Investing in Innovation:
An Insurance Carrier's Guide to Insurtech Engagement

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ABSTRACT

In a heavily digitized world of speed and convenience - where anyone can purchase groceries, hail a driver, and file their taxes from the comfort of home with just a few clicks or taps - consumers demand ease in everything they do. These expectations do not stop short of the insurance experience, and companies that fail to modernize and accommodate them will surely be left behind. Insurers need not fear, however, as substantial opportunity and assistance exists in the growing landscape of insurance technology ("insurtech"). This report aims to provide a comprehensive guide to properly navigating and taking advantage of insurtech for insurance carriers. Despite its overarching theme, insurtech comes in infinite forms, with a variety of specific objectives, for use by every party in the insurance industry. Therefore, the first section of this report breaks down the complexities of insurtech to define it broadly, explain its origins, and analyze leading technologies in the space. In addition, the first section further explores why insurtech relationships are almost always necessary for survival as a carrier, regardless of the difficulties they present. Broken into the five main stages of insurtech engagement, the second section draws heavily from our interviews with insurance innovation leaders to emphasize the most crucial action points for maximizing success in each step. This includes assessing resources such as budgetary capacity and human capital to determine whether external innovation is optimal, utilizing a variety of sources - most importantly insurtech accelerators - to stay informed of insurtech trends and offerings, and creating a standardized process for testing and evaluating potential solutions. Assuming a desired and compatible insurtech is discovered, we discuss how a carrier's needs and capabilities dictate its form of engagement (i.e., partnership, acquisition, or other) and provide essential considerations for fostering a fruitful insurtech relationship of any structure. The third and final section of the report summarizes our findings and highlights prominent technologies such as blockchain that are predicted to drive the future of insurtech. Lastly, we encourage carriers of all sizes to prioritize their technological advancement by devoting resources to insurtech learning, testing, and investment.

Subjects: Information Systems, Insurance

An Introduction to Insurtech

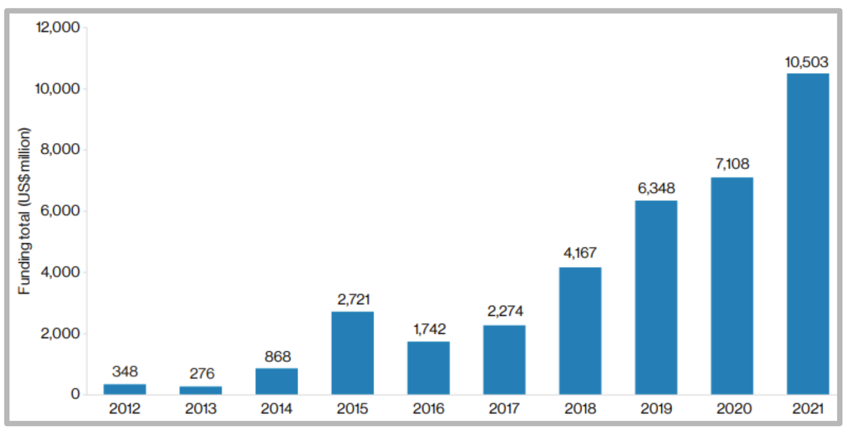
Historically and even still today, the process of purchasing and utilizing insurance has been dreaded by consumers for a variety of reasons. After dealing with notoriously pushy agents, piles of paperwork, and lengthy contracts loaded with confusing jargon, exhausted insurance shoppers may still be denied coverage or sold a generic product not tailored to their specific needs. Furthermore, insureds are frequently overcharged due to outdated methods of price calculation that lump customers together based on surface-level facts and characteristics.

On top of their endless list of gripes with insurance, modern customers demand fast, intuitive, and digitally capable business transactions in everything they do. With competing offerings like Amazon, they expect instant service anywhere, any time, and on any device. This issue of speed and convenience is primarily relevant in the infamous business of insurance as 41% of respondents admit they would switch providers due solely to a lack of digital capabilities[1]. It is due to these sentiments that insurance technology ("insurtech") has emerged and shined in recent years.

Defined generally, insurtech is the use of technology with the purpose of creating improvement in the insurance value chain.

Most sources[2, 3, 4] consider the inception of insurtech to have taken place in 2010 when Berlin-based Friendsurance created the first peer-to-peer (P2P) insurance community in the form of a digital bancassurance platform. Other innovators like CoverHound - a price comparison aggregator for insurance options - and Trov - originally an on-demand property insurance vendor - surfaced soon after in 2010 and 2012, respectively[2].

From their initial emergence, Deloitte[5] estimates that insurtech startups attracted over $16.5 billion in investment through the first half of 2019. Venture capital investment in insurtech grew to $10.5 billion in the first three quarters of 2021 alone from just $348 million in 2012[6] and is estimated to continue rising at an average annual rate of 89%[3]. Furthermore, 81 insurtechs were acquired in 2020[3], indicating substantial maturity within the market.



Annual insurtech funding surpassed $10.5 billion in the first three quarters of 2021 alone[6]

Using our definition of insurtech, over 4,000 insurtech companies are operational across the globe today. Interestingly, only 44% of them come from the United States. Those originating externally predominantly hail from other insurtech hubs such as the United Kingdom, France, Germany, Spain, Canada, Brazil, South Africa, India, China, Australia, and Japan[3].
What differentiates these thousands of solutions is the specific improvement they seek to yield and where within the insurance value chain they operate. While some insurtechs seek to

increase efficiency and cut costs, others aim to simplify the customer experience, facilitate direct distribution, prevent fraud, collect and analyze massive data, select and price risks, automate customer engagement, and more. On a different note, while some target internal functions such as product development, underwriting, pricing, and claims management, others aim to affect externally through marketing and sales, customer service, risk monitoring, and so on.

