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How InsurTechs are poised to transform insurance

Startupbootcamp InsurTech

pwc

Executive summary

PwC's second year of collaboration with the Startupbootcamp InsurTech program takes place against a backdrop of growing excitement, investment and a rapidly increasing number of new businesses and collaborative partnerships. The growth of InsurTech has been remarkable, with a thriving ecosystem of start-ups, insurers, investors and innovators springing up over the past twelve months.

Notably, this year, we are witnessing start-ups emerge with more-sophisticated and wide-ranging value propositions that augment and supplement the entire insurance value chain. This is a step away from the skewed focus on distribution that was initially the case when InsurTech exploded onto the scene.

It is not just the start-ups that are reaching maturity, so is the InsurTech ecosystem as a whole. Last year's report highlighted the importance of collaboration between start-ups, insurers and others to deliver value for customers and the bottom line because InsurTech offerings were primarily enabling rather than disruptive. This remains the case and it seems as if the battle for hearts and minds has now been won - insurers are increasingly looking outwards to innovate and their engagement with start-ups is more positive and advanced.

This can be seen in the increasing number of proof of concepts (PoCs) that are being carried out as well as their increasing complexity. No longer are start-ups seen as point solutions, for example, many insurers are now looking to combine a number of different external propositions, along with their own capabilities, to deliver more powerful propositions.

With the ecosystem maturing, the stage is set for InsurTech to begin delivering significant value, which has the potential to change insurance for the greater good of both customers and the industry as a whole. InsurTech has opened a fantastic window of opportunity.

But it is important not to get carried away. InsurTech will not transform the bottom line overnight and it will not all be plain sailing. Maturing start-ups will need time to prove their value in an industry where KPIs such as claims ratios can take time to be realised, insurers need to transform how they work and these collaborative models will take time to embed. And, of course, not every start-up will succeed.

Nevertheless, InsurTech is a movement on the verge of a breakthrough. Insurers understand that InsurTechs can help them grow revenue, launch innovative propositions, reduce costs and transform their relationships with customers for the better. As those hopes are realised, the growth of InsurTech could become exponential.

The position of Startupbootcamp and PwC at the centre of the InsurTech ecosystem offers a unique view of its rapid progress. In this report, we will share our insight, the trends we see and explore how collaboration between InsurTechs and insurers can drive value in the future.

OUR KEY FINDINGS INCLUDE:

A second wave of InsurTechs is emerging, tackling more complex and wide-ranging problems that are more closely aligned to insurers' needs. Notably, we are seeing more InsurTechs targeting the mid and back office rather than customer facing distribution. Most interestingly, we have seen a fourfold increase in the proportion of start-ups that are focussing on exploring new approaches to underwriting risk and predicting loss.

Insurers have recognised that collaboration is the best way to release value, both in terms of growing revenue and reducing costs, from InsurTech. PwC research has indicated that in 2016, just 28% of insurers were exploring partnerships as a way to leverage InsurTech, but in 2017 45% are directly engaging in such partnerships.

Collaboration is still not a smooth process but insurers and start-ups are learning quickly. Only 17% of insurers believe they are good at co-creating with start-ups according to PwC research, and start-ups find the process of engaging with insurers time consuming and often frustrating. But progress towards new models of agile collaboration is now accelerating.

Start-ups are more widely adopting emerging technologies with Artificial Intelligence (AI) as a particular focus. 53% of applicants to this year's Startupbootcamp program use an emerging technology as their primary technology, compared to 40% last year. Insurers need to be aware of these technologies and their potential impact. AI in particular has the potential to deliver large value in insurance.

InsurTech is still not attracting diverse talent. Disappointingly just one in six of the individuals driving the start-ups that applied to Startupbootcamp this year are women. Whilst this compares favourably to other published figures on senior diversity in insurance and the FinTech world more broadly, there is clearly still much to be done to improve the gender balance in Insurtech.

Collaboration could become disruption. The window of opportunity will close if insurers or start-ups struggle to deliver value and lose patience. Other organisations, including new entrants from beyond the insurance sector, are waiting in the wings.

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1. The InsurTech Landscape in 2017

KEY TAKEAWAYS FROM THIS CHAPTER:

InsurTech is continuing to build momentum, with deals in the sector increasing

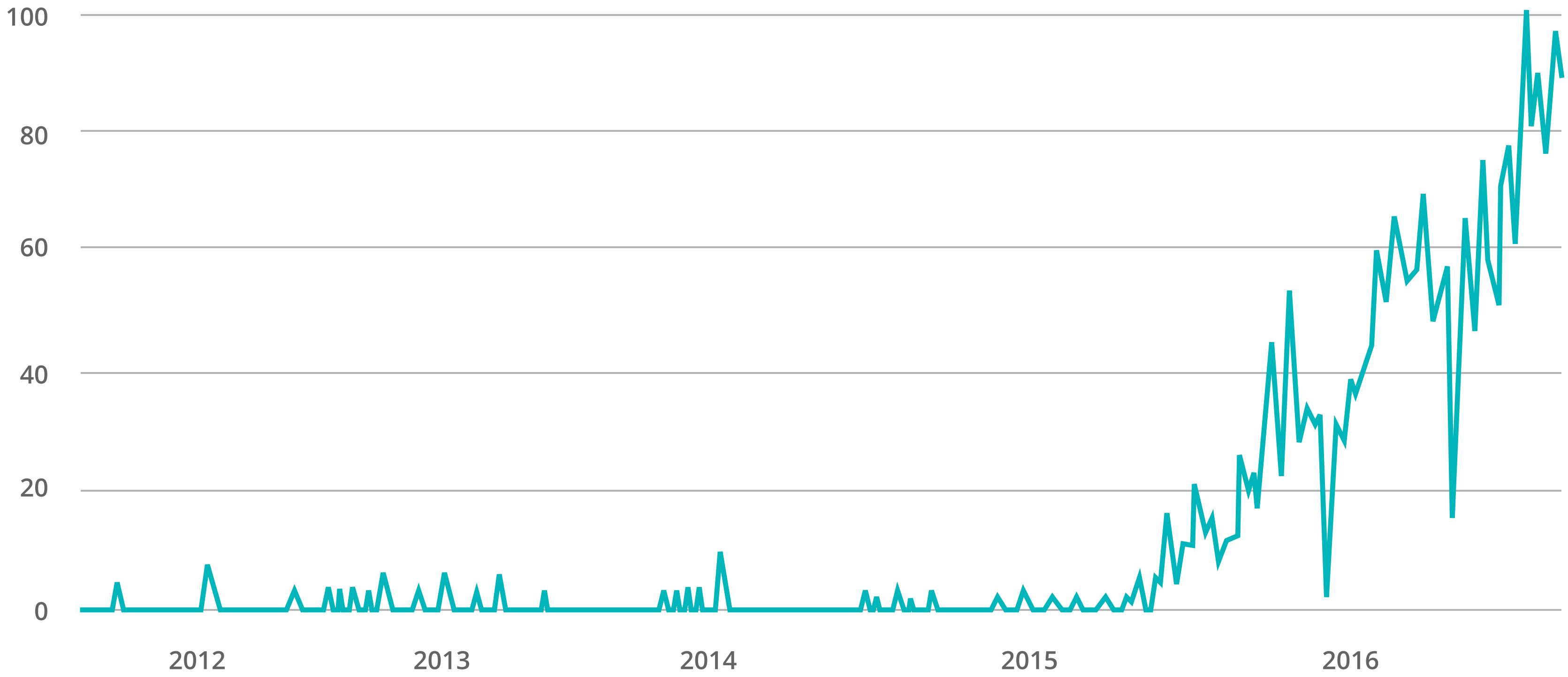
Insurers are excited about the prospect of working with InsurTechs, giving the sector a window of opportunity to prove its value

This is set against the backdrop of an insurance industry facing numerous challenges and a world undergoing rapid change

InsurTech continues to mature. Since last year's Startupbootcamp trend report highlighted the growing "mainstream awareness" of InsurTech, excitement around the sector has grown further. You need look no further than this year's Startupbootcamp InsurTech demo day at the O2 Arena in London where more than 850 delegates packed the venue and over 6,000 watched it streamed live on Facebook.

The excitement is highlighted by the prevalence of "InsurTech" as a Google search term which has increased exponentially from virtually nothing at the end of 2015.

Interest in InsurTech grows: InsurTech as a search term on Google



Source: Google Trends

Amid the buzz, InsurTech businesses have themselves begun to grow up, attracting interest from both traditional insurers and an audience beyond the insurance industry. "InsurTech is no longer the new kid on the block," says Ori Hanani from the insurer Admiral's French operation.

An often cited example is Lemonade, the US technology-driven property and casualty insurance company, which has been hitting the headlines this year - it grabbed particular attention after settling a claim in a world record 3 seconds. And there are examples closer to home such as Startupbootcamp alumni Buzzmove, which has raised £6m of investment since leaving the accelerator last year and launched Buzzvault, a new service aimed at customers who want to "protect, manage and store" their belongings in a "digital vault".

Offerings such as these are attracting the significant amounts of funding now flowing into InsurTech businesses. Indeed, the flow of capital into InsurTech underlines its growing significance and perceived future value.

In 2016, we saw more deals in the InsurTech sector than ever before, with 173 separate transactions according to CB Insights, a 42% increase on the previous year. And as Figure 1 reveals $1.69bn was invested into InsurTech start-ups during 2016, the second year running in which these companies attracted more than $1bn of investment. While that was lower than the record $2.67bn of investment seen in 2015, that figure included some unusually large individual transactions, including investments of $931m in Zhong An, the Chinese full-stack insurer, and $500m in Zenefits.

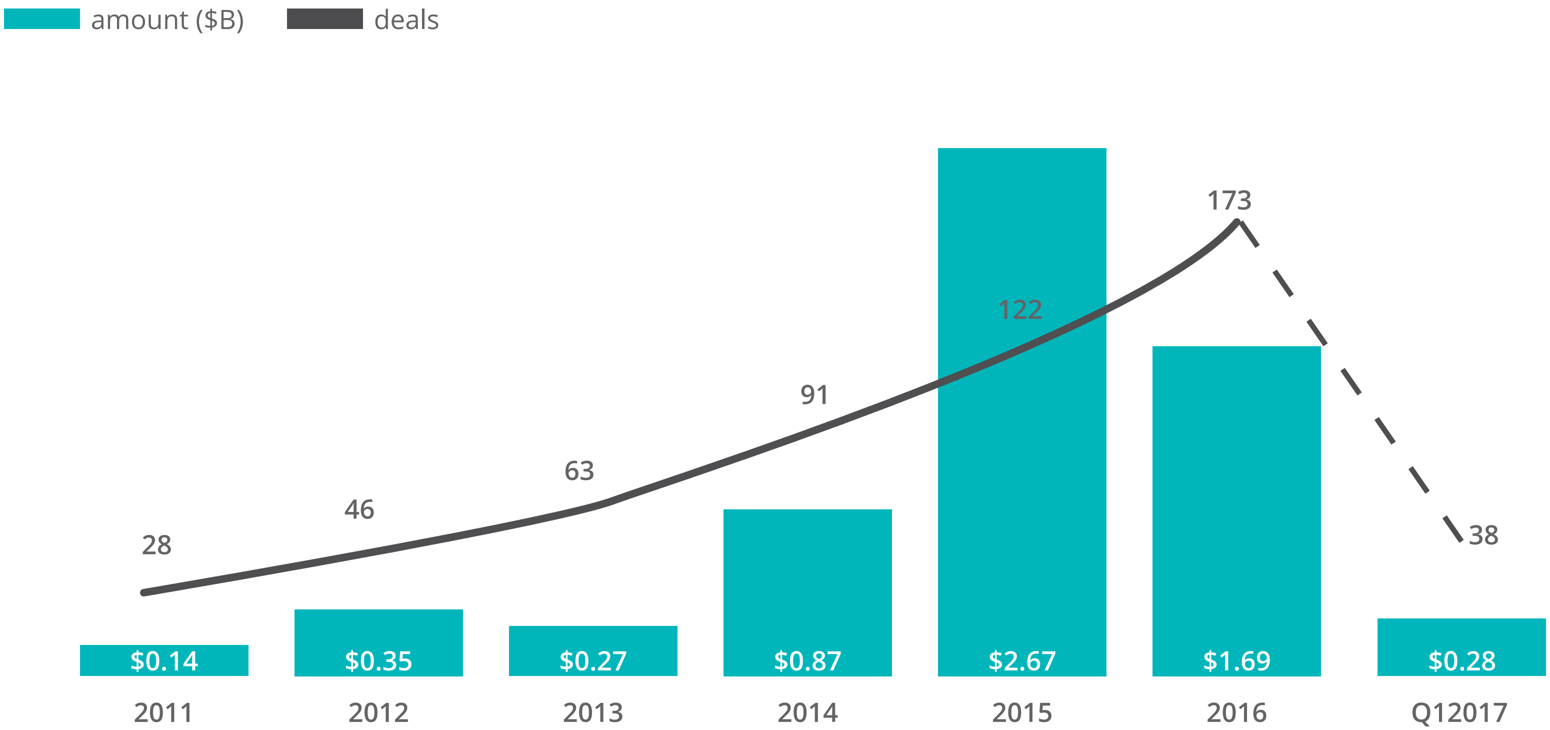
Despite the general upward trend, investment in Q1 2017 was disappointing, according to data from CB Insights and Willis Towers Watson, and down on the same quarter in the previous year by a significant $500m - although only down by $20m when solely early stage investments are considered. It is too early to say whether this trend will continue but some commentators are now noting that investment isn't matching the hype.

However, there is certainly money out there. Multiple corporate venture capitalists and funds have targeted the InsurTech space and announced large sums to invest. At the time of writing, for example, QBE recently announced a plan to invest $50 million into InsurTech, WR Berkley created a new role focussed solely on InsurTech investment and IA Capital Group are looking to insurers to build a $100 million InsurTech war chest.

The low investment figures in Q1 of this year may be a symptom of InsurTech's youth. With two thirds of deals at seed or series A level in 2016 there simply aren't enough InsurTechs of scale (yet) to send investment dollars higher.[1] There just aren't that many later stage start-ups raising the larger sums to do so. As some of those early stage investments begin to find their feet it is possible that we will start to see significant deals more regularly. It may also be that those looking to invest are conscious of the buzz around InsurTech, wary of inflated prices, and are resultantly biding their time.

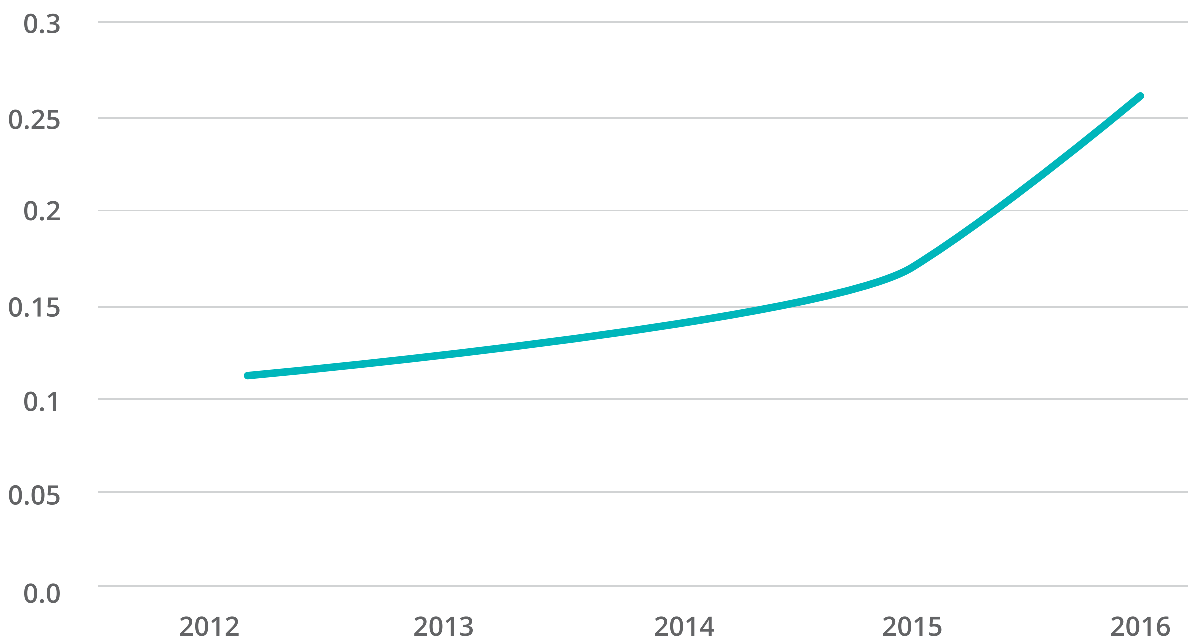
1 CB Insights analysis

InsurTechs raise billions



Source: CB Insights

Ratio of deal volume in InsurTech vs FinTech



Source: CB Insights

The overall trend seems clear though. Investment in InsurTech propositions is growing as the sector matures. This growth has seen InsurTech catch up further with the banking focused FinTech sector. Indeed, Tshidi Hagan of Old Mutual argues that this has been the year that InsurTech has 'emerged from the shadows of FinTech' and become 'a sector in its own right'.

The figure on the left illustrates this point. Five years ago, for every investment in InsurTech there were nearly ten in FinTech, by 2016 the figure had dropped to just under four. InsurTech is catching up with FinTech.

Startupbootcamp InsurTech's own experience provides further evidence that the InsurTech sector is growing rapidly. Applications to the Startupbootcamp InsurTech program have almost doubled since last year, with an increasingly diverse and global range of businesses seeking support and acceleration. There was an even more international flavour to this year's applications, including the first applications from Oceania (see Figure on the next page). InsurTech is now a truly global phenomenon.

Insurers themselves have become very active in the investment space despite a pretty sluggish start. In 2012, just one insurer or reinsurer agreed a deal with a technology-focused business, according to CB Insights; last year, that figure was 100. Startupbootcamp's own portfolio of partners (18 in total, encompassing 26 different brands) provides further evidence of the desire of the mainstream insurance industry not only to invest in but to forge partnerships with emerging InsurTechs too.

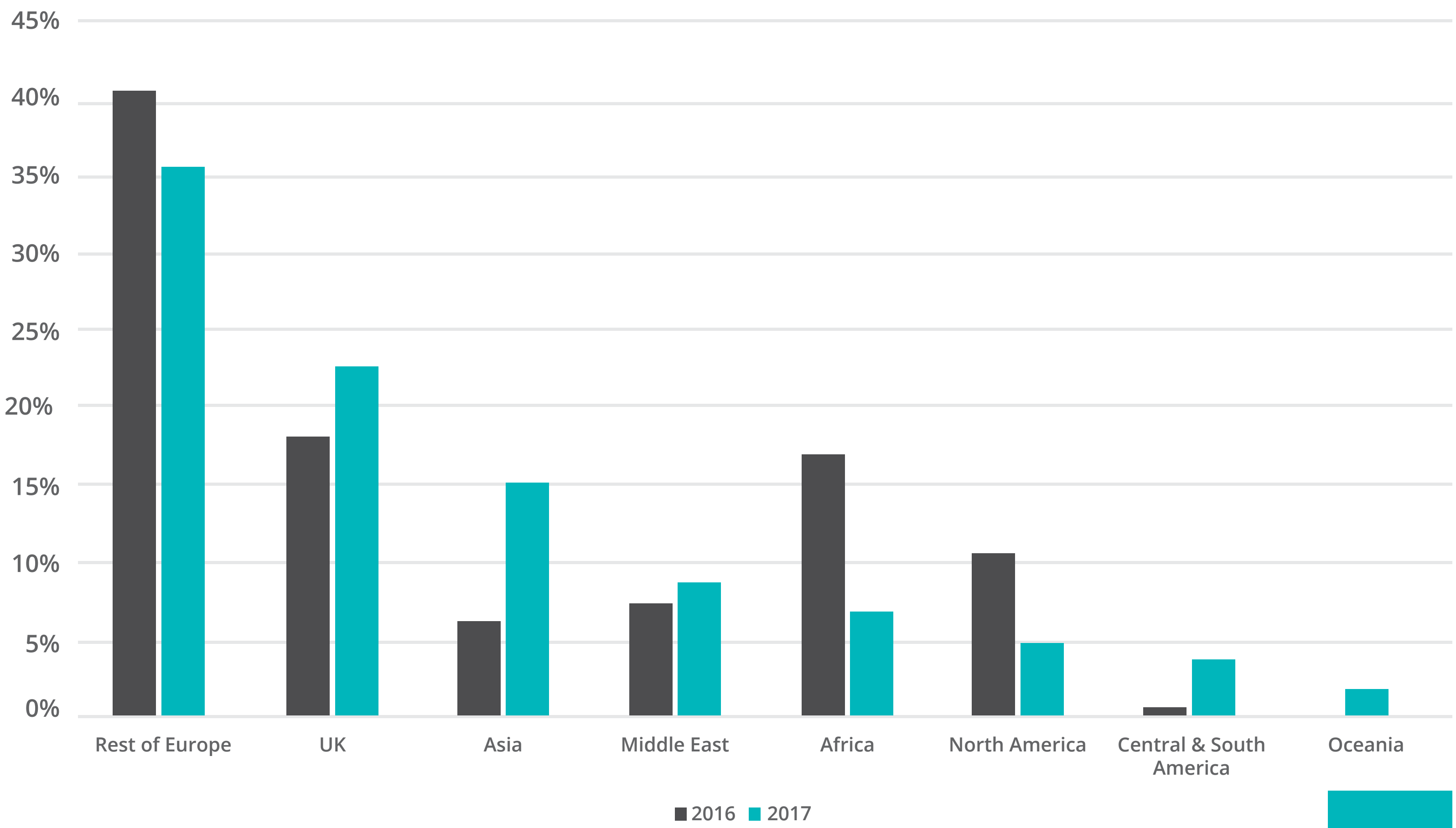
This is because "we are only now starting to see the types of businesses coming through that will have a big impact in the world of insurance" Dan Smith of Exponential points out, "many are completing PoCs right now; it won't be long until they start delivering significant value".

There are already success stories. Take RightIndem, a member of 2016's Startupbootcamp cohort. Its customer-centric claims software offers greater control to policyholders, speeds up resolution of claims and improves claims centre productivity for insurers. The company is now working with six separate insurers, having completed several PoCs, and has an impressive global pipeline.

We are only now starting to see the types of businesses coming through that will have a big impact in the world of insurance. Many are completing PoCs right now; it won't be long until they start delivering significant value.

Dan Smith, Exponential

Startupbootcamp InsurTech attracts global InsurTech interest



The economic backdrop

The InsurTech phenomenon comes at an opportune moment for the insurance industry. It is an industry that is facing many challenges including:

• low interest rate and low growth economies,
• changing and challenging regulation,
• the restrictions of legacy systems and processes,
• significant changes in customer behaviours and expectations,
• poor customer perceptions

But as Jonathan Howe, Global InsurTech Lead at PwC, wrote recently "this is not an industry in inevitable decline. There is a clear social need for insurance, and the emergence of new risks in a changing world means there is more need than ever before for individuals and businesses to protect themselves." InsurTech offers insurers the opportunity to reinvent themselves and meet their challenges head on.

The Brexit effect

The UK's departure from the European Union represents a challenge for InsurTech businesses, just as it will impact the wider insurance and financial services (FS) industry. While London is likely to remain a world-renowned insurance centre, Brexit could undermine its pre-eminence – and the uncertainty during the negotiation period is potentially destabilising.

In the short term, Brexit has had limited effect – applications to Startupbootcamp from InsurTech businesses based in other European Union countries actually rose this year, a phenomenon also seen in the FinTech program. Still, the long-term impact remains difficult to predict and there are certainly question marks as to whether talent and investment will still be drawn to British shores to the same degree that they are currently.

That said, InsurTechs should also recognise that Brexit may offer opportunities, such as the potential relaxing of regulations in order to stimulate innovation. And if insurers, regulators and government are able to work together to continue to allow cross border insurance services post Brexit, there is no reason to think London will not remain an important hub for InsurTech.

This is not an industry in inevitable decline. There is a clear social need for insurance, and the emergence of new risks in a changing world means there is more need than ever before for individuals and businesses to protect themselves.

Jonathan Howe, PwC

2. Trends in InsurTech

KEY TAKEAWAYS FROM THIS CHAPTER:

Increasingly sophisticated start-ups are offering greater value, tackling more complex problems throughout the insurance value chain and not only in personal lines

Emerging technologies such as AI are increasingly important to the InsurTech sector

Collaboration between insurers and InsurTechs remains vital to maximising value; increasing numbers of insurers recognise that, but some must do more

Data from the second Startupbootcamp InsurTech program provides a snapshot of how and where early-stage InsurTech firms are focusing their energies. Primarily, the data that has been used in this report is from applications to the program and fast-track events (633 start-ups). Whilst such data cannot provide us with a full picture of InsurTech it does enable us to understand the emerging landscape and, combined with external research, comparison to last year's data as well as PwC's own experiences from the heart of the InsurTech ecosystem, it provides evidence of a number of key trends:

1. InsurTech is a maturing ecosystem with growing expertise
2. InsurTech start-ups are increasingly tackling more complex problems across the value chain
3. InsurTech start-ups are aligning more closely to insurers' needs
4. More start-ups are focussing their attention outside of personal lines
5. Increasingly, emerging technologies are underpinning InsurTech solutions
6. There are too few women in senior positions within InsurTech start-ups
7. The InsurTech ecosystem is focused on collaboration and insurers are increasingly looking outwards to innovate

A maturing ecosystem with growing expertise

Not only are more InsurTech businesses now active, but they increasingly display greater sophistication. "InsurTechs have a more mature understanding of the insurance market," says Derek Smith of Lloyds Banking Group. "We are seeing firms that are much more mature than many of the early-stage companies we saw previously that had jumped across from FinTech."

Startupbootcamp InsurTech's data suggests that this reflects, at least in part, the involvement of experienced and expert insurance sector veterans in many InsurTech start-ups. **More than four in five (81%) InsurTech start-ups have a team member with previous insurance sector experience.**[2]

This increased sector expertise has led to growing enthusiasm amongst insurers about the prospects of these more insurance savvy businesses, says Jon Bradbury of Zurich. "There is now an awareness and excitement of what is possible and how it may enable us to do things faster, better and cheaper," he says.

Indeed, the growing maturity of start-ups has already had an impact on insurers, and whilst they "have not had a significant impact on sales yet, they have had an impact on culture," says Christian Riepe of Ergo. "The more traditional players are recognising that things are changing and that it is ok to fail, take risks and make mistakes in a managed way in order to ultimately drive more value in the projects we undertake."

Despite this growing maturity, it is important to remember how young InsurTech is. Success stories are still thin on the ground and although many PoCs are being trialled the majority are in their early stages and there are very few examples of successful implementations.

2 Startupbootcamp InsurTech, InsurTech Survey, 2017

InsurTechs are increasingly tackling more complex problems across the value chain

In last year's analysis of Startupbootcamp InsurTech's applicants, we grouped businesses into six categories across two groups, an exercise we have repeated this year.

External view

(Businesses that look outwards from the insurer)

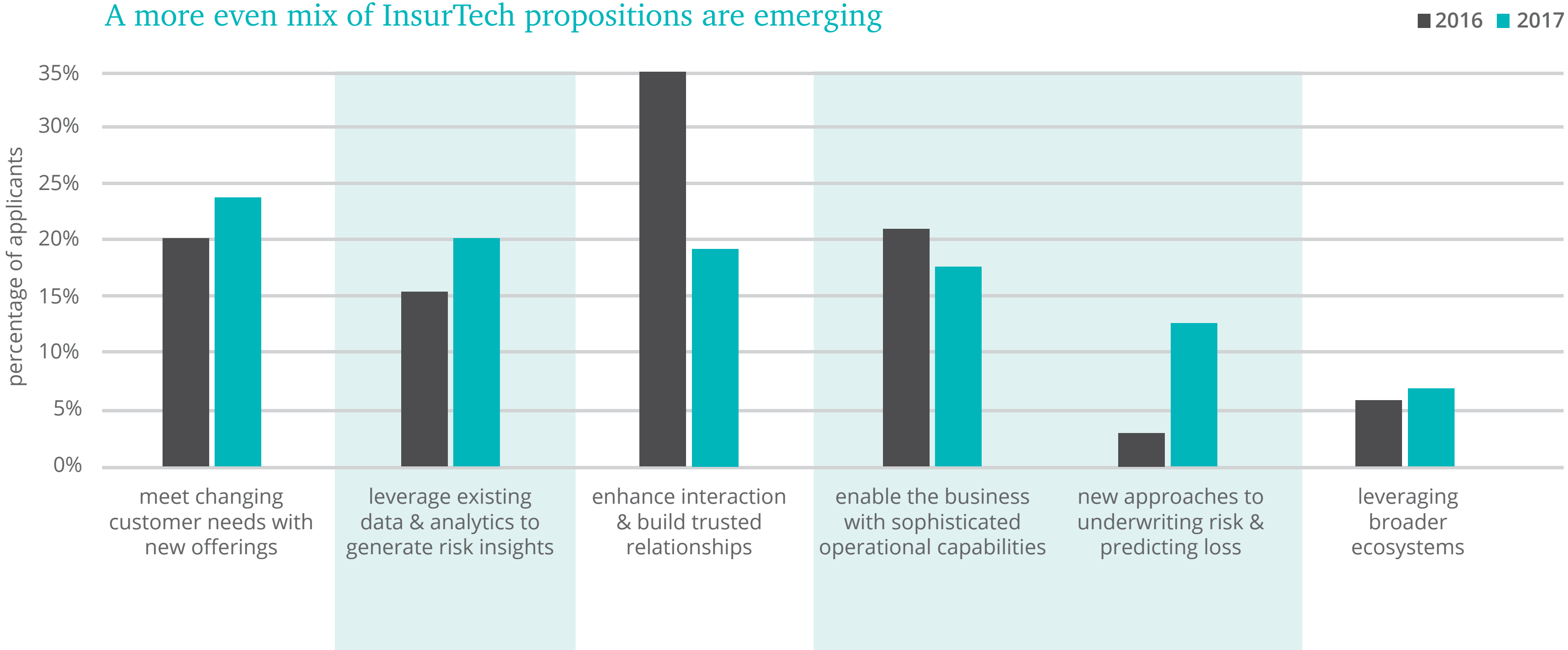
›› Enhancing interactions and building trusted relationships
›› Meeting changing customer needs with new offerings
›› Leveraging broader ecosystems

Internal view

(Businesses focused on the insurer's own business model)

›› Enabling the business with sophisticated operational capabilities
›› Leveraging existing data and analytics to generate risk insights
›› New approaches to underwriting risk and predicting loss

A more even mix of InsurTech propositions are emerging



A comparison between last year's applicants and this year's shows that whilst 61% of applicants last year had an external focus, primarily distribution and customer interaction propositions, this year the figure had dropped to just 50%. This underlines the increasing diversity of InsurTechs and their growing application across the value chain and in particular to the back and mid office.

Notably, there has been a significant increase in the number of InsurTechs focussed on underwriting solutions, indicative of the increasingly complex, insurance-specific problems now being tackled. As Peter Klingspor of Talanx notes, this reflects how "the range of problems that InsurTechs are addressing has broadened over the course of the year, from a focus on the front end to truly tackling the entire insurance value chain".

More specifically, amongst last year's applicants, firms that aim to "enhance interaction and build trusted relationships" dominated. These start-ups were typically focused on distribution, offering a dynamic new front-end for customers purchasing insurance. In many ways this was the low-hanging fruit, insurance is perceived to be lacking in its engagement with customers. By contrast, this category was only the third largest in 2017; while such solutions have a great deal to offer, the decrease in their prevalence is again suggestive of the fact that we are seeing more complex insurance-specific solutions emerging. This is not to say that there is less focus on the customer. The decrease is only relative to last year's applications and back end solutions can also benefit customers by making insurers more efficient enabling lower prices to customers, for example.

Excitingly, **this year's largest group of start-ups were those that seek to "meet changing customer needs with new offerings"**. Such solutions are designed to make insurance more relevant and trusted, and often offer insurers an opportunity to engage with segments of the market with which they have traditionally struggled to build relationships. As well as this, insurers will be able to diversify and differentiate, targeting more niche customer segments or developing more niche solutions.

Such solutions are exemplified by companies like TikkR, a member of the 2017 cohort. It operates an on-demand digital insurance platform that can insure people's 'active moments', such as insuring a surfer when they are surfing, removing the need for multiple long-term contracts; TikkR's ultimate goal is to analyse customers' lifestyles in order to predict and protect their 'moments' automatically. Another good example in this category is Sharenjoy, which offers one of the world's first experiential insurance for millennials who enjoy entertainment events, such as gigs; it aims to provide customers who miss events with replacement tickets to similar events rather than with cash.

The range of problems that InsurTechs are addressing has broadened over the course of the year, from a focus on the front end to truly tackling the entire insurance value chain.

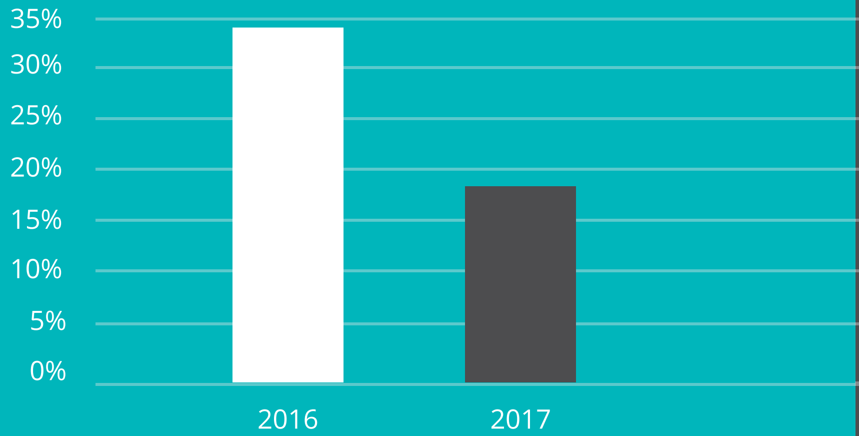
Peter Klingspor, Talanx

There was also a notable increase in the relative number of start-ups that 'leverage data and analytics in order to generate new risk insights'. The application of intelligent analytics to the vast swathes of data that insurers already have at their fingertips was always likely to prove fertile ground for start-ups - and it is proving so.

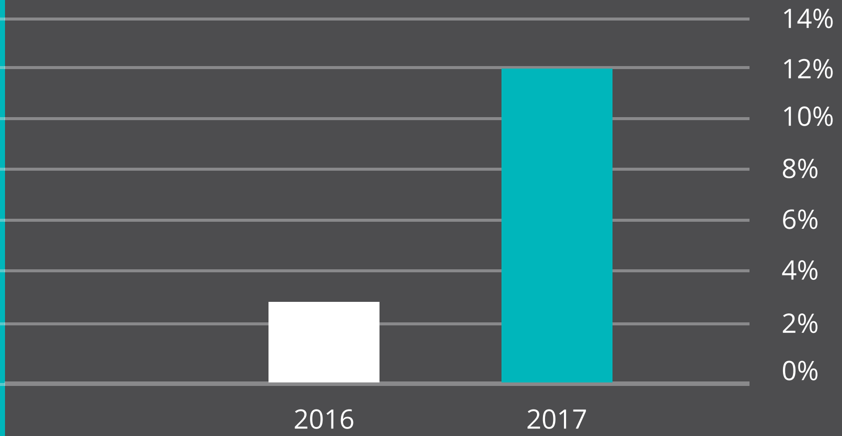
Start-ups 'exploring new approaches to underwriting risk and predicting loss' was the fastest growing category, with a fourfold increase from last year. One example in this instance is firms looking to help insurers better understand and price cyber risk. One applicant to the program, Cybewrite, is creating a platform to help insurers do just that. This is significant as it is clear evidence that InsurTechs are increasingly moving through the value chain and solving insurance-specific problems.

The trend towards InsurTechs focusing on these thorny and complex internal issues for insurers looks set to continue. Amongst InsurTechs founded between 2013 and 2015, 33% had an internal focus; for those founded in 2016 that figure has risen to 61%.

The reducing prevalence of start-ups looking to 'enhance customer interactions'



The increasing prevalence of start-ups 'exploring new approaches to underwriting risk and predicting loss'



InsurTech start-ups are aligning more closely to insurers' needs

Crucially, the changing nature of InsurTechs is leading to a closer alignment with insurers' needs. Last year's Startupbootcamp InsurTech applications data suggested a disconnect between the focus of many InsurTechs and what insurers said would actually be most impactful. This year, that disconnect is far less apparent.

The graph on the next page shows this clearly. Insurers have highlighted 'meeting changing customer needs with new offerings' as the most impactful trend. Last year this saw only the 3rd most applications - this year it saw the greatest number of applications.

If this closer alignment continues, insurers can look forward to the InsurTech sector offering a suite of potential solutions to the issues they currently face, both in driving revenues and securing savings. The ability of InsurTechs to unlock value throughout the value chain will be crucial to its enduring success.

More start-ups are focusing their attention outside of personal lines

Last year almost half of Startupbootcamp InsurTech applicants, focused on personal lines; this year, there has been a more balanced split across the market with just a quarter of applicants focused on personal lines. The rise of non-personal lines start-ups is exemplified by businesses such as Adapt Ready. Adapt Ready is a big data analytics platform, and member of the Startupbootcamp 2017 cohort, that uses sophisticated machine learning algorithms to help commercial insurers to better understand and manage the risks they are carrying, specifically in relation to business interruption insurance.

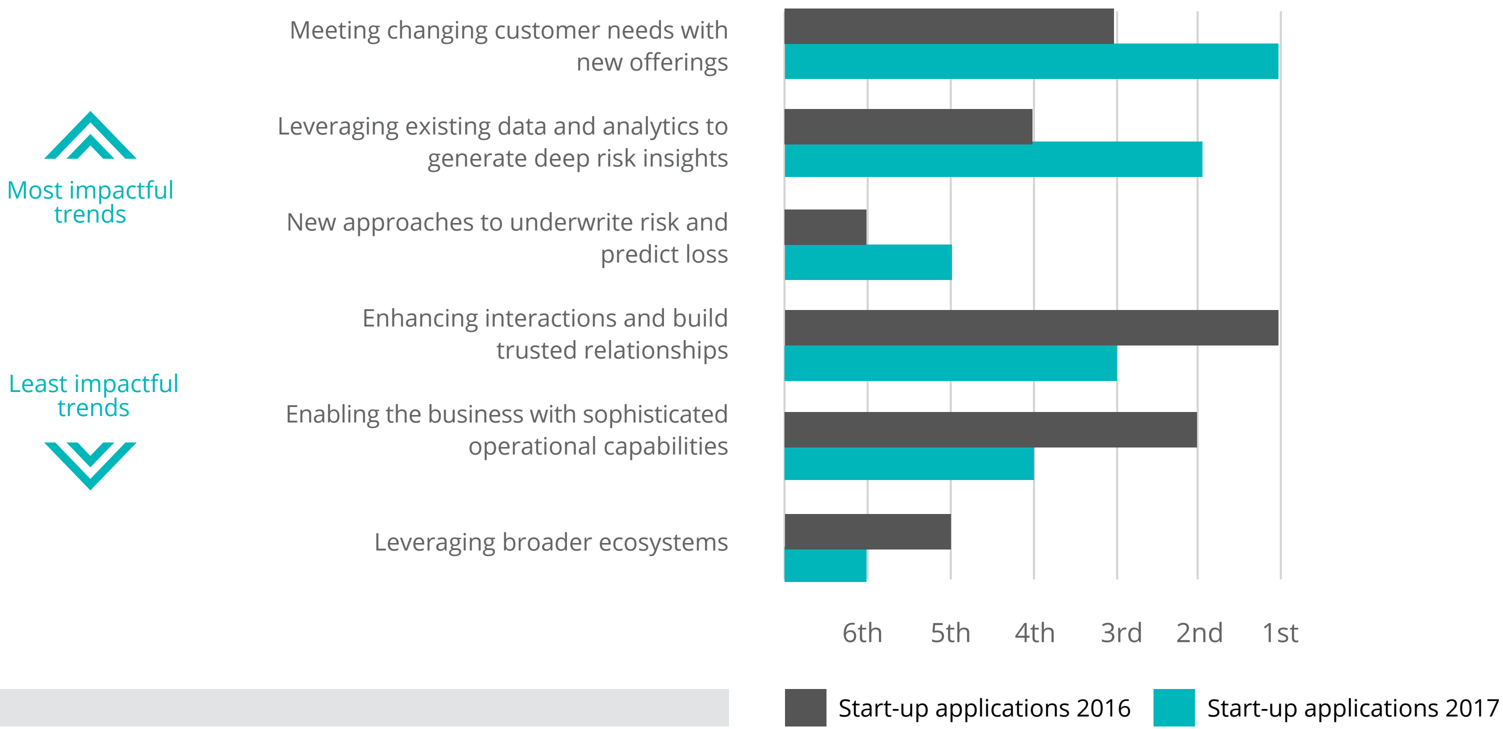
And this is not a one off. Much comment in the InsurTech sector has focussed on the lack of commercial insurance offerings and whilst they may lag behind, 12% of applications this year focussed on commercial insurance. Data from PwC's DeNovo platform, indicates that over the past five years over $3bn has been plugged into commercial insurance focused start-ups. Whilst DeNovo defines InsurTech in a broader sense than some other mediums (it includes companies that have significant use-cases for commercial insurance such as drones for example) it is still a strong indicator - $3bn is not an insignificant figure.

This year, we also saw an increasing number of start-ups with industry-generic solutions that have been applied to insurance rather than being specifically developed for it. 22% of Startupbootcamp InsurTech applicants this year offer multi-industry solutions, up from 16% in 2016. Emerge, a member of this year's cohort, for example, offers a software-as-a-service solution delivering machine learning models that can be applied to a range of operational issues. Start-ups like these are being drawn to insurance as it is seen as an exciting and collaborative place to be with great potential for quick growth as a start-up. If insurers and investors continue to support such endeavours it is likely we will see this trend continue to the benefit of the insurance industry as a whole.

InsurTech start-ups are aligning more closely to insurers' needs

Insurers were asked in which areas they saw the most important impact to their business from FinTech:

Each start-up that applied to Startupbootcamp InsurTech was categorised into one of the six trends:



Health insurance is another area where InsurTechs continue to grow (although dropping slightly in relative terms from 23% of applicants in 2016 to 21% this year). With advances in healthcare proceeding at pace thanks to the genomics and life sciences industries, InsurTechs see a range of opportunities to offer clear upfront value to customers through preventative care. A good example is TrackActive, a member of this year's cohort, which offers insurers, healthcare providers and customers a platform designed to optimise rehabilitation from injury and to prevent injury and chronic disease. The data gathered from the platform is also used to drive the development of early intervention and prevention applications.

Whilst we are seeing a greater diversity of InsurTech offerings this has not meant that there has been a decline in creativity in the personal lines space. Indeed, there are increasingly more advanced solutions appearing that represent genuine business model innovation. Insure a Thing, from the 2017 cohort, is a clear example. It offers a novel approach to bike insurance by introducing a cost-plus business model based on claims settled rather than policies sold. Instead of estimating premiums upfront, it splits the actual cost of claims, plus a fee, across all customers at the end of the month. From an initial focus on bikes, they are looking to provide insurance for other products and beyond.

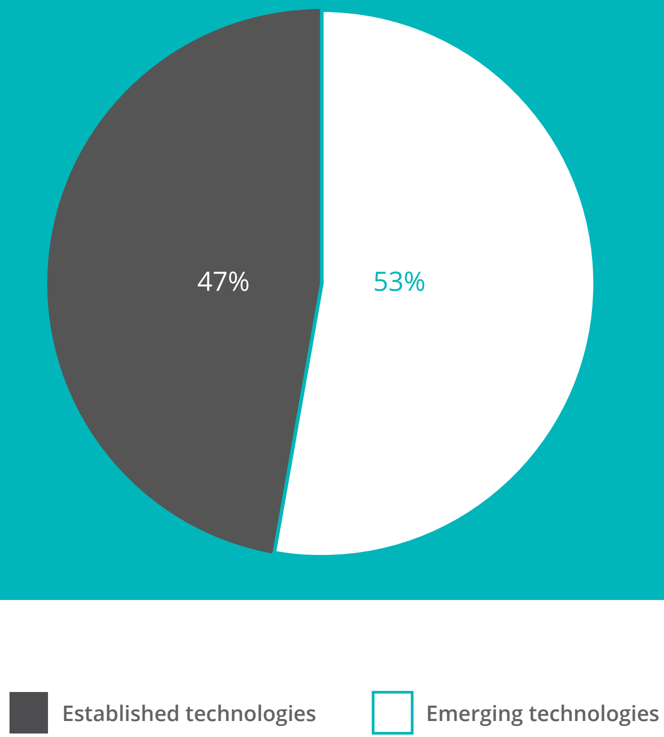
Another good example is InsureStreet, who, amongst other things, are working in partnership with insurers to deliver deposit replacement insurance to reduce the deposit burden on the growing number of renters in the UK.

There are still some areas of insurance that are seeing less start-ups with offerings specifically for them. As Meera Last of Lloyds Banking Group points out though, "one area that still attracts a relatively small amount of attention are pension and life offerings - there is still a heavy general insurance focus" a point that is supported by the relatively small investment in 'retirement savings and benefits' start-ups tracked by DeNovo.

Whilst reinsurance is the least invested in area, reinsurers have been very active in supporting start-ups directly (for example by underwriting their products or by direct investment), so the figures mask the number of start-ups that are relevant for reinsurers.

Regardless, more start-ups are emerging, or pivoting to insurance, all the time and as InsurTech continues to mature, this breadth will increase. While the focus was initially on specific parts of insurance and its value chain, InsurTech's impact is now being felt throughout.

Emerging technologies underpin over half of our applicants' solutions



Increasingly, emerging technologies are underpinning InsurTech solutions

Over half of applicants to this year's program employed emerging technologies such as AI or the internet of things (IoT) compared to 40% last year, an increase of 13% percentage points.

Moreover, in certain categories, emerging technologies are playing an even more important role. Two-thirds of applicants with businesses based on underwriting and risk management are deploying an emerging technology – such technologies clearly have the potential to drive change at the very core of the insurance operating model.

This is an important trend. While InsurTechs are naturally keen to be understood for the commercial value they could drive rather than the intricacies of their primary technology, the large numbers of start-ups making compelling use cases for emerging technologies means the broader industry must get to grips with such tools. Aerobotics, an aerial data analytics company and member of SBC InsurTech's 2017 cohort, is one such example. It uses drones to capture high resolution imagery of farms and then applies machine learning to provide insight into crop health to farmers. It now aims to deliver an agricultural insurance product that benefits both farmer and insurer, all year round.

Of the emerging technologies we have seen, we look at four in more detail here:

I. Artificial intelligence
II. Robotics
III. Internet of Things
IV. Blockchain

I. Artificial intelligence

Artificial intelligence (AI) in particular has caught the attention of the InsurTech scene this year. Roberta Profeta of Intesa Sanpaolo is particularly excited by the potential of AI. "It's something I'm looking forward to seeing applied more and more. The potential impact is enormous and multifold with a range of applications, from text mining to scouring obscure archives for apparently missing bits of a policy or claim, to boosting telematics and telesensing to proper predictive analytics, catastrophe modelling and beyond."

And as Jehangir Byramji, Lloyds Banking Group, points out “machine learning has moved beyond showcases that prove AI’s extraordinary potential; deep learning shifted from the lab to the enterprise with open source methods like TensorFlow and affordable cloud computing. We have seen multiple institutions launching solutions direct to consumers, like chatbots, that benefit from Natural Language Processing and other AI methods.”

It is this increasing sophistication and ease of access that makes AI so exciting and potentially transformative. In a data-driven environment such as insurance, AI offers not only the opportunity to derive insight at greater speed and with greater accuracy but to derive new insight too. And the possibilities for insurance stretch across the value chain, from the back office to the front. Of the Startupbootcamp InsurTech applicants this year alone we saw AI solutions focussing on:

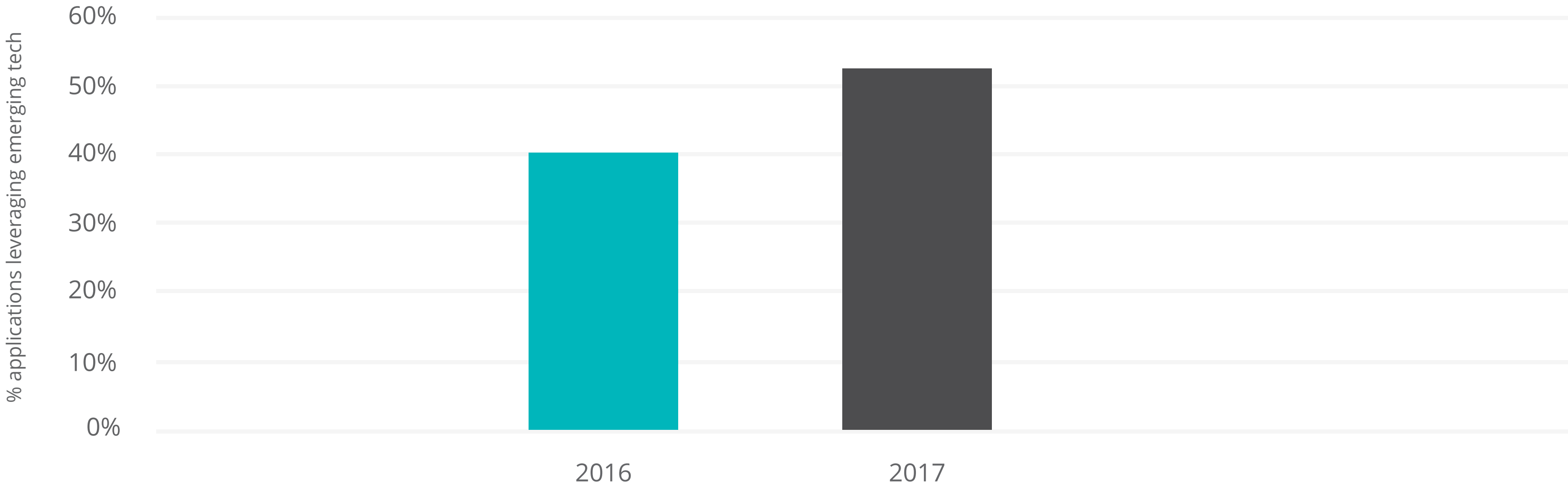
- Claims and benefit management
- Products and pricing
- Sales and distribution
- Underwriting and risk management
- And many single solutions with a range of applications across the value chain

And this is just InsurTechs that have AI as their main proposition. The vast majority of InsurTech start-ups in the ecosystem use it to the point that it is essentially ubiquitous. Notably, 80% of Startupbootcamp InsurTech’s 2017 cohort used AI in one form or another. For start-ups, it makes complete sense. It is often the most efficient means of completing a particular task.

And whilst it will take longer for insurers to be quite as agile, many are already using and experimenting with it and InsurTechs are well placed to help them do so successfully. AIMO, for example, uses AI alongside 3D camera sensors to analyse human movement. It delivers high-precision and individualized health analytics and recommendations in real-time, offering real value to health insurers and with machine learning will only be getting smarter.

Moving forward, “the growing maturity of AI (machine learning) and data ubiquity will facilitate the insurance industry’s evolution from a ‘protection’ model to a ‘preventative’ model” suggests Mark Falconer of LV=, “such a move doesn’t suppose that ‘insurance’ will no longer be required, however it does mean we will have to re-define what ‘insurable risk’ is, and in doing so it will surely make more ‘risks’ insurable”.

Emerging technology usage increases



II. Robotics

Last year's Startupbootcamp InsurTech analysis suggested robotics would also make a splash in the InsurTech sector and this prediction appears to be coming true – **this year's program received three times as many applications from firms using robotics applications.** The emergence of robotic process automation (RPA) and intelligent process automation (IPA) is potentially exciting for a range of insurance use cases.

III. The Internet of Things

Elsewhere, the IoT continues to excite, though only 13% of applicants to the Startupbootcamp InsurTech program this year relied on it as underpinning their proposition. Given the applications in insurance of concepts such as connected health, the connected home and wearables, as well as the potential to change perceptions of insurance by moving away from an indemnity to protection focused model, IoT-based InsurTechs have a promising future and have attracted significant backing from investors.

IV. Blockchain

Blockchain, by contrast, has yet to feature in significant numbers of InsurTech propositions. **Only 3% of applicants to Startupbootcamp InsurTech this year employ blockchain as their primary technology** – half the proportion seen in 2016. This might be considered surprising, but despite the hype surrounding distributed ledger technologies – and the undoubted potential for their use in insurance – the industry so far is adopting a 'wait and see' approach because, in the main, they are unsure where it can provide differentiated value. Blockchain is still a new technology to many and more time is needed for it to be fully understood and explored.

This is not to suggest, however, that blockchain does not have a bright future. The recent PoC completed by PwC for Lloyd's of London is one example of the application of distributed ledger technology– a more widespread breakthrough may simply be yet to come.

Over half of applicants to this year's program employed emerging technologies such as AI or IoT compared to 40% last year, an increase of 13% percentage points.

There are too few women in senior positions within InsurTechs

Analysis of Startupbootcamp InsurTech's application data has shown that only 16% of those that applied had a female CEO, founder or co-founder. This gender imbalance is, perhaps, not surprising when we look at the bigger picture.

PwC research 'Mending the Gender Gap',[3] indicates that women only held 19% of senior level positions, 14% of board seats and 2% of CEO roles in financial services firms. The recently published London Matters 2017 report by the London Market Group, cites the proportion of female executive directors at just 5%.[4] The picture is equally concerning in the FinTech arena - research by Inno Tribe indicates that female executives at the top 50 FinTechs make up just 4.95% of all executives.[5]

This pattern of declining gender balance towards senior levels within insurance businesses is consistent with data from the Chartered Insurance Institute, which indicates that of those members holding Associateship or Fellowship status, only 26% and 13% respectively are women, whereas among those holding Certificate status, the balance is far more even at 46%. However, this imbalance also reflects the date at which the qualification was obtained. Considering only those who obtained the qualification within the last 10 years, women constitute 38% and 29% of those holding Associate and Fellow titles. This increase in younger women achieving qualifications is encouraging. It will be important however for the profession to ensure that talent practices recognise this capability - through promotion and retention policies - with a view to improving gender balance in senior positions.

TheCityUK report into the Future of Financial and Professional Services,[6] produced in conjunction with PwC, highlights the important role of insurance in society and goes on to identify talent diversity and technology as two key areas critical to the future success of the UK insurance sector. The move to more technology based distribution channels as a means of improving customer engagement is considered by many insurance businesses to be the key to future success. The low levels of female representation in the boardroom at InsurTech start-ups, in keeping with the current trend in the more traditional parts of the sector, is concerning.

Jane Portas, Insurance Partner at PwC, commented "These findings clearly indicate that considerably more needs to be done to attract female talent to the insurance sector, and to improve gender balance through retention and promotion strategies. A profession that is not representative of society will be less equipped to relate to its customers and their needs, to innovate relevant solutions, and attract diverse talent. Creating a more diverse and inclusive profession is a business imperative, it's simply no longer an option."

3 PwC, Mending the Gender Gap, 2013 • **4** LMG &BCG, London Matters 2017, 2017 • **5** Inno Tribe, Power Women in FinTech Index, 2015
6 TheCityUK &PwC, A Vision for a Transformed World-Leading Industry, 2017

The InsurTech ecosystem is still focused on collaboration and insurers are increasingly looking outwards to innovate

Last year's report argued that collaboration will be the key to unlocking value. If anything, this view has strengthened over the past year with InsurTechs continuing to see themselves as enablers rather than disruptors and the number of full stack InsurTech solutions still very low.

The value that collaboration can deliver is seen in the example of NuvaLaw, from Startupbootcamp InsurTech's 2017 cohort, a platform that brings insurers together with a number of tools, processes and services to reduce the time and cost involved in settling claims. NuvaLaw is designing a new process to handle inter-insurer motor damage and personal injury claims; its online dispute resolution service, which employs AI and platform technologies, has the potential to deliver a 40% reduction in costs and capital outlays, and resolves claims at four times the speed of court-based settlements. If insurers work together through solutions such as NuvaLaw's there is huge value to be created.

Insurers increasingly recognise the opportunity that InsurTech presents them and are looking outwards to innovate. In 2016, just 28% of insurers surveyed had begun exploring partnerships with InsurTechs.[7] By 2017, 45% said they were directly engaging. Other insurers have work to do, however, with a further 42% of the firms surveyed conceding they are not even monitoring the InsurTech space.[8]

That said, while insurance is sometimes singled out for lacking an innovative spirit, recent research found 67% of industry leaders see creativity and innovation as very important to their organisations, ahead of other financial services businesses.[9] And examples such as that of Lloyds Banking Group show clearly how insurers are being increasingly creative in their interactions with start-ups, seeing them not as individual point solutions but seeing how they could combine to create even more powerful propositions.

For example, Derek Smith, Head of Insurance Innovation at Lloyds Banking Group notes that "partnering with Startupbootcamp InsurTech has helped us gain access to new technology, business models and emerging customer needs. Teams from across our division are now running multiple PoCs with companies from the cohorts and events run by the team.

As an example, the General Insurance and Innovation teams are partnering with three of Startupbootcamp's companies to build and live test future home insurance propositions that address customers' needs of tomorrow by proactively reducing physical and cyber risks in the home."

Still, despite such examples, insurers must be prepared to put their money where their mouths are: PwC's 2017 FinTech survey found that while financial services companies plan to spend an average of 15% of annual turnover on their technology programs, the figure for insurers is only 7%.

7 PwC, FinTech Survey, 2016 • **8** PwC, FinTech Survey, 2017 • **9** PwC, CEO Survey, 2017

How do insurers currently engage with InsurTechs?

58%

monitor InsurTech in order to respond competitively

45%

engage in partnerships with InsurTech companies

30%

buy the services of InsurTech companies to improve their operations and services

21%

establish start-up programs to incubate InsurTech companies

14%

set up venture funds to fund InsurTech companies

11%

acquire InurTech companies

8%

do not deal with InsurTech

Source: PwC, Insurance's new normal Driving innovation with InsurTech, (2017)

3. Enabling collaboration

KEY TAKEAWAYS FROM THIS CHAPTER:

Successful collaboration between insurers and InsurTech requires both sides to overcome process and culture challenges.

Finding a way through data security anxieties will help collaborations unlock value.

Focus on expectations and execution to give collaborations the best possible chance of success.

While insurers and InsurTechs alike agree that collaboration between start-ups and more established businesses is the key to driving value, both groups also agree that working together isn't always easy. Their difficulties typically fall into two categories:

PROCESS.
Many collaborations are prevented simply by the practical questions of how to ensure buy-in from all the key stakeholders. For example, insurers worry about the legal arrangements, particularly around data sharing, and struggle with procurement processes not designed for engaging with small start-ups. Still some insurers are now making good progress in solving these problems.

CULTURE.
If start-ups are speedboats – quick and agile but unstable in choppy waters – and established insurers are oil tankers – powerful and strong but slow to change directions – bringing the two together inevitably brings challenges. Both sides have to be prepared to overcome their frustrations with one another, finding compromises to move past these perceived weaknesses.

And both do recognise these issues. A survey conducted by Startupbootcamp found 72% of start-ups worried about how to collaborate with larger businesses, with 59% complaining they had made more than 10 calls before tracking down the right person to discuss a joint initiative; Half (48%) said agreeing a deal had taken more than six months.[10] PwC research, meanwhile, suggests only 17% of insurers believe they are good at co-creations with start-ups, against 28% of financial services firms generally. The survey found IT security was the concern most likely to represent a stumbling block.[11]

The data dilemma

Data underpins the activities of insurance companies, and many InsurTech ventures are predicated on their ability to exploit data. However, information sharing is uncomfortable for insurers, particularly where projects may be short-lived PoCs. They fear breaches that could lead to legal or regulatory sanction, as well as significant reputation damage.

In PwC research, 63% of insurers highlighted data security, privacy and protection as one of their biggest barriers to innovation, higher than the 54% recorded across the financial services industry as a whole. InsurTechs are simply unlikely to have the data security accreditations insurers require as a minimum standard when working with partners.[12]

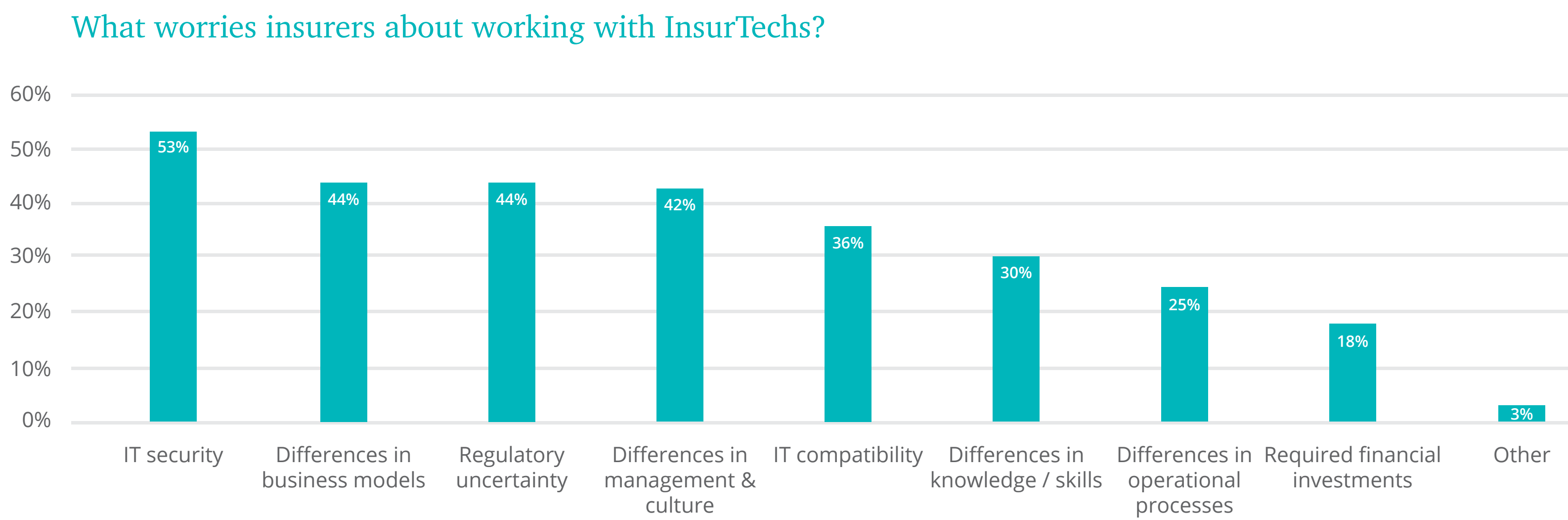
Moreover, regulatory concerns are likely to increase, when the European Union's General Data Protection Regulation (GDPR) comes into force in May 2018, imposing greater responsibilities on all organisations that hold personal data – as well as much larger fines for failures.

Still, changes such as the GDPR can also be seen as an opportunity to engage more positively with consumers. PORT, for example, is a start-up that aims to make it easier for businesses to comply with the GDPR using tools that enable practical compliance; in the longer term, it hopes to facilitate an information-sharing process where consumers can see how they are benefitting from allowing access to their data while also maintaining control.

Such examples provide an important lesson: if more businesses can find a way to overcome their data challenges, the value on offer is huge.

10 Startupbootcamp, Collaborate to Innovate, 2017 • **11** PwC, FinTech Survey, 2017 • **12** PwC, FinTech Survey, 2017

IT security worries insurers the most about working with InsurTechs



Source: PwC, Insurance's new normal Driving innovation with InsurTech, (2017)

How to make collaborations work

There is no one-size-fits-all blueprint for collaboration, but there are three key enterprise innovation models that PwC has identified as having had some success.

1. Innovation centre - The innovation centre (also named "lab" or "hub") is a structure at a corporate level that bridges external innovation with business unit needs and innovation opportunities. It relies on internal subject matter experts and/or innovation champions to ignite and drive innovation initiatives at a business unit level. With this model, innovative new products and services go to market under the company's brand.

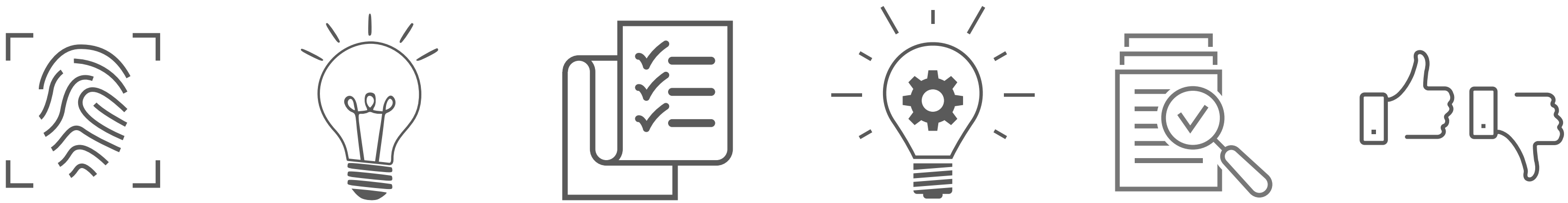
2. Incubator - An incubator can drive innovation from idea to end product by identifying new opportunities and developing related solutions. Although it does require a significant investment of both budget and resource, it has proven especially effective in addressing complex problems and devising new approaches to them.

3. Strategic venture capital - The SVC model offers the opportunity to participate via a stake or acquisition in relevant InsurTech related players. This is a way to influence and shape the development of specific start-ups (e.g. pushing them to solve specific problems), acquire key capabilities and talent, and/or as a way to derive value from strategic investments.[13]

Each of these models has their benefits and large insurers will often use a combination but nearly all will have looked to practically engage with start-ups via the PoC model – sometimes called proof-of-value. It is a quick way for insurers to test the potential value of an idea from which they can build a business case whilst providing start-ups with the experience and data to roll out their ventures on a larger scale.

PwC's work with Startupbootcamp and its insurance partners has identified a number of best practices that underpin the most effective PoCs, with a high-level plan illustrated below.

A framework for proof-of-concept work



Identify & assess

Scouting for and assessing potential capability appropriate start-ups that will solve a business problem / meet a business need. Should be aligned to corporate objectives.

Onboard

Overcome all necessary administrative hurdles in order to onboard the start-up and make the PoC a success. This should be a clearly defined and simplified process when compared to BAU.

Define & prepare

Working with the start-up and in line with corporate objectives, define the PoC. Crucially, defining what success looks like. Ensure that everything is in place (environments etc) so the PoC can run smoothly.

Execute

Run the PoC within the defined timeframe and limits. Monitor the results. Dispose of data.

Evaluate

Analyse the results and assess against the pre-agreed success criteria. Socialise results with the key stakeholders.

Go / no-go

Decision as to how to move forward based upon the results of the PoC.

13 PwC, Insurance Top Issues, 2017

In practice, our recommendations fall into two categories:

i. Expectations

››Set a clear and limited scope for the proof-of-concept, with all stakeholders agreed on the problem that is to be solved. Focus on a specific question and the technical response required.

››Align expectations. Insurers and InsurTechs must collaborate to agree the scope of the PoC, agreeing roles and responsibilities, as well as ways of working.

››Set clear deadlines. These timescales must be adhered to strictly.

››Identify clear deliverables. Set out what the PoC will deliver, both in terms of final outcomes and project documentation.

››Define success. Agree targets for the PoC, as well as the metrics on which progress will be measured.

››Identify next steps. Agree at the outset what will happen following a successful PoC, with clear actions for all stakeholders.

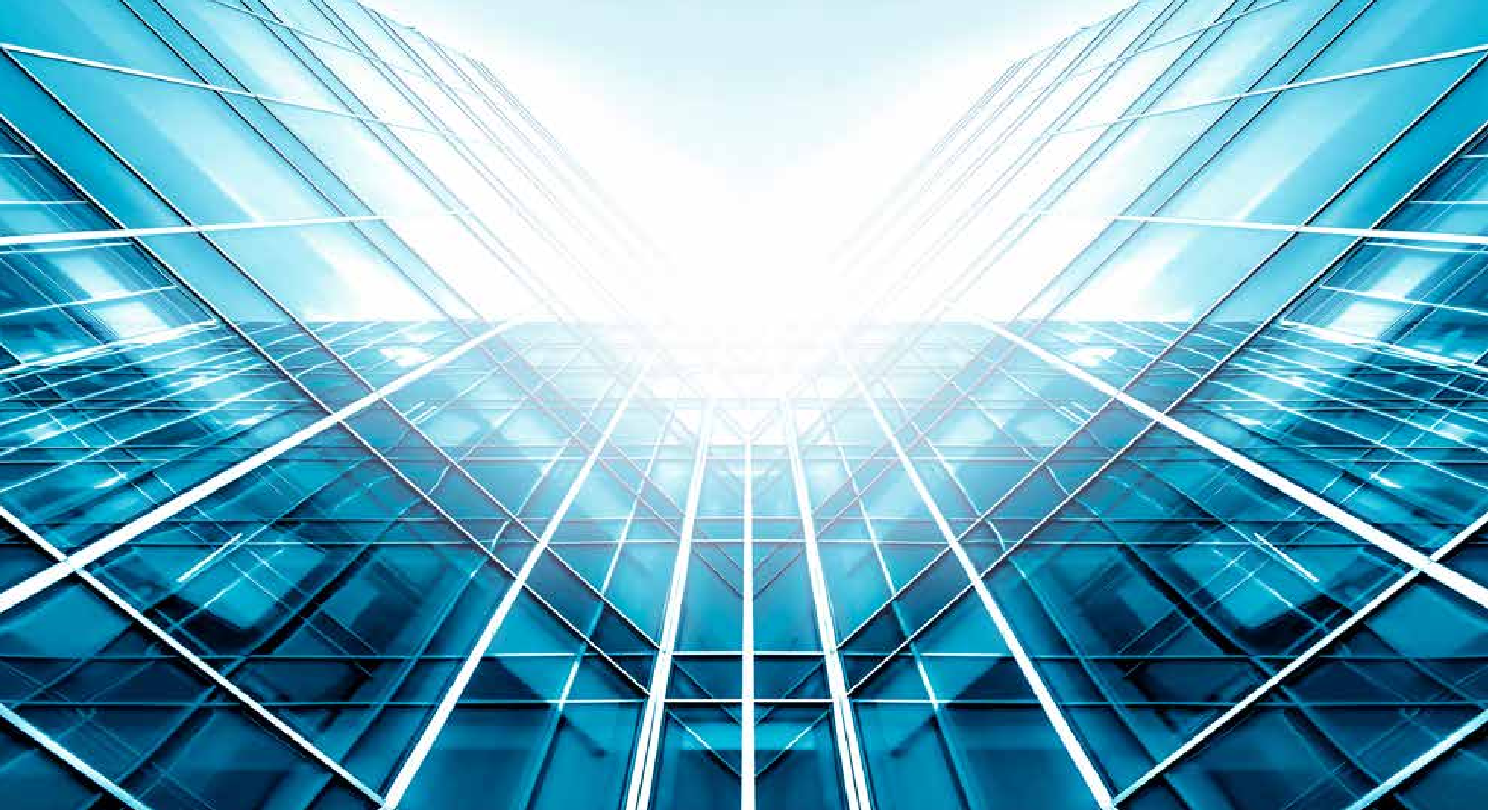
ii. Execution

››Follow a clear method. Having agreed a process for working, make sure all stakeholders understand the plan and the broader governance structures, and that they stick to them.

››Pick the right team. Use as small a team as possible to avoid complexity, but ensure all key stakeholder groups have representation. Ideally, insurers will put someone on each PoC on a full-time basis, but beyond the project look for champions across the business to enhance its reach. Start-ups must be careful to balance the demands of the PoC with business as usual but ensure they give enough to build the relationship and deliver successfully.

››Set up an independent environment: It is best practice to set up an independent environment for the PoC to operate within. Sharing environments can become messy and jeopardise the PoC.

If start-ups are speedboats – quick and agile but unstable in choppy waters – and established insurers are oil tankers – powerful and strong but slow to change directions – bringing the two together inevitably brings challenges.



4. What next for InsurTech?

We see a bright future for InsurTechs and insurers alike, with successful collaboration offering the potential to unlock significant value throughout the industry. There is a caveat, however: the window of opportunity will not remain open indefinitely.

1. The short-term outlook for InsurTech

InsurTech will come of age and begin driving significant value

››With partnerships, pilots and PoC initiatives now underway, InsurTechs are moving closer to full roll-out of their technologies. These can deliver significant value for insurers while driving an improved customer experience

Investment and interest in InsurTech will continue to increase

››We will see a number of InsurTechs starting to scale at speed and raise significant levels of new funding

››Success for the InsurTech pioneers will inspire other entrepreneurs and encourage investors and insurers to support more start-ups

››However, disappointments could be a brake on progress, with insurers becoming more reluctant to commit resources to collaborations if they are not prepared to fail fast

Emerging technologies will become increasingly widely exploited

››Technologies such as artificial intelligence and machine learning will become ubiquitous, finding use cases across the value chain

››More nascent technologies, including Blockchain, will also begin delivering value in insurance

InsurTechs will lead innovation as insurers respond to the changing landscape

››InsurTechs hold the key to enabling insurers to respond to the unprecedented pace of change in their operating environment

››The connected home and the sharing economy will provide further challenges and opportunities with which InsurTechs can help insurers

››Despite this, established insurers will start to have a greater influence on the direction of travel as they guide InsurTechs using their deep knowledge

2. The long-term outlook for InsurTech

If insurers aren't careful, collaboration will become disruption

››Insurers that fail to exploit collaboration opportunities will lose ground to rivals and new entrants able to drive value through innovation driven by InsurTech partnerships

››New entrants from beyond insurance could enter the industry with InsurTech partners. We are already seeing reinsurers bypass primary insurers with InsurTech partners, but perhaps a greater threat will come from technology companies as well as the utility and telecoms sectors, as these businesses find ways to expand their current suites of products and enter new markets

››InsurTechs may also choose to go it alone, working with other start-ups or individually as they attract further venture capital funding. Recent Startupbootcamp research found 40% of InsurTechs saw themselves as disruptors rather than enablers and the potential for more full stack InsurTechs to emerge is there [14]

Greater cross-industry collaboration will drive customer centricity and financial wellness

››Working with other sectors of the financial services industry, InsurTechs will be part of the move towards more holistic financial services, with consumers accessing a full overview of their finances through a single portal; this trend has significant potential benefits for financial wellness

››Industry boundaries will continue to blur as insurers (and others) use technology to deliver preventative solutions as well as insurance. A good example where this is already happening is CBien, the start-up in residence for this year's cohort. It is a digital asset management platform that helps people secure, value and manage their possessions, with an option to insure them as part of their more comprehensive solution

››We will move from a crowded marketplace to a world where a handful of key players drive the wellness agenda and ensure consumers have total control of their finances

14 Startupbootcamp InsurTech, Startup Survey, 2017

Conclusion

Is the InsurTech sector living up to its potential to be 'transformational for the wider insurance industry' as we predicted in last year's report? We think it is and it has gathered real momentum this year.

With increasingly sophisticated start-ups offering solutions across the insurance value chain the potential benefits that could be created for insurers, investors and customers alike is huge. Critically, there is now a thriving ecosystem, built on collaboration, working hard to create that value.

Barring a few well known exceptions, the majority of the most exciting start-ups are still in their early stages or piloting their propositions. As they move forward in the months ahead InsurTech will reach an exciting and critical phase. Everything seems to be in place for the transformational nature of InsurTech to be realised. It will be down to those involved to deliver it. Succeed and the floodgates could open, fail and InsurTech, and the future of insurance, could suffer a major setback.

It is a remarkable position for such a young sector to be in but it is reflective of the pace of change that is the new normal in the world today. A pace of change that is the reason the insurance industry must be agile and jump at the opportunity that InsurTech presents to deliver for the good of all - new entrants, incumbents and customers.

A closing note from Sabine VanderLinden

Over 36 months on and it looks like InsurTech will remain a force for good. The market is evolving at a fast pace and it is now empowering teams to address the digital transformation agenda in unconventional and innovative ways. Many insurers have now dedicated significant resources and are building departments of experts who are able to screen and interact with start-ups, from early stage to mature ones. Furthermore, they are doing this in an increasingly smart manner as they identify ventures that show the best fit and alignment with their strategic direction and imperatives.

While we will continue to hear and read about disruptive InsurTech brands, for most it will be their ability to partner with insurance providers that will determine their success. Collaboration is still very much the glue that holds the ecosystem together and the oil that will keep it running smoothly.

As digital first personal lines platforms become more pervasive, the more complex needs of commercial lines providers will become a key focus area for start-ups looking at technology as a means to improving internal processes across the insurance value chain.

It is likely that we will see InsurTechs moving their focus towards delivering fuller stack platforms. As this happens the mid and back office will gradually become more prevalent as will robotics-led servicing, advanced pricing techniques, precision risk scoring, and digital claims platforms focussed on addressing specific weaknesses across ecosystems of interactions.

As we continue to work, support and interact with a multitude of early adopters, insurance brands and investors, we will pursue our vision of enabling true collaboration between innovative gems and the insurance sector we all care so much for.

I can confirm that there are 1000s of highly effective and interesting start-ups that are incredibly relevant for a changing insurance landscape. This year we have seen an increasing number of InsurTechs coming out of stealth mode, aiming to tackle more complex often internally focused problems, and a multitude of technologies is at the core of this enablement.

It is an incredibly exciting time for everyone involved in InsurTech and I cannot wait to see where we stand in one year's time. One thing is for certain - it won't be where we are now!

Sabine VanderLinden

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Startupbootcamp InsurTech

Startupbootcamp InsurTech is the leading accelerator focused on financial innovation. We provide funding, mentorship, office space in the heart of London and access to a global network of investors and VCs, for up to 10 selected InsurTech start-ups from across the globe.

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