurTech has shifted. In year one, the debate focused on how startups would disrupt the incumbent insurance sector. In year two, the emphasis moved to collaboration, as startups and insurers pondered how to combine the former’s technology with the latter’s customer knowledge, understanding of risk, and capital strength. These collaborations looked beyond front-end focused applications in order to solve problems throughout the value chain.

Now, in year three of Startupbootcamp (SBC), this evolution is continuing. InsurTech is increasingly about supporting insurers to innovate beyond the existing value chain into new industries and to offer new value to clients. In which case, the question becomes, is InsurTech really “Insur”Tech anymore?

It is possible to categorize the Startupbootcamp applicants into those startups that sit within insurance and those that are **beyond** the sector. The latter group includes:

- startups focused on an entirely different industry and with value to that industry regardless of applications in insurance - examples include firms offering preventive services to property managers;
- startups that provide services which are industry-agnostic, but which now hope to serve the insurance sector – examples include firms offering customer service enhancement.

Not only has Startupbootcamp seen an overall increase in applications each year, over 1000 in 2018, but more and more applications are coming from startups primarily focused on adjacent industries - they see that insurance is ripe for innovation. **This report looks into the 226 startups that were taken through to the final stages of selection***. This year, 61% of Startupbootcamp applicants were from beyond insurance – and the trend on the program itself is clear. While 75% of the 2016 Startupbootcamp cohort were clearly within insurance, 80% of this year’s selection operate beyond the sector; they could standalone without insurers but now hope to sell to the industry or collaborate with its incumbents.

*going forwards in this report, ‘applicants’ will refer to the 226 startups who were taken through to the final stages of Startupbootcamp InsurTech’s application process

61% of Applicants
in 2018 were those
“beyond insurance”

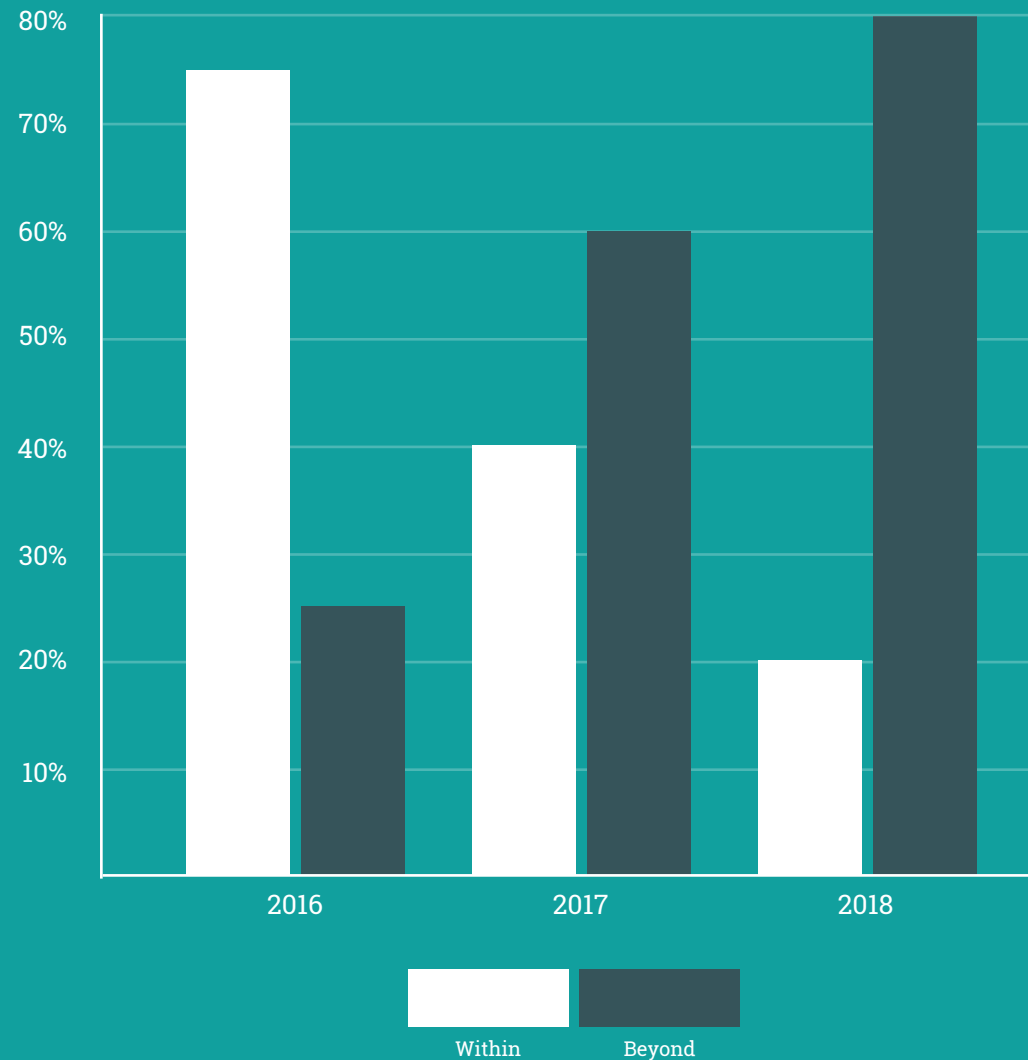
61%

Startupbootcamp InsurTech is strongly influenced by the innovation direction of its insurance partners. PwC has been a partner of Startupbootcamp InsurTech throughout the three programs. Over time, the opportunity has broadened – insurers are now focused on the promise of innovation from beyond the confines of their own sector.

In other words, the term InsurTech itself now increasingly falls short of describing what these startups offer. Rather, the emerging picture is now of an ecosystem that brings together adjacent industries to provide an improved service of greater value to insurers and their customers. Adjacent industries of particular relevance include agriculture, health, cyber-security, the sharing economy, wealth management and transport, though there are many other examples too. PwC has been a partner of Startupbootcamp InsurTech since throughout the three programmes.

Jim Richard, UK insurance leader at PwC, comments on the changing nature of the ecosystem: “Three years ago the hype was about startups disrupting traditional insurers. Now the talk - and increasingly the reality - is about startups and insurers working together to create meaningful partnerships. All parties are working together and learning from other sectors to solve problems within insurance and react to the changing outside world. This approach to innovation is creeping up the agenda for our insurance clients.”

Startupbootcamp Cohort: The startups broaden beyond insurance



Beyond insurance:

Startups focused on an entirely different industry and with value to that industry regardless of applications in insurance; or startups that provide services which are industry-agnostic but are now moving into insurance.

Within insurance:

Startups with offerings specific only to insurance.

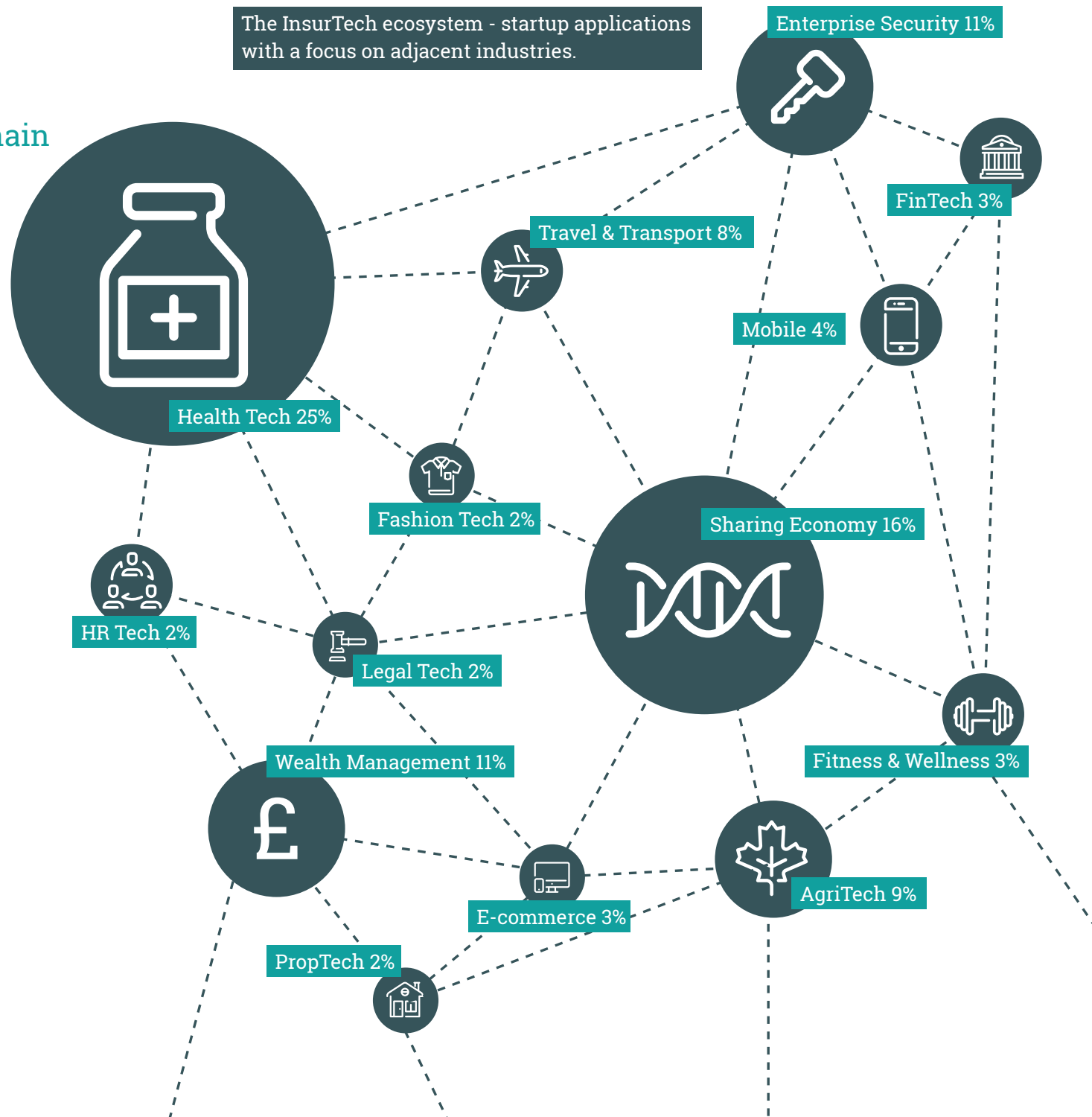
The InsurTech ecosystem - startup applications with a focus on adjacent industries.

1. Reaching new parts of the value chain

Startups from beyond insurance give insurers the opportunity to access different parts of the value chain and to move into prevention. **Indeed in our survey, 80% of incumbent partners of SBC agree that prevention is part of the future for insurers.** For their part, insurers acknowledge that to expand their existing value chain, they should be offering additional value to clients. As data becomes more real-time and extensive, each risk pool effectively shrinks to one, and the value comes in preventing now predictable risks from occurring.

At Zurich, one insurer that has been involved with Startupbootcamp over the past two years, Antony Elliott, Group Head of Business Transformation at Zurich Insurance, says collaborations with startups are now evolving. "Our initial involvement with the InsurTech landscape helped us become a more customer-centric organization. Now we are becoming increasingly outwards looking, through additional services and looking more broadly beyond insurance."

"InsurTech is changing the way in which propositions can work, thinking about the customer holistically. For example, we are interested in the ecosystem around the home and commercial properties, looking to further our understanding of what our customers want, and then who to partner with to meet those needs."



Innovation beyond insurance: insurance collaboration use cases

Industry: AgriTech



Insurance use case:

The use of drone and satellite technology in agriculture is increasing: satellite data is helping to predict environmental factors to support farming activities and improve yield, and to help farmers tackle localized issues. For insurers, this data offers a means to reduce crop claims with precision agriculture – and to extend cover to the uninsured, particularly in rural areas in Africa.

Startupbootcamp 2018 startup:

CyStellar operates a platform that integrates, manages and secures data from ground sensors, aerial surveillance and satellite imagery. The data powers applications such as precision agriculture, predictive maintenance, or logistics for fully interactive, predictive decision making. Their near real-time data allows them to support insurers in the case of catastrophe incidents, where it is often costly and difficult to collect information.

Industry: PropTech



Insurance use case:

At its most basic, PropTech gives users remote control of property features such as lights, heating and blinds, but sophistication is growing. For example, the increased use of the Internet of Things (IoT) in property is helping commercial property managers and home owners to predict and prevent events such as fire from faulty equipment, water leaks or theft.

Startupbootcamp 2018 startup:

Exploiting IoT devices, analytics technology and an insights platform, **Flowenum** helps commercial property managers to minimize problems such as damp and mould – and to plan their maintenance programs more efficiently.

Industry: HealthTech



Insurance use case:

HealthTech tools harnessing the IoT and wearable devices give individuals access to a wealth of information about their wellbeing – and provide opportunities such as the means to encourage change or manage medication. For insurers, opportunities include the possibility of new value-added services, better prevention and increased risk data.

Startupbootcamp 2018 startup:

vHealth Lab uses artificial intelligence technologies to help cardiac patients monitor their heart at home and make smart therapy decisions accordingly.

Industry: Enterprise Security



Insurance use case:

PwC's research suggests just 53% of companies have an overall information security strategy. More startups are entering this space to help firms understand and mitigate risk. Cyber insurance has the potential to be the fastest-growing sector of the industry. Insurers are moving beyond offering cover to partner with cyber-security experts offering risk management and prevention platforms.

Startupbootcamp 2018 startup:

Zeguro helps small and medium-sized enterprises manage the threat with a virtual cyber-security officer. Able to continually identify and mitigate risk, it can offer companies the right insurance against cyber threats.

2. Securing new value from data

Startups can provide access to new data sources or offer new ways to drive value from data; this is very often the bridge now pushing InsurTech beyond the boundaries of insurance.

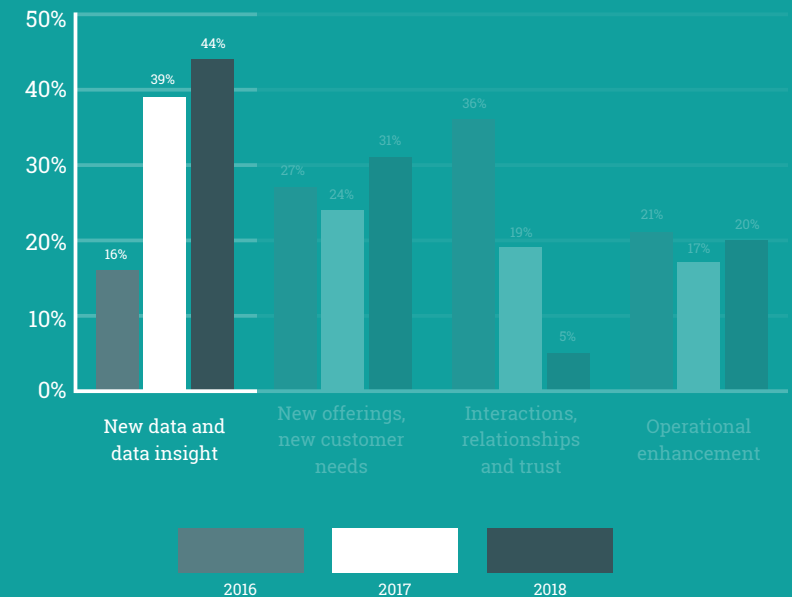
Startupbootcamp InsurTech received over 1000 applications in 2018. These startups, along with applications from 2016 and 2017, have been classified into four groups based on the primary theme of the startup.

Almost half of the startups that applied for this year's Startupbootcamp (44%) offered a value proposition predicated on providing more data or better data. But the question facing insurers now is how to secure greater value from data. Many in the industry are struggling to cope with the volumes of information now flowing into their organizations while others point out that underwriting activities over many years means they already have a high-quality and granular view of their markets.

At the same time, looking beyond the insurance industry can open up new sources of valuable data that wasn't originally collated or created with insurers in mind. Despite the fact that the telematics has been in existence in the motor insurance industry for the past 10 years, there is still only a small market penetration of the technology. Customers remain hesitant to use this product solely for the purpose of insurance, and need to see additional value from such a proposition.

Startupbootcamp participant **vDexi** is one InsurTech innovator attempting to enable more insurers to extract value from telematics. It is building a vehicle data exchange that will give insurers access to standardized data which comes directly from devices inbuilt into cars.

Startupbootcamp applications:
startups focusing on data are
increasingly keen to move into
tech insurance



“Without access to connected vehicle data, insurance companies will struggle to provide competitive and profitable vehicle insurance moving forward,” the company argues. “Through vDexi, insurance companies can access standardized vehicle data from all vehicle owners.”

Another startup providing insurers access to existing data collected for purposes other than insurance is Startupbootcamp 2018 program participant CyStellar, whose IoT devices, and satellite data supports farmers to improve their crop precision. This data, is also extremely useful to insurers when it comes to accessing data in areas they currently don’t have any. For example, it enables the industry to provide support in areas such as incidents of catastrophe, where solutions are currently in short supply.

Partnering with startups that have the skills to exploit the exponentially increasing volumes of data in this way will be crucial for insurers.

Data interpretation

Other startups offer use cases and applications that convert the implicit value in data into realizable insight – for example, through real-time risk assessment analytics.

ZASTI is a startup that has built an artificial intelligence-powered data platform that is able to help many different industries anticipate emerging risks, with successful use cases in aviation, healthcare and compliance. In aviation, ZASTI is able to combine new data sources from IoT devices, with existing data and historic data sets to predict flight delays; engine failures and can plan to minimize these risks.

This data analysis is bringing deep insight to companies in aviation, but can also be applied to an insurance context.

Partnering with startups that have the skills to exploit the exponentially increasing volumes of data in this way will be crucial for insurers. Currently, incumbent insurers – hampered by legacy IT infrastructure and competing in a fierce market for data scientists – are struggling to drive actionable insight from data, particularly in real-time, with unstructured data posing an especially tough challenge. Harnessing the skills of startups, which are already being applied successfully in industries beyond insurance, will therefore be crucial.

Gregor Wiest, Head of Innovation at Ergo Group, highlights the AI priority at Ergo. “Amongst evaluating new propositions of digital health and mobility, we are heavily focused on exploring how AI can enable areas such as underwriting and claims. Our business has the willingness and openness to change and collaborate with startups, but like many insurers we have some constraints from legacy systems. Still, in the future we will put more emphasis on collaborating with startups, and expect the importance of this to increase.”

The technology focus of applicants

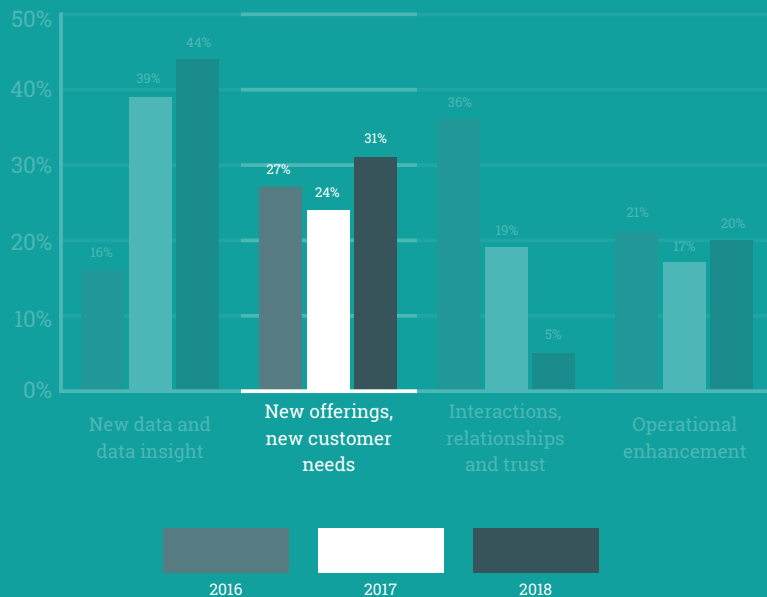


The chart shows the primary technology of startups that applied for Startupbootcamp InsurTech over the course of three years. The most significant increase over the period is in the number of startups using advanced analytics and big data.

This is one consequence of the number of startups using artificial intelligence as a core technology in their business.

3. InsurTech enables insurers to create new propositions beyond insurance

Startupbootcamp applications: a continued focus on new customer offerings



The past three years has seen a marked decrease in startups focused on superficial customer interaction on top of an existing product or service. Instead, many startups are now looking to reinvent the customer proposition, with 31% of applications focused on developing new offerings and meeting new customer needs.

The influx of startups from beyond the insurance sector is an important part of the picture. These firms potentially offer insurers a means with which to offer a broader range of solutions and to target new customers – and ultimately, therefore, to drive premium income higher.

Partnerships with cyber-security startups offers the opportunity to earn new premiums

The issue of cyber-security is one good example. The World Economic Forum's 2018 Global Risks Reports identifies cyber attacks as top-five risk in 23 of the 35 OECD member countries, with estimates that the total economic cost of cyber crime globally will hit \$2 trillion in 2019. Insurers at the forefront of combatting and mitigating this threat will earn a share of an increasingly valuable market.

Until now, however, many insurers have struggled to develop a strong proposition in this market. With little historic data available on a relatively new threat, they have found it difficult to price the risk. The market remains underserved: a PwC survey last year found that just 14% of small businesses have cyber insurance.

In this year's Startupbootcamp, 6% of applicants are in the area of cyber risk, offering incumbent insurance industry partners a possible option for getting to grips with the market. Although this is not a high number, this has shown significant growth from year one of Startupbootcamp.

The number of
startup applicants
focusing on cyber
has tripled from
2016 to 2018

Startupbootcamp InsurTech has a program in both London and Hartford, Connecticut in the United States. Of the 20 startups across the two programs, three startups have a focus on cyber security- Zeguro, SecureHome and Yaxa.

Zeguro, part of the London 2018 program, is focused on assessing and managing enterprise cyber risk. It plugs into the client's cloud platforms, web assets and third-party business tools to provide risk mitigation and employee training. Zeguro has partnered with Hartford Steam Boiler (HSB), part of Munich Re, who will provide capacity to support Zeguro's cyber insurance offering.

"Cyber is a very dynamic and fast evolving risk and an area of growth for HSB", explains Stephanie Watkins, Senior Vice President, International Business at Hartford Steam Boiler. "We see value in partnering with selected startups to help augment our own internal cyber expertise to support us to provide better solutions for our customers."

"We chose to work with Zeguro to help our small business customers understand their cyber risk", she adds. "Through our partnership we can deliver a suite of practical, easy to implement risk management tools and advice to help our customers minimize their cyber risk. Over time, we also expect to gain additional data and insights from our relationship with Zeguro, which will help us continue to evolve our cyber insurance products and services to meet the changing needs of our customers."

"We chose to work with Zeguro to help our small business customers understand their cyber risk"

Stephanie Watkins, Hartford Steam Boiler

Exploiting the sharing economy

12% of applicants this year came from sharing economy and related fields

12%

6% in 2016

7% in 2017

Where cyber-security allows insurers to offer new products to their customers, there continues to be innovation elsewhere which insurers must respond to in order to remain relevant.

The sharing economy provides an exciting opportunity for insurers and InsurTechs to work - 12% of applications to Startupbootcamp this year came from firms in related fields. This makes sense: PwC research, commissioned by the European Commission, forecasts the combined global revenues of the biggest sub-sectors of the sharing economy will rise from \$15bn in 2013 to \$335bn by 2025.

This changing landscape means that insurers must adapt their traditional products, to meet these changing needs in other industries. The trend away from ownership to borrowing across transport and mobility, property and co-working means insurers must offer new products to serve this market. For example, Startupbootcamp 2018 startup **ForestCar** offers a new proposition: an airport car sharing service, connecting car owners wishing to park at airports with renters wishing to access vehicles. ForestCar itself owns no vehicles, and the necessary insurance product requires multiple parties, including the owner and the renter. It takes a forward thinking insurer to lead the pack and create a bespoke product for such an offering. Whilst on the program, ForestCar has secured a partnership with Cuvva, a pay-as-you-go car insurance provider.

The growth of the sharing economy raises important questions about trust. Startupbootcamp 2018 participant **Deemly** has a role to play here, offering a reputation and social verification tool for peer-to-peer marketplaces. Deemly creates a trust score for users across multiple marketplaces, allowing users of these services to utilize their entire digital reputation in order to better participate in all peer-to-peer marketplaces.

Sara Green Brodersen, founder and CEO of Deemly highlights the need for collaboration in the sharing economy: “The sharing economy represents a huge unlocked potential for insurers to tap in to. By working with startups in this space they will have a better understanding of the market and its impact on and need for future propositions.”

Cyber risk and the sharing economy are just two examples of broad themes where the insurance industry now has an opportunity to innovate and drive value. Strategic partnerships with startups offering expertise and technological know-how in these areas offers huge potential to insurers seeking to explore new areas of growth. Other insurers will choose to watch and wait – but risk losing first mover advantage.

“The sharing economy represents a huge unlocked potential for insurers to tap in to.”

Sara Green Brodersen, founder and CEO of Deemly



Startupbootcamp applications by insurance line: startups increasingly looking to solve problems in commercial insurance



“InsurTech started in the personal lines space, which is not unexpected as the disruptors’ first focus is often on improving the customer experience...

...More recently we’ve seen an emergence of innovative data and analytics ventures that are focused on helping commercial operators too.”

Hélène Stanway, Digital Leader of XL Catlin

Across the lines

One notable feature of this year’s applicants to the Startupbootcamp program is an increase in the number of startups focused on commercial lines of insurance. In 2018, 24% of applicants were commercial lines-focused, up from 14% last year and 13% in 2016.

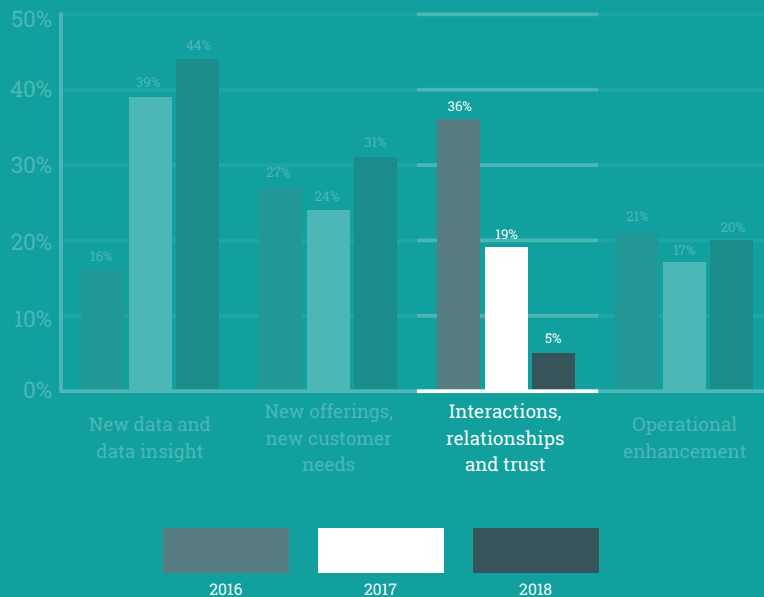
One explanation for this increase is the huge data flow that connected devices and the IoT are now generating; this has huge potential for risk detection and mitigation across broad swathes of industry. Meanwhile, the advent of opportunities to develop new products in areas such as cyber-security is also driving greater attention to commercial lines.

Still, such distinctions may become less relevant. Already, the proportion of applicants offering solutions applicable across multiple lines has climbed to 32%, up from 10% in year one of the Startupbootcamp program.

Hélène Stanway, Digital Leader of XL Catlin, comments on InsurTech’s move into commercial lines: “InsurTech started in the personal lines space, which is not unexpected as the disruptors’ first focus is often on improving the customer experience,” Stanway says. “There was then a transition into small commercial lines as these have many of the same characteristics as personal lines and the sector is ripe for automation. More recently we’ve seen an emergence of innovative data and analytics ventures that are focused on helping commercial operators too. That trend has been terrific for us as it means we are able to work with a wealth of startups that truly understand commercial risk and the way large re/insurers such as XL Catlin operate.”

4. Customer experience beyond the industry continues to set the standard

Startupbootcamp applications: far fewer startups, focusing primarily on enhancing customer relationships are entering the industry



The dominance of customer-focused startups in year one of the Startupbootcamp program has now dissipated. One possibility is that some insurers feel that, in the future, they will no longer own the customer - tech giants or bundled products will take away this customer relationship. Such insurers are focusing their attention on improving their underwriting and risk analysis where they may have a more robust competitive advantage.

Anton Kleingeld, Head of Strategic Partnership & Alliances at Old Mutual, South Africa agrees with this view. "Currently, most incumbent insurers own the entire value chain, from distribution, all the way through to technology", Kleingeld says. "In the long term, we expect not only to see an acceleration of the unbundling of the technology stack but also a disaggregation of the value chain. Insurers of the future are more likely to focus on their core capabilities like pricing (or even trading) of risk, with less of a focus on distribution or administration, the delivery of which will shift to digital or other partnership mechanisms."

An alternative argument is that in the early days of InsurTech, startups were focused on supporting superficial customer interactions - the low-hanging fruit. Insurers have improved their customer experience and continue to do so; they are not ready to give up their customer relationships.

“If tech giants are to become future competitors, insurers will never be able to win on technology alone. They must capitalize on their knowledge and relationships with their customers, and leverage their employees to make the most out of human interactions.”

Lior Shacham, CEO of PicUP

Startups will continue to have a role to play. Insurers remain on the lookout for meaningful improvements to customer interaction.

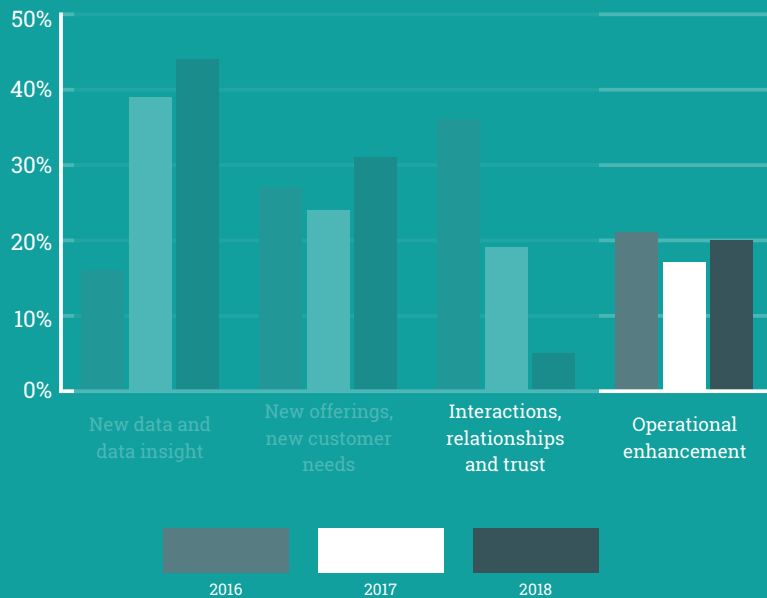
PicUP, one of the 2018 Startupbootcamp cohort, is an example of what is possible. It offers a phone call optimization platform that personalizes the customer's incoming call screen so they can see who is calling and why. The company enables additional services within the call, such as allowing customers to complete and sign documentation. The effect is to help companies enrich the customer journey with a combined digital and human interaction. For insurers, this has significant appeal, especially in a claims process where customers continue to express a desire for human interaction during an emotional time.

Lior Shacham, CEO of PicUP says: “If tech giants are to become future competitors, insurers will never be able to win on technology alone. They must capitalize on their knowledge and relationships with their customers, and leverage their employees to make the most out of human interactions. Empowering their employees with technology, and not replacing them with it, is the best way to leverage their strongest competitive advantage.”

A return to the experience of the first Startupbootcamp, when so many participants were focused on the front-end customer relationship, now looks unlikely. Insurers are now pursuing a broader range of collaborations that also focus on back and middle-office innovation; and InsurTechs are increasingly giving attention to commercial lines. Nevertheless, insurers recognize that improving the customer experience requires more than an updated website; startups offering new front-end solutions with clear potential for the insurance sector will continue to be in demand.

5. “Real” InsurTechs continue to support insurers as they improve their operations

Startupbootcamp applications: there continues to be appetite for improved operational efficiency



While the theme of this year’s Startupbootcamp program can be described as beyond insurance, this is not to suggest none of the startups selected are focusing specifically on the sector.

For example, 20% of applicants to Startupbootcamp this year could be categorized as offering solutions that help businesses develop more sophisticated operational capabilities, a small increase on last year’s figure of 17%.

In many cases, these startups’ solutions are industry agnostic, reflecting the pressure across many sectors to drive up efficiency and lower cost. But in an environment where interest rates have remained lower for longer than most analysts expected, putting pressure on insurers’ investment returns, the sector is increasingly keen to embrace collaborations with innovators in this area.

Indeed, insurers are increasingly looking to startups to solve specific problems throughout the value chain. One good example of a business doing exactly that is Startupbootcamp participant **PolyWizz**, which is working to build greater customer centricity into the insurance sales cycle, reducing the cost of acquisition. Its platform analyzes the insurer’s customer portfolio, as well as data from a range of other sources, including social media, in order to improve insight generation and support sales teams through the sales process.

Insurers will continue to look for opportunities such as this, making tactical investments to solve specific problems throughout the value chain. For startups able to adapt and innovate to provide such solutions – potentially applying tools already in use in other industries – insurance can be a valuable partner.

The danger for insurers is having multiple-point solutions with overlapping capabilities; and startups will need to remain relevant. These point solutions are useful and may offer insurers important tactical value, they are unlikely to become long-term strategic solutions. Startups must continually adapt to the evolution of insurers.

6. The broader value story

It would be a mistake to look only at the tangible results of InsurTech innovation. In fact, startups in the sector are having an impact in many different ways.

i. An evolving culture of innovation

Over three years of Startupbootcamp, InsurTech has brought real value to incumbents, and that value continues to shift as the ways in which insurers embrace innovation continue to evolve.

Fiona Williams, Business Development Executive at Admiral explains the way in which her business's interaction with InsurTech startups continues to change. "At Admiral we have a test and learn approach and are always keen to explore new ways of doing things and improving our service to our customers whether that is through trialling new software to optimize our existing service or offering our customers an entirely new product proposition", Williams says. "In the next few years we will continue to be interested to monitor the ever-changing startup landscape with a view to partnering where we see we can create an even better value proposition for both our new and existing customers."

Hélène Stanway, Digital Leader of XL Catlin, says: "Insurers have to evolve and show buyers that they are capable of innovating. That is the only way to remain attractive and competitive and is what will make a difference in the next 5, 10, 15 years. The industry needs to embrace the opportunity for change. At XL Catlin, we have made it one of our core values to be future-focused, and that means that collaborating with InsurTech companies is key to our strategy."

More generally, insurers' approach to Startupbootcamp reflects these partners' stories:

- In year one of the program, many firms focused on watching and learning. Both fearful and curious about the startups, insurers were happy to engage from the side-lines. But even in the absence of large numbers of partnerships, the watch and learn approach stimulated in-house innovation. Insurers set up innovation teams to explore opportunities for transformation.
- In year two, the focus moved to tactical solutions and talent. A year on, startups embraced collaboration with insurers, and we saw the uptake of proof of concepts in tactical points across the value chain. Examples included digital processing of claims; white labelled distribution platforms.
- In year three of the program, insurers are starting to scale proof of concepts, but are looking to overcome understandable hesitation from risk and compliance teams in taking experimentation to execution.

The opportunity for insurers is to further capitalize on this innovation by co-creating the new value propositions. The alternative is to watch as this innovation takes place. But while insurers will still see some benefits from this approach – reduced claims from customers using third-party preventive services, for example – there will also be impacts; not least, these customers will expect lower premiums. Instead, engaging with co-creation provides a route to stronger relationships with clients, and the potential to increase revenue in prevention, where there is more space to grow.

“By partnering with insurers, my team can focus on continually improving our technology, rather than focusing on sales and marketing.”

Ram Srinivasan, co-founder of ZASTI

Teemu Ala-Hynnälä, CEO and co-founder of Flowenum, says the prevention and prediction value proposition his business offers has obvious appeal to insurers. “We think this is a perfect fit for collaboration with insurers,” Ala-Hynnälä says. “Insurers are experts in risk management already, so to provide this service to customers is not a big leap from how a customer thinks of an insurer already.”

From the perspective of startups, moreover, the opportunity is access to customers and the trusted relationships they have with their insurers. Their business model may be based on a service bundled in with an insurance product or provided on a standalone basis that adds value either for the insurer or the customer.

Ram Srinivasan, co-founder of ZASTI, has worked with insurers that are taking different approaches to collaboration. While some are looking to recommend ZASTI’s predictive analytics platform to their clients in return for a reduced premium or a customized insurance product, others would like to white label the platform, offering it to their customers as an additional service.

For ZASTI, the latter approach is the preferred method. “By partnering with insurers, my team can focus on continually improving our technology, rather than focusing on sales and marketing,” says Srinivasan. “This partnership method is also more lucrative for the insurers, meaning we can develop longer-term strategic partnerships that provide value to the end customer”. However, he acknowledges that at least in the short term, insurers are keener to keep their environments separated, with legal and risk teams anxious not to expose themselves to risk.

However, there are a number of barriers to overcome in order to embed innovation in a meaningful way within the business:

- Innovation not aligned to strategy - often, innovation and proof of concept collaborations have taken place in areas not aligned with the strategic direction of the company. Such exercises may generate positive learnings but are unlikely ever to reach scale. Both insurer and startup resources could be better deployed elsewhere.
- Lack of ownership from business units – for now, much of the innovation and progress with startups is being driven from insurers' satellite innovation teams. Such teams are a step in the right direction, but this approach can lead to many organizations struggling to embed an innovation mindset in their businesses. The innovation teams' main barrier, and what should be top of the priority list, is getting buy in from the business units.

How do insurers move forward? Innovation teams have had great success in scouting relevant startups and creating proof of concepts. They are now looking to be as embedded as possible within business units. Consider:

- Running strategy or problem-solving workshops with business units; supporting them to express their pain points will help encourage business units to get involved;
- Celebrating and promoting success; the innovation team should promote successful proof of concepts that meet the needs of the business as widely as possible, including externally;
- Allocating KPIs and resources within business units since a leadership truly invested in innovation will carve out the time and resources necessary for business units to embrace it - giving allocated time and KPIs demonstrates the priority the business is giving to this.

One challenge will be in tackling the failure is not an option mentality, managing the risk that innovation inevitably brings. Indeed, while many InsurTech solutions are predicated on helping the insurance sector better manage risk, experimentation with new ideas carries risks of its own. Not every initiative will deliver the hoped-for results; insurers will need to be ready to change tack or simply to back off as the situation requires. A commitment to "fail fast" is a key element of successful innovation.

Understandably, risk and compliance teams are concerned about working with unproven and new startups. Partnering and scaling with a startup, opens up the business to risk, but taking the easier option of keeping the partnered startup at arms-length (see earlier section on partnership model) means that insurers don't see the benefit of the collaboration.

Lloyds Banking Group, Innovation Journey

Derek Smith, Head of Insurance Innovation at Lloyds Banking Group (LBG) reflects on the change in innovation mindset at LBG since becoming an SBC partner three years ago.

“We initially joined as a partner to gather insight from thinking outside of insurance. We understood that we did not have a complete view of our customers’ changing needs, and were therefore not meeting them. We joined to explore how InsurTech could help us to identify and meet those needs. What we didn’t comprehend was the scale of cultural benefit that collaborating with Startupbootcamp and the startups would bring. From talent and ways of working, to new propositions and a view of the customer beyond financial services, we have benefited greatly.

Not only has there been an impact on culture within our business, but our approach to innovation has evolved. We are no longer finding a point solution and looking at how to apply it to our business, but we are now bringing together themes we see in the market, defining problem statements for the medium term strategy of our business and designing proposition ideas to solve

for those problems. We then look to plug in startups that support us to reach that vision.

Where a few years ago we would have looked to build a new proposition entirely on our own, we would now look to build and partner with startups. In the future, we will continue to use the power of our InsurTech network to identify and test future propositions, as well as look to select strategic partners to support the growth of our business.”

LBG’s transformational shift away from a traditional organizational structure, towards customer focused, co-located teams is supporting this innovation journey. By creating self-contained business units, with product owners and engineers working together to own the full customer journey, they are able to make their own decisions with a strong customer focus and go to market quicker.

Startupbootcamp is evolving its program in order to meet these changing requirements of innovation. Startupbootcamp is reinforcing partnerships with operational units to ensure the commitment to meaningful and focused execution. To help create a culture of innovation, Startupbootcamp is aware that there is a growing need for execution, where the emphasis will be first on identifying the pains insurance companies have and creating a small innovation team which will be able to provide a solution through collaboration with startups. Startupbootcamp’s mission is to ensure that insurance partners get the right mechanisms and leadership in place to accelerate brilliant ideas.

ii. Access to talent and diversity

Last year’s report highlighted the increase in the number of startups with team members who had insurance expertise. This was important as InsurTechs moved beyond a focus on front-end use cases to broader operational problems within insurance. We are now increasingly seeing teams with either deep expertise in technology, or in another industry, with advisors or board members bringing the insurance expertise. As more startups focus on innovation beyond insurance and work with insurers to build a broader ecosystem of InsurTech, new skills are flowing into the industry.

1 in 5 CEOs agreed it was 'very difficult' to attract digital talent into the industry.
45% hope to partner with external providers to secure digital skills.



20%

This is very welcome. PwC's 21st CEO Survey 2018 warned insurance industry CEOs are very concerned about the availability of digital skills in the industry, more than other financial services industries. A fifth of insurance company CEOs warned it was very difficult to attract such talent to the industry while 45% said they hoped to partner with external providers to secure these skills.

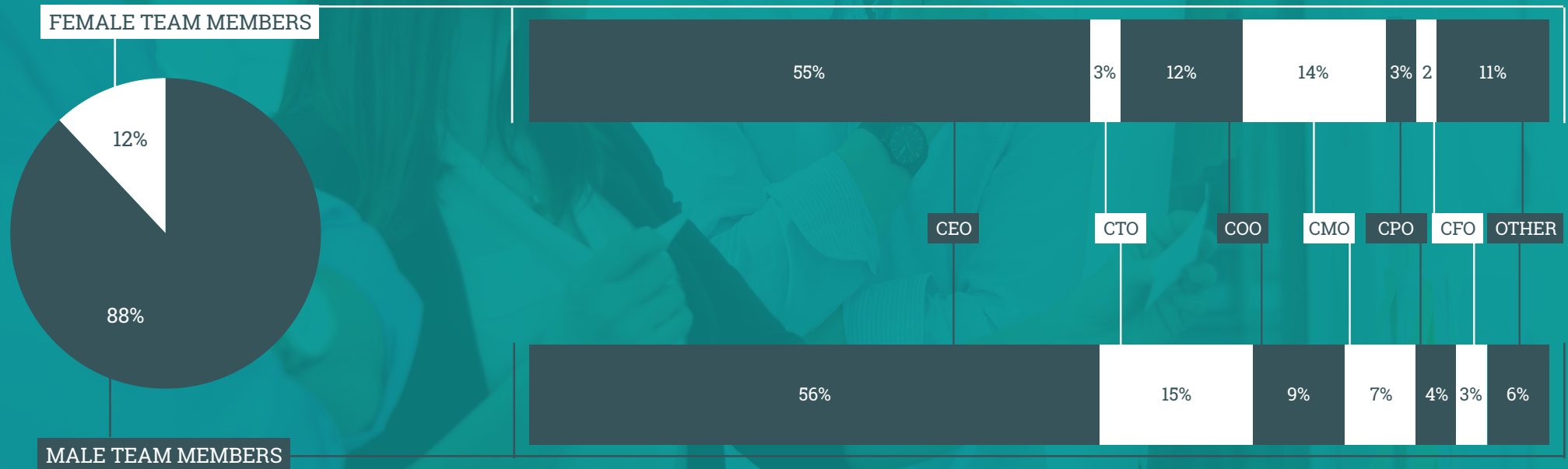
Startup founders and team members can bring deep expertise from other industries. Peter Bunus, the CEO of Startupbootcamp 2018 cohort member CyStellar, is an excellent example. Dr. Bunus has co-founded a string of high-tech ventures, growing several businesses to scale, and worked extensively in academia and science.

Startups clearly bring diversity from a skills and geographic perspective, but we are yet to see true gender diversity from InsurTech startups. Of the >1000 startup applications, we analyzed the makeup of 226. Only 23% of applicants to this year's program had a female founder. Although this is an improvement from last year's statistic of 16%, it still highlights the gender imbalance.

Looking at the types of roles that women typically have within these startups, compared to the roles men have, the starkest difference is when we look at Chief Technology Officer (CTO) and Chief Marketing Officer (CMO) roles, men are five times more likely to be a CTO, where women are twice as likely to be CMO.

Applicant Team Members by Gender

Comparing the proportion of men and women's roles



Note: Of the >1000 startup applications, 226 teams were analyzed by role and gender

This statistic is part of a wider problem. PwC's 2017 "Women in Tech, time to close the gender gap" report spoke to over 2000 A-level students to highlight that the gender gap in technology is still prevalent in schools and will therefore impact career choices in the future. Only 8% of young women say a career in technology is their first choice, or one of their first choices, compared to 34% of young men. This is a vicious circle: without female role models, there is a lack of visibility of role models for young women to aspire to; combined with a lack of career advice to girls to get into technology, enforcing the gender stereotype.

PwC is trying to combat these issues with, for example, the TechSheCan initiative and a new network, Women in Insurance and Technology. This network aims to take decisive action to combat the pyramid effect of the decreasing proportion of women working in this area as seniority increases. Some of the actions the network is exploring are: the wording of job adverts to ensure gender neutral language; reverse mentoring with more junior women mentoring senior men; and Lean In's initiative, MentorHer.



8%

8% of young women say a career in technology is their first choice, or one of their first choices

78%

of students can't name a famous female working in technology

16%

of females have had a career in technology suggested to them (35% of males)

5%

of leadership positions in the technology sector are held by women

7. What next for InsurTech?

The outlook for InsurTech startups is bright. Not every new venture will succeed but in a sector that is hungry for innovation – and increasingly willing to look beyond its boundaries for new ideas and solutions – the best startups have every chance of commercial success, whether in collaboration with incumbents or on a standalone basis.

i. The short-term outlook for InsurTech

Innovation becomes BAU beyond the innovation team to the business units

Innovation teams have shown success, but in less mature environments these teams can struggle to gain buy-in from other parts of the organization, hampering efforts to encourage change at a business unit level.

As maturity of innovation teams grow, they will continue to establish relationships with business units, who will take a more proactive approach when it comes to going to the innovation team with problem statements they wish to find new solutions to. This culture change does not, however, happen without concerted effort.

One other question for insurers to address in this area is the role of the C-suite. At very few organizations is the head of innovation currently a board-level role.

Data-driven innovation will continue to increase

At their heart insurers are data companies and we therefore expect to see a continued interest and investment in data focused startups and continued investment in data analytics. Some 50% of partners surveyed say they are already working with data analytics providers in their business-as-usual activities, while the other 50% are either in development or looking to develop relationships.

This investment will further enhance underwriting and claims. Some 83% of partners agree that data analytics will be transformative in these areas.

Innovation will grow in commercial and speciality lines

To date, most innovation has been centered on personal lines of insurance, particularly around customer engagement and the front end. But as insurers are better able to exploit data, they will be able to innovate further into commercial and speciality lines, moving towards prevention and mitigation rather than risk transfer.

As part of this trend, we expect to see greater innovation within broker distribution. Customers will expect an omni-channel experience. Clients will value advice on risk from their brokers ahead of access to insurance.

ii. The longer-term outlook for InsurTech

“InsurTech” will cease to be a relevant term

We expect to see the language around innovation in insurance change. As a focus on technology and innovation becomes an everyday and essential part of operating a competitive insurance business, the idea of standalone InsurTechs will become as outdated as the concept of having a separate digital strategy for the company. Instead, InsurTech will become an innovation ecosystem in and around insurance, with insurers working with a range of partners from within the industry and beyond.

Greenfield insurers will evolve

Insurers will learn from the broader FinTech community, building their own greenfield operations based on straight-through digital processing. This will span not only distribution and transactional business but also claims and dynamic underwriting. In this way, insurers will move past the inflexible and inaccessible legacy systems currently acting as a barrier to innovation, with greenfield insurers embracing a modular approach.

Disruption from scale-ups and big tech

As well as competition from tech giants, we expect to see startups coming together to become disruptive scale-ups with broader capabilities and ambitions. Startups with specialization in different parts of the value chain may come together to launch their own greenfield operations. In this scenario, we expect these scale-ups to work directly with first mover reinsurers to provide capacity, cutting incumbent providers, and slower reinsurers out of the mix.

Closing Remarks

When we started Startupbootcamp InsurTech three years ago, we did not expect that InsurTech as a topic, would become engrained as a key component of the way business is done in insurance so fast. We learnt a lot from observing retail-based propositions emerge, seeing InsurTech move from consumer-led to business-led propositions, as they combine more advanced sets of capabilities and technologies to solve more complex problems.

From Mexico to Singapore, we were able to identify, accelerate, invest and support over 50 InsurTech startups across our InsurTech, FinTech and Cyber-security programs. We were able to classify how InsurTech combined with PropTech (BuzzMove/ BuzzVault); IoT (Fing); AgriTech (Aerobotics, Cystellar); Aircraft Manufacturing (Zasti); Supply Chain (Adapt Ready, Statwig) or the Sharing Economy (Valoo, ForestCar) could solve very unique challenges across the insurance value chain. Insurers and InsurTechs have so far **engaged in over 300 pilots** with some well-publicised success.

Emerging technologies combined with a demand-driven market have pushed businesses and innovators to consider **transparency and trust** as a core part of their customer propositions. Sharing economy entrants and the tech giants have both facilitated the move toward such core principles and building blocks of tech-led offerings.

Today, insurers are seeking means for driving profitable growth and of identifying new possibilities for differentiation. As part of this search, seeking **relevance** from adjacent industries as a means for inspiration is becoming part of that equation.

As we now predict that “InsurTech will be ‘Insur’Tech no more” we know that this statement will trigger a few raised eyebrows as InsurTech was only truly established four years ago – whilst FinTechs have now existed for 12 years and are still going strong, challenging bank thinking and financial services infrastructure.

With this statement, we want to stress to market players - makers and participants - that anyone in insurance interested in the cultural change and innovation that InsurTech companies can generate either through collaboration, partnership or investment opportunities, must look at the problem with a different lens. **Insurance is everywhere**. This means that digital capabilities brought about by InsurTech and other new ventures will potentially touch every facet of our world and ecosystem, to address very specific issues ranging from the protection gap, serving the underserved, or the impact of a potential fourth industrial revolution on insurance.

I feel very privileged to be working with forward thinking businesses, young and old, that are truly engaged in reshuffling, disaggregating and reinventing customer propositions and value chains from back to front. And I look forward to helping them identify those unique differentiating models that will make their business survive, thrive and excel for the years to come.

Through this process we also hope to contain the “innovation theatre syndrome” which delivers few results. But for now, it is part of our current reality.

Sabine VanderLinden

CEO, InsurTech Business, Startupbootcamp & Rainmaking

Conclusion

Last year, the InsurTech report from PwC and Startupbootcamp predicted we would see more cross industry collaboration, but this year we have been surprised by the pace that this is starting to happen.

Most startups are no longer talking about disrupting the market, but understand their place within the InsurTech ecosystem - how they can add value to insurers and bring in expertise, or data, from outside the industry.

Although startups who providing better data and insights within existing underwriting models are already adding value to insurers, we look forward to the exciting opportunities that will be possible as insurers replace legacy technology, allowing for greater interaction with third parties.

Startups will continue to play a role in supporting insurers to improve efficiency and customer interactions across the existing value chain and beyond. As we see insurers invest more in their innovation capabilities, looking to scale with startups beyond proof of concepts, we can conclude that this ecosystem is still set to grow and mature- becoming a core part of the insurance industry.

“As we see insurers invest more in their innovation capabilities, looking to scale with startups beyond proof of concepts, we can conclude that this ecosystem is still set to grow and mature - becoming a core part of the insurance industry”

Victoria Newton, PwC Advisor
in Residence to Startupbootcamp



Startupbootcamp InsurTech

Startupbootcamp InsurTech is the leading insurance accelerator focused on innovation for the insurance industry. The award-winning accelerator provides InsurTech startups with mentorship, sustainable design, and key growth resources, and offers access to world class industry expertise during an intensive three-month program. The programs are supported by industry partners, as well as an extensive mentor and alumni network from more than 30 countries across the globe.

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