To illustrate the wide range of insurtech specialties and examine the applications of leading technologies, let us look at a few examples.

First, blockchain is a revolutionary database technology that stores information on a shared ledger to maintain a secure, transparent, and decentralized record of transactions or other data. As information is collected and stored, it is grouped into chunks known as blocks that are strung together to form a chronological chain of events and data[7]. Applying blockchain to policy administration and claims management is Inmediate[8], an insurtech based in Singapore that uses a distributed ledger to power its smart contracts and make policies transparent and fraud-resistant. Through its services, all records of customer documents, transactions, and evidence of validation is stored and published in a shared blockchain ledger that optimizes data control and ensures information is always complete, up to date, and consistent for all parties involved.

Next, artificial intelligence (AI) is a form of technology capable of tasks that usually require human input and decision-making[9]. Under the umbrella of AI is machine learning (ML), a field which focuses on developing algorithms that can analyze, learn from, and identify patterns in data to make decisions independently[10]. Due to the versatility of these technologies, a plethora of insurtechs have applied them to insurance in a variety of ways. For example, Lemonade[11] is a multi-billion-dollar insurtech that leverages AI to automatically underwrite and price renters, homeowners, auto, pet, and term life insurance in seconds using minimal data input from potential customers. In addition, the company leverages similar methods when claims are filed to calculate appropriate payout amounts and automatically reimburse insureds within minutes. Therefore, Lemonade operates primarily in the areas of underwriting, pricing, and claims management, and addresses a number of goals including (but not limited to) increasing customer speed and convenience, cutting costs and lowering prices, distributing insurance directly, and utilizing data and technology to automate key processes.

Lastly, a network of small monitoring devices known as the "Internet of Things" ("IoT")[12] has been implemented in most major categories of insurance to collect data in real time. This allows for more accurate pricing of insurance based on real behavior and other previously inaccessible pieces of information. In addition, it facilitates risk monitoring, risk reduction, and (in some cases) loss prevention that reduce claim counts and lower the cost of insurance on average. In the area of property insurance, Neos[13] is an insurtech offering cameras and sensors for smoke, leaks, motion, and other home hazards. In auto, Root Insurance[14] uses its own mobile application to track driving behavior for automatic policy pricing, premium adjustment, and claim management in the event of an accident or damage. Within workers compensation, MākuSafe[15] provides a comprehensive worker safety system which includes wearables such as armbands to monitor motion, environmental conditions, as well as slips, trips, and falls. Finally, health insurance providers like United Healthcare and life insurance carriers such as AXA[16] have begun using wearable devices such as the Oura Ring and Fitbit wristbands. These track statistics including blood glucose levels and heart rate variability to more accurately assess the health of insureds and offer discounts to those that stay active[16, 17].

The Neos Smart Home Pack, including a smart camera and sensors for motion, contact, and leak[13]

MākuSafe's signature armband, equipped with sensors for ambient light, air quality, noise, air pressure, humidity, and temperature[15]

Contrary to popular belief that has widely persisted since the emergence of insurtech, (the vast majority of) insurtech startups are not out to replace established carriers. Instead, as illustrated by the examples above, insurtechs are created by founders with specific expertise who aim to create unique and innovative technologies designed to disrupt a specific area of insurance. Therefore, insurtechs desire and survive through relationships with carriers that allow their solutions to be of use and propagate improvement within the industry. However, these relationships can only take place if the foolish view of insurtech as competition is reversed.

Instead, carriers must realize that insurtech relationships are a near necessity with substantial benefit to both parties involved. In this largely digitized and quickly innovating world economy, the importance of staying ahead of the curve and satisfying the demands of consumers has been thoroughly established. However, carriers are insurance companies and not technology firms, and they most often lack the time and resources needed to remain competitive on their own when it comes to innovation. Even with the funding or manpower to develop solutions internally, it is usually far less expensive to pay for solutions that are already developed and come from a team of experts devoted to their implementation and maintenance. For these reasons and many others - whether it is through purchasing solutions and services, forging a partnership, acquiring an insurtech, or some other form of relationship - it is clear that insurtech engagement is a crucial consideration for carriers of all types and sizes.

With this in mind, let us examine how the process of insurtech engagement can be broken down and best executed from the perspective of an insurance carrier.

Step 1: The Internal/External Innovation Dilemma

Before committing and allocating resources to the insurtech search, it is crucial that insurance carriers analyze their resources to confirm that innovation by means of an external solution is both possible and optimal. The first factor to consider in this process is internal talent, about which the following questions should be asked in the following order:

1. Does the carrier have enough employees and sufficient expertise among them to solve the problem at hand and build out a solution on their own?
2. Can these employees generate and implement the solution within the carrier's desired time frame?
3. Can the carrier afford to divert the attention of these employees to solving the problem for this amount of time?
4. Can the carrier continually allocate funds and human capital to the maintenance of the solution in the long term?

If a carrier answers "no" to any of these questions, its internal talent is not sufficient to solve the innovation objective at hand and external assistance will be necessary. Compared to most startups and technology firms, (especially large) insurance carriers tend to have older workforces that lack the technical skills and innovative thinking a company needs to develop solutions entirely on its own. Furthermore, with the cost of time and personpower needed to invent, design, and construct products as complex as insurtechs offer, it is almost always less expensive - and always quicker - to turn to a third party.

The second set of questions pertains to the carrier's size and budgetary capacity:

1. Does the carrier have enough excess capital to pay for a third party's solution?
2. Can the carrier accept the risk of investing (a great deal of money) in a solution from a startup company that may soon fail?

Depending on the scale to which they are being implemented, insurtech solutions cost thousands and potentially millions of dollars for carriers to get their hands on. Furthermore, it must be considered that, in most cases, this money is given to a startup company that has yet to establish itself and surpass the stage of high failure risk. For these reasons, relatively small and accordingly risk-averse carriers will likely need to limit themselves to relations with established vendors. For example, IMT Insurance[18] is a West Des Moines-based insurance carrier that sells its products through independent agents across a six-state territory. Having recently pivoted to external innovation, IMT has only considered and invested in the solutions of safely established third parties. Meanwhile, EMC Insurance[19] is a multi-billion-dollar carrier among the top 60 insurance organizations in the United States based on net written premium. It writes contracts in all 50 states and across the world, and therefore has the surplus and appetite to accept the risk of contracting with insurtechs of all sizes. For example, in 2019, EMC signed a commercial agreement with insurtech startup Betterview during its Series A funding round[20].

For most carriers, the analysis of these factors will lead to the conclusion that it is best to look externally to the offerings of insurtech. This choice is further supported by the fact that insurtechs are specialized and experienced experts in their area of focus within the insurance value chain. Their solutions are built and ready for application with varying levels of customization available for the specific needs of the carrier. As soon as the necessary funds are paid, their products can be integrated and leveraged to solve key issues. Furthermore, as a third-party provider, insurtechs have resources dedicated to overseeing the implementation of their offerings, troubleshooting concerns that arise, as well as maintaining and updating their products over time. With all of these resources and services considered, it is most often safer and far cheaper for carriers to take an external approach.

One of a fleet of drones formerly used by Betterview to conduct property inspections using aerial imagery[21]

Core Systems Providers

The goal of the carrier in any innovation effort is to improve efficiency and advance towards the convenient insurance experience demanded by today's customers. In addition to partnering with specialized insurtech companies, this transformation can be supported and fast-tracked through investment in the core systems offered by providers such as Duck Creek, Guidewire, and Insurity.

For insurance firms, core systems providers offer technological platforms and infrastructure designed to consolidate and host all operational segments and processes. For example, Duck Creek[22] provides a low-code, on-demand software as a service (SaaS) platform designed specifically for property and casualty insurers. This includes Duck Creek Policy, an end-to-end policy administration tool for building, delivering, and servicing products; Duck Creek Rating, a flexible rating engine that enables carriers to design profitable offerings; as well as software for billing, claims handling, data analysis, distribution management, reinsurance management, and more. These products are available on a stand-alone basis or together as the integrated Duck Creek Platform, which currently services over 150 customers including notable carriers such as Geico, Liberty Mutual, and AIG.

Software products offered in The Duck Creek Suite[23]

By consolidating operations onto one expertly designed platform, the use of a core system effectively streamlines the diverse and wide-ranging functions of insurance carriers. This helps to eliminate the unpredictable technical debt of legacy systems by providing IT infrastructure at a consistent and defined cost. Time-consuming and expensive software fixes and upgrades are outsourced to the core systems provider, leaving more time for the carrier to pursue its central priorities. Furthermore, the features of most core systems enhance speed-to-market capabilities - making it easier to create and launch new and improved products - and save time with greater process automation for tasks like premium audit.

In addition to the operational improvement that core systems facilitate, it must be mentioned that their usage makes it easier for carriers to work with and implement insurtech solutions. Especially if the core system in question is well-known and widely-used, the insurtech need not tailor their solution to the carrier's unique (and probably archaic) legacy infrastructure. Instead, because the insurtech has likely encountered the standardized core system in its relationships with other carriers, it can more quickly plug in its solution with pre-existing knowledge of its functionality. For example, considering the stature of Duck Creek and the number of carriers that use its platform, experienced insurtechs have almost undoubtedly worked with one of them in the past. Therefore, when implementing their solution for a new carrier that uses the platform, this process is essentially automatic without the need for intensive customization.

However, the downsides of working with a core systems provider cannot be overlooked. While it is helpful for the carrier to outsource maintenance and troubleshooting of its systems to a third party, the lack of control and flexibility this entails is certainly a reason for concern. As users of core platforms, carriers become subject to the design choices and upgrade speeds of their vendors, creating a dependency that makes further internal innovation a challenge. Furthermore, as one of hundreds of users of a given core system, carriers have complained about the commonly slow and impersonal customer service that providers offer.

Benefits	Drawbacks
Efficiency	Costly
Consolidation	Lack of Control
Outsourced Maintenance	Update Speed
Cost Consistency	Customer Service
Insurtech Implementation	

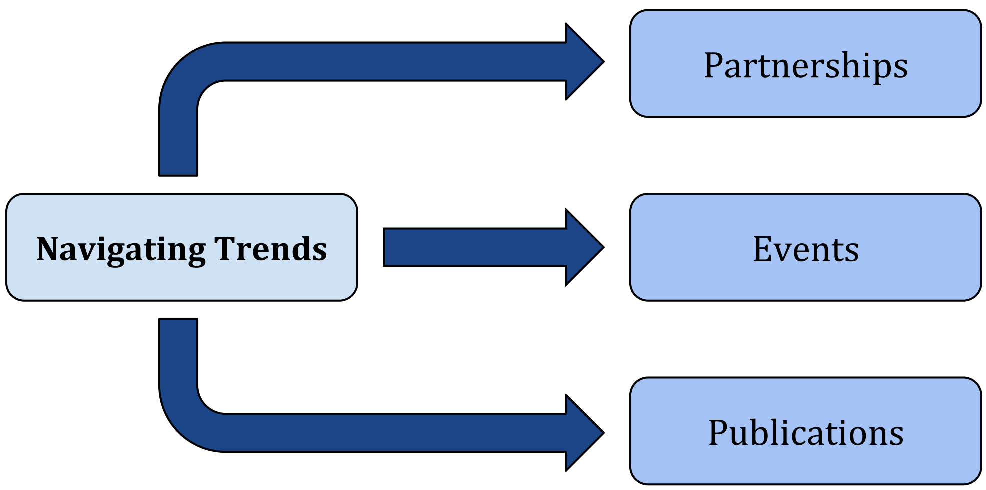
The pros and cons, as an insurance carrier, of utilizing a core systems provider

With these pros and cons in mind - as well as the spendy nature of most core platforms - carriers must determine the combination of core provider and insurtech solutions that fits best with their innovation goals and the resources available to pursue them.

Step 2: Staying Up to Date and Scanning the Market

With insurtech - and the insurance industry as a whole - being such an expansive and innovative area, it is of vital importance for insurance carriers to stay up to date with its most recent and relevant trends. Failure to keep up with these will not only result in the carrier being left behind, but also the loss of potential competitive advantages. For example, if an insurance carrier is unable to provide their customers with the best - primarily the latest digital capabilities and technological products - then it will most likely lose those customers to a better-equipped competitor. This challenge poses the following question: How can one stay up to date and scan the market to keep up with the rapidly changing and evolving area of insurtech? Navigating insurtech can seem daunting; since there are so many offerings, it can be a long and complex process. This is why it is highly encouraged to engage with an entity that narrows the search, helps find insurtechs that suit carrier needs, and provides long-term support even after relationships have been formed.

In short, in order to stay up to date and scan the market, we recommend using a multi-pronged approach that incorporates the following three main practices:



Partnerships

The first practice is the utilization of partnerships with various entities including accelerators, ecosystems, venture capital funds, and more. This section will focus primarily on partnerships with accelerators.

Accelerators

In general, accelerators seek to promote the development of startups. They primarily function by partnering with corporations and investment firms and granting them early access to respective startups in return for monetary investment. The startups in the accelerator program are selected after an evaluation process, and many accelerators further divide these candidates into separate cohorts. The accelerators that do not use this cohort structure may elect to organize their program based on specific projects. Throughout the duration of the accelerator program, the participating startups are provided a wealth of benefits and services including industry knowledge, specialized mentorship (e.g., the founder of an insurtech startup will find advice on how to deal with insurer bureaucracy highly insightful), strategy development, and marketing consulting[24].

Insurance carriers that partner with insurtech accelerators will not only find and engage with promising insurtech startups, but will also enjoy many additional continued benefits including exclusive industry news and updates, direct access to insurtechs that cater to their specific business needs, personal introductions, and more.

The following are key insurtech accelerators that provide a sufficient introduction to and generalized picture of the accelerator space:

- **Global Insurance Accelerator - Des Moines, IA**
  This is the world's first accelerator focused solely on insurtech. It seeks to mentor insurtech startups that target the global insurance industry, and overall work to foster innovation in insurance. Its main program lasts 100 days - running from mid-January through April - and is equity-based. However, it also provides a shorter non-equity program in the fall called InsurTech Days. The GIA's program[25] is highly appealing to insurtech startups because, as it states, "Our investors are insurance carriers, our mentors are primarily insurance professionals. Participating with our program is a highly strategic decision to find product-market fit and do customer discovery faster than you could ever do on your own."

- **InsurTech NY - New York, NY**
  This is an organization seeking to promote insurance innovation specifically within the New York metropolitan area[26]. It seeks to "drive talent to insurance, support innovation-friendly regulation, provide infrastructure to InsurTechs, and improve access to investment." Its accelerator programs are bi-monthly and seek to bring together carriers, brokers, investors, and insurtech startups. There is no equity or fee to enter the programs, and insurtech participants are granted proofs of concept, pilots, partnerships, fundraising, and even talent acquisition.

- **Plug and Play Tech Center - Silicon Valley, CA**
  This accelerator is active in 14 countries and has amassed a network of over 30,000 international startups[27]. Its purpose is to "share with you the latest trends, help you define a roadmap, and make sure that you're at the forefront of digital transformation." Plug and Play is not an insurance-specific accelerator - it has various "innovation platforms" for companies and industries of different types - but its Insurtech Innovation Platform has recently established itself as one of the organization's largest focuses. It hosts hundreds of events every year that bring together corporations, venture capitalists, startups, governments, and universities. It also provides access to market-leading Tech Trend Reports, which include topics like "The Cyber Insurance Handbook," "Leveraging AI in Commercial and Residential Property Insurance," and "The Asian Market: Insurtech in Japan." Most notably, Plug and Play connected Nationwide with Nexar to provide telematics dashcams, Versicherungskammer Bayern with FairFleet to provide drones usable for safely assessing damage to buildings, and Willis Towers Watson (WTW) with Relativity6 to help WTW better predict client churn.

Events

Insurtech-related events are a direct way of being introduced to and networking with countless insurtech startups. Despite the fact that attending events will require an investment of both time and human capital, the benefits reaped from a successful relationship between an insurance carrier and an insurtech will far outweigh these costs. Notable insurtech events include InsureTech Connect in Las Vegas, Nevada; the DIGIN Conference in New Orleans, Louisiana; Insurance AI and Innovative Tech USA in Chicago, Illinois; and the Global Insurance Symposium in Des Moines, Iowa. These are just a few of the many examples that occur on a yearly basis, and this list does not include the many insurance innovation events that are held outside of the United States.

Publications

This is perhaps the easiest and most convenient method of staying up to date. Using publications as a form of market research means that an insurance carrier does not have to rely on a connection with a third-party or sponsor travel to external events. In this section, key examples of relevant sources will be organized and presented, and will serve as a sufficient starting point for a carrier's independent research. It is important to note that, when performing research, a carrier needs to rely on multiple sources across all different mediums in order to gain a perspective that is well-rounded and thorough.

Platforms and Databases

Digital resources are the most accessible source of information, and the internet as a whole is an invaluable resource for performing research. When looking into the insurtech space, there are many curated platforms and databases that allow an insurance carrier's search to become seamless. The following are two main examples:

- **Crunchbase**
  This is a platform that provides an all-in-one prospecting solution powered by a private data repository, allowing investors to research companies, monitor their respective funding progressions, obtain important contact information, and more[28]. It is an ideal resource for all of its users to scan for new business opportunities. It is especially good at helping fast-growing startup companies establish their brand and build their reputation, and technology companies in insurance have enjoyed great success because of their exposure from Crunchbase.

- **CB Insights**
  This is a business analytics platform and global database that gives its users the opportunity to monitor various tech trends and markets, explore different business models, and see companies from all levels of prominence in their respective sector. CB Insights[29] has predictive algorithms and analyst research that allows its users to generate a catered selection of companies that suit their specific business needs. With its ability to analyze millions of data points and give real-time information on virtually any company, this is another key resource for insurance carriers to utilize in their search for an insurtech startup.

Insurance-Specific News Sources, Consulting Firm Updates, and Other Resources

There are countless publications that fall into the category of insurance-specific news sources. Some common examples include the Insurance Journal and the InsurTech Magazine. While the magazines and journals that cover a broad range of topics are useful for obtaining overall industry knowledge, insurance carriers should identify publications with more specialized content that is relevant for their business needs and insurtech search.

Most prominent consulting firms publish useful industry updates, including Milliman, EY, KPMG, PwC, and Deloitte. As of late, their updates have been especially insightful with regards to the rising insurtech space, and many of them have been beneficial throughout the course of our research. Insurance carriers should utilize as many of these industry updates from as many consulting firms as they can in order to craft a well-rounded perspective and knowledge of the insurtech space.

Another notable resource for insurtech research is Gartner. Gartner[30] provides newsroom insights from thousands of research and advisory experts. It is especially renowned for its research methodology, specifically the Gartner hype cycle for emerging technologies. Considering the prominence of insurtech startups in the space of emerging technology, Gartner is a qualified source to provide valuable insights for insurance carriers in their insurtech search.

Step 3: Insurtech Outreach and Testing

At this point, the insurance carrier has narrowed down its pool of potential insurtech collaborators and would like to move forward in confirming fit and making a selection. Although there are many ways to proceed from here, it is useful to establish a process for both outreach to the insurtech and the testing of its relevant products and services. This section seeks to provide a generalized process for accomplishing both of these items.

Outreach

Introductions

With promising candidates on its radar, the insurance carrier can now begin to reach out to insurtech startups. Depending on the size and prominence of the carrier, it may be the case that the insurtech reaches out first. There are multiple mediums through which this can be accomplished, including email, social media, in-person interaction, and facilitated connection through another party such as an accelerator. Once a stream of communication is established between the carrier and an insurtech, an analysis of these interactions should be carried out.

Communication Styles

Throughout the course of an insurance carrier's correspondence with an insurtech, it is important for the carrier to pay close attention to various nuances and characteristics in the style of communication that the insurtech uses. Our interviewees (see Acknowledgments) offered the following specifics regarding what they look for in their communications with insurtech startups:

- **Level of responsiveness and persistence**
  Depending on the size and reputation of the insurance carrier, the insurtech startup will often be the party that initiates communication with the intent of pitching itself and establishing a relationship of some form. If this is the case, then the carrier needs to pay attention to how the conversation starts. If an insurtech oversteps boundaries when initiating correspondence, this is cause to be wary. For example, it is problematic if an insurtech acts too aggressively in asking for money to fund its endeavors or requests too much free reign with carrier data.

  In general, whether the insurance carrier or the insurtech startup initiates the correspondence, the amount of communication that occurs is a key factor of which to be aware. If the insurtech wants to be a serious contender, it must be prompt with its responses and stay persistent in maintaining communication as well as ensuring that the interests and goals of both parties align.

- **Knowledge of superior characteristics and limitations**
  Throughout the correspondence between an insurance carrier and an insurtech, it is important that the insurtech proves its knowledge of itself, the carrier, and the industry as a whole. Carriers should consider the following questions to assess this knowledge:

  1. How aware is the insurtech of it strengths, capabilities, and how it can effectively solve our business needs?

2. How aware is the insurtech of its potential shortcomings and limitations? Is it transparent and honest about them?

3. How familiar is the insurtech with our company? Is it aware of any potential challenges that may arise in establishing a working relationship?

- **Coachability and receptiveness to feedback**
  To be a valid candidate for collaboration, an insurtech must be willing to take and implement any feedback that the carrier provides. It needs to understand the purpose and benefit of feedback in maximizing its relationships and helping it to better navigate and attract future ventures. If, throughout the course of communication, the insurtech displays a lack of receptiveness to feedback or constructive criticism, this is a red flag that immediately jeopardizes its candidacy. Competing in such an expansive and rapidly changing sector, insurtechs need to be flexible and adaptable to change, especially when the success of an insurance carrier is also on the line.

Assessing Fit

When gauging the effectiveness of a potential relationship with an insurtech, it is important for carriers to not only consider the practical aspects of the relationship, but also the intangible factors that come into play. These have just as much - if not more - of an impact on both parties than surface-level characteristics. Through our research, we divided these factors into the following four main categories:

- **Vision**
  When an insurance carrier considers a relationship with an insurtech, it is important to make sure that the visions of both parties are aligned. First of all, what is the overall mission of the insurtech? Does it make sense that it wants to work with and provide its specific services to the carrier? Second of all, what do each of the parties want to get out of the relationship? Will they be working towards a common goal?

- **Trust**
  It goes without saying that carriers and insurtechs must establish a solid foundation of trust with one another. This trust depends upon professional accountability and is necessary for establishment of a genuine and friendly rapport. The business arrangements that form between a carrier and an insurtech often result in complicated contracts, and having a strong sense of trust can play a key role in bringing them to fruition. The importance of trust - as well as strategies that can be used to foster trust - will be further discussed in Step 5.

- **Culture**
  Of the four categories discussed here, culture is the most essential considering the extent to which it contributes to the alignment of the other three. In a carrier-insurtech relationship, it would obviously be optimal if both parties had similar or identical company cultures. However, this is almost never the case, and it is unrealistic to expect that both parties develop a homogenized culture for the sake of their relationship. Instead, acknowledging and addressing stark differences in culture is essential to preventing collaborative barriers. For example, it is important to gauge various corporate

dynamics, such as leadership and teamwork, and establish a streamlined flow of communication and decision-making[31]. Strategies for addressing the issue of culture will be further discussed in Step 5.

- **Integration**
  As mentioned, integration relates directly with culture. Considering carriers and insurtechs have distinct sets of professional and cultural norms, adjustments must be made and middle grounds found in order to most effectively integrate the insurtech's solution into the systems and operations of the carrier. In addition, this effort is necessary to facilitate smooth collaboration. It is important for both parties involved to assess their core values, seek to promote them amidst changes, and work on combining both perspectives involved to facilitate quick and effective integration[32].

Testing

After evaluating the previously discussed criteria, the insurance carrier can move forward with testing of each candidate insurtech's products and services. While the other factors in this section focus on the more intangible aspects of a proposed relationship, the testing process provides more physical and concrete validation that the insurtech's solution is right for the carrier's needs and that a working relationship between the two parties can be established.

The nature of this testing process will vary depending on both the carrier and the insurtech, as well as the business needs that the insurtech is addressing. Since it is on such a case-by-case basis, we can only provide broad examples of what testing might look like. For example, if a carrier has a specific data processing need that a candidate insurtech can fulfill, the carrier can provide a scaled-down sample dataset for the sake of testing. If the insurtech's solution successfully accomplishes its purpose with this data and can hold under sensitivity testing, then the service can be tested at larger scales to prove its sustainability, fit, and scalability. While this is a hypothetical and extremely generalized example of the testing phase, it is important for the insurance carrier to establish a consistent and streamlined process - as well as a standardized set of judgment criteria - that is best for its structure and needs.

Step 4: Investing and Determining Ideal Structure

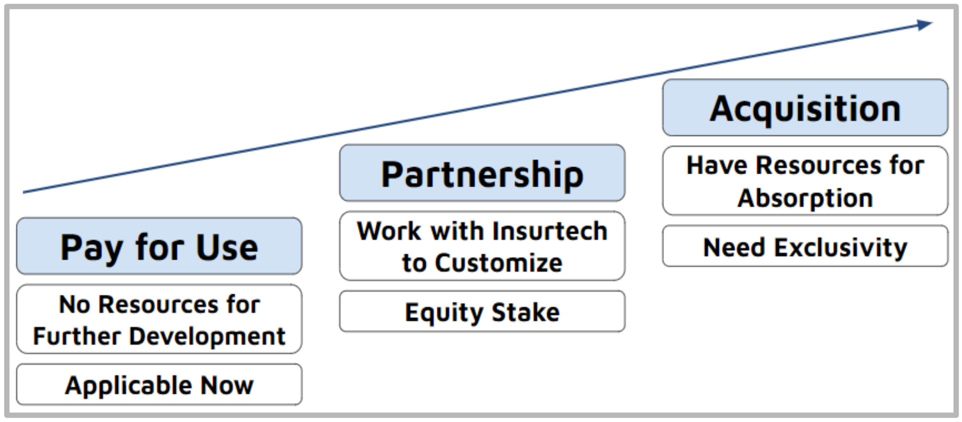
If the results of testing and collaboration confirm that an insurtech and its solution are fit for investment, the carrier must carefully analyze its needs and resources to determine the ideal structure for a transaction and resulting relationship. Through our interviews with insurance innovation leaders experienced in insurtech investment, we identified three primary structural models which offer progressively greater levels of connection with the external company.

The first of these models requires the smallest amount of capital and entails nothing more than exchanging money for access to the insurtech's solution. If the insurtech is matured and offers a well-developed solution that is ready for immediate application with little to no customization, then this is likely the most appropriate option for the carrier. It is also optimal if the carrier has limited funds for investment, insufficient time and personpower to collaborate with the insurtech and further advance the solution, or no need to protect the product from competitors. For example, Sorcero[33] is an insurtech that provides a natural language processing (NLP) platform designed to automate and enhance the analysis of vast, unstructured medical data and content. The company has been around for over four years as of April 2022 and serviced numerous clients including top diagnostic and pharmaceutical companies. Through these experiences, it has proved the efficacy of its solution by generating an overall increase in productivity of 1,000 percent, a 90 percent decrease in literature monitoring time, and a 99.8 percent detection of relevancy for its customers. Therefore, health insurance, life insurance, and other carriers that could solve a business problem or accomplish a key objective with Sorcero's platform can save time and money by confidently paying to use it and refraining from any additional partnership.

For greater connection and collaboration with the insurtech - as well as increased flexibility and control over its solution - carriers can choose to form a partnership. This option is intended for situations in which the insurtech solution requires further development and customization to fit the specific needs and planned uses of the carrier prior to implementation. To gain the control necessary to command such alterations, partnerships typically require the carrier to take an equity stake in the insurtech company. Therefore, this option is exclusive to carriers that have sufficient funds available to do so. In addition, carriers forming a partnership must have the time and human capital to work closely with the insurtech in tailoring its solution, monitoring its application, and making adjustments to it over time.

An example of this model is provided by the partnership between EMC Insurance Companies and MākuSafe, the workers' safety company discussed above in An Introduction to Insurtech. In June of 2019, the two parties launched a pilot program[34] to assess how MākuSafe's data-collecting armbands and analytics software could reduce workplace accidents and in turn prevent workers' compensation claims. The goal of this test was to gauge the technology's performance under real-world conditions "in order to fine-tune the products" before making them available to the public. Following the pilot, EMC made an investment in MākuSafe and finalized a partnership to implement their solutions on a larger scale. In doing so, they asked for changes to various features such as accident reporting, for example to make the devices automatically report all falls and unusual movement[35]. Today, MākuSafe's solutions continue to be deployed in the workplaces of EMC's workers' compensation policyholders to analyze "near misses" and identify predictors of risk that can be used to prevent future accidents. As a result, all three parties involved are benefitted by the innovation.

Finally, of the primary relationship structures we noted in our research, the third is by far the rarest and involves the carrier acquiring the insurtech company. Considering the enormous amount of surplus capital and other resources necessary to handle the absorption and management of the insurtech, this strategy is almost completely exclusive to large and established carriers. However, for those that can handle these requirements, acquisition is the best way for a carrier to gain complete control of an insurtech solution and prevent competitors from accessing or utilizing it.



A progressive model of the three primary insurtech relationship structures and their key identifiers

In recent news, the AI-powered insurance company Lemonade chose to acquire Metromile - a pay-per-mile, usage-based auto insurance startup - in November of 2021 for approximately $500 million[36]. While Lemonade had used its technological strengths to surpass a customer base of 1.2 million policyholders earlier in the year, its reach was limited to home and pet insurance. In addition, the company lost over $55 million in the year prior to the acquisition. Therefore, it sought to integrate Metromile's revolutionary continuous data feed to fuel precision pricing and enhance risk selection for new and existing business. Lemonade has since incorporated Metromile under its "single culture, single tech stack, single brand, unified team, and unified product line," injecting Metromile's expertise and technological capabilities into its growing Lemonade Car program[37].

Regardless of the structure selected for an insurtech relationship - whether it follows one of these strategies or another of infinite customizable variations - it must ensure that the goals of the carrier are aligned with those of the insurtech. For example, carriers should refrain from acquiring an insurtech if doing so presents harmful limitations to its anticipated trajectory. Not all insurtech companies are looking to be acquired and it is possible that restricting a solution to the use of one carrier goes against the goals of its founder or owner. Therefore, any optimal relationship structure must be mutually beneficial and simultaneously advance the aspirations of both parties involved. With that said, there is no one-size-fits-all approach, so carriers must carefully analyze their goals and resources to determine what will work and serve them best while simultaneously empowering their insurtech of interest.

Step 5: Facilitating a Successful Insurtech Relationship

Now that a transaction has been made and a relationship is established, the work of the carrier is far from over. With access to a solution acquired, prompt action must be taken to put it to use. Therefore, the first step in any insurtech relationship involves incorporating the external technology into the carrier's systems and processes. Considering the size and bureaucracy of most established carriers, this task is often lengthy, complicated, and multi-pronged. For these reasons - as discussed in Step 3 - carriers have achieved continued success by creating and calling upon a defined and fast-tracked implementation process. This "process-ized" model should address everything necessary to fully integrate the insurtech, get its solution running, and effectively solve the problem at hand. For example, template forms as well as speedy legal and technical reviews should be used to quickly move the insurtech through the requirements of the legal, financial, IT, and other departments.

During and after these implementation efforts, our research has shed light on a number of key strategies that facilitate smooth collaboration and allow both carriers and insurtechs to get the most from relationships with one another. The first of these is frequent, honest, and considerate communication. Insurtechs operate at a fast pace and are substantially hindered by the delays of the bureaucratic corporate environment. Therefore, carriers must be responsive and communicate at the pace they need. For example, a request from insurtech personnel to speak over the phone means assistance and collaboration is needed today. It does not imply scheduling a meeting weeks or months in the future as it often does in the carrier workspace. Furthermore, as they operate in a foreign setting and attempt to deploy and manage their solution, insurtechs will require clear goals, defined deadlines, and constant direction. To address this need, carriers must set and clearly articulate realistic and attainable targets at the outset of their relationship. In addition, they must be patient as things progress and provide consistent feedback - both positive and negative - when it arises. Finally, while the majority of insurtech leaders are technologically skilled and experienced, they often lack a deep understanding of the intricacies of insurance. Therefore, carriers must work to identify and fill gaps in their knowledge by educating the insurtech and ensuring their solidified understanding.

Along similar lines, we found that developing personal relationships and becoming friends with insurtech associates effectively supports the success of carrier innovation ventures. Considering the amount of pain-staking work that the two parties must collaborate to complete, it is crucial that both sides feel comfortable and connected with one another. This makes the need to communicate far less daunting and unnatural and promotes the honesty that is necessary to achieve optimal results. Furthermore, friendship fosters mutual trust and dedication from both sides to deliver on their promises in an impressive and exceptional way. Lastly, in addition to increasing the probability of life-long connection with the insurtech beyond professional contexts, the time spent together as friends helps to mitigate the effects of often detrimental differences in culture. Not only will it help carriers to change their mindsets in favor of agility and flexibility, but also allow insurtechs to more easily assimilate to the unfamiliar legacy carrier environment.

But how can a carrier go about creating this friendship in the first place? Sure, joint events like dinners, office parties, and team-building activities are great opportunities to bond with insurtech associates and demonstrate that the relationship is not exclusively professional.

However, even more important is an intentional effort by all carrier employees to get to know the insurtech personnel on a personal level before commencing any business collaboration. This sets the stage for further relational development throughout the course of such work as well as a more enjoyable and productive experience facilitated by the benefits we discussed.

Next, in any undertaking related to innovation, it is crucial that carrier leaders and C-suite executives are on board and in support. Though its payoff is most certainly worth it, the process of insurtech engagement is long and demanding, requiring significant time, money, and resources to yield success. In order for innovation leaders to gain access to these resources and the flexibility needed to deal with uncertainty and pursue unanticipated opportunities, commitment to the mission must extend to the very top of the organization. This becomes especially important once an insurtech relationship has been formed and substantial devotion is needed to implement a solution and get it properly functioning. Therefore, carrier innovation leaders must secure executive buy-in prior to embarking on the journey of insurtech engagement in order to draw upon it throughout. Despite its intimidating nature, this can be done by establishing a clear game plan, timeline, and budget to be presented to executives. In doing so, the problem(s) at hand and the benefit of turning to insurtech must be emphasized in spite of all that is necessary to obtain it.

Another difficulty faced by insurtech companies - when in a relationship with an insurance carrier - is properly navigating the carrier's expansive operations and seemingly endless personnel. Depending on the reach and impact of their solution within the carrier, insurtech companies will need to collaborate with employees and access resources across the organization. Therefore, to prevent struggle and facilitate efficiency, carriers should designate a point contact for the insurtech that is knowledgeable and well-connected within the company. When a need arises, this individual can quickly respond by providing an answer or directing the insurtech to the employee that can do so best. By making introductions as needed, the point contact helps the insurtech gain a grasp of the carrier's structure and thoroughly integrates them throughout the business. Furthermore, as the party in closest contact with the insurtech, carriers can utilize the point contact to measure the effectiveness of the relationship and respond appropriately when things are not going as needed or anticipated. If opted for, this monitoring should be conducted using meaningful and measurable metrics that track the progress and value of the relationship to the carrier.

Finally, often the most detrimental forces in relationships between carriers and insurtechs are differences in culture. In comparison to stereotypically traditional, risk-averse, and rigid legacy carriers, insurtechs tend to foster young and agile cultures in which risks are welcomed and new ways of thinking are encouraged to create change and innovation. As a result of these contrasting norms and philosophies - and despite their need for insurtech

The five key factors for a successful insurtech-carrier relationship solutions - carriers struggle to work closely with and integrate insurtech companies into their internal ecosystems. Therefore, it is clear that prioritizing cultural fit is necessary to maximize insurtech relationships and achieve the intended outcome of insurtech innovation. To tackle this task, carriers should take time before finalizing an insurtech relationship to ensure that values and priorities are aligned on both sides. Through this process, differences can be identified and an integration program can be outlined accordingly. Acknowledging that defined corporate culture boosts satisfaction and revenue[38, 39], such a program must outline its goals with precision, implement steps for internal change, and effectively reward employee behaviors that exemplify the open-minded and adaptable culture being pursued.

Looking Forward and Getting Started with Insurtech

Though attitudes seem to be changing thanks to revolutionary technological advancements, the process of shopping for, purchasing, and utilizing insurance continues to be generally feared and dreaded by consumers. This can be attributed to the misalignment between stereotypes historically attributed to the industry and modern demands for digital capability, ease, speed, and convenience. Either way, one thing is clear: insurance carriers that fail to innovate and satisfy these demands will fall behind and surely perish.

However, even carriers that understand their obligation to improve and advance most likely lack the resources and expertise necessary to generate sufficient innovation. At the end of the day, carriers are insurance companies with insurance expertise and insurance priorities, not technology companies with the time and manpower to focus on inventing and developing new technologies from scratch. This is where the need for insurtech becomes apparent.

Not only are insurtech companies led by experts in the technologies that they harness, but they offer ready-to-use solutions for pain points in the insurance value chain and staff dedicated to implementing and maintaining these solutions for their clients. Therefore, as opposed to internal innovation, investment in insurtech tends to be the faster, cheaper, more effective, and more sustainable option for carriers looking to stay competitive in the long term. However, while looking externally is the optimal innovation strategy in most cases, each carrier must make this decision for itself based on the human capital, budgetary capacity, and other resources it has available.

Regardless of this decision, in order to remain competitive and take advantage of compatible opportunities, carriers of all sizes and strategies must keep a watch on the insurtech market. This involves educating oneself on available offerings as well as emerging trends and technologies that are shaping the future of the space. To do so successfully, a variety of sources must be consistently employed and analyzed. Recommended options include insurtech accelerators and ecosystems, venture capital partnerships, insurtech events and conferences, industry publications, and consulting firms.

At the current moment, experts predict that blockchain, artificial intelligence (AI), machine learning (ML), and the Internet of Things (IoT) will continue to produce positively revolutionary solutions that lead the insurtech market. In addition, however, virtual reality (VR), augmented reality (AR), and other methods of modeling the world digitally will develop substantially and emerge as commonplace tools for the simulation of risk and the assessment of loss. For example, after a home is ravaged by fire, these technologies can be used to analyze - on a very granular level - the extent of the damages and calculate the most accurate cost of repair or replacement without compromising the safety of a claims adjuster[40].

If a carrier identifies an insurtech that addresses one of its problems, it must reach out promptly to connect with its leaders and learn more about its solution. Assuming the insurtech's leaders are responsive, honest, knowledgeable, and coachable, a pilot or proof of concept is in order to assess the solution in practice. This demonstration allows the carrier to see how the solution functions independently as well as in conjunction with its proprietary systems and data.

Conditional on the solution's satisfactory testing performance and fulfillment of the carrier's desired criteria, the next step is investment. It is crucial that each carrier carefully considers its needs and resources to determine the optimal structure for a transaction and resulting insurtech relationship. If the solution is mostly perfect and completely prepared for deployment at a reasonable price, simply paying for access to it may be sufficient. If the carrier has lots of surplus funds to work with and needs exclusive control of the solution, it may go so far as to acquire the insurtech firm.

Finally, to maximize an insurtech relationship of any structure, carriers must be flexible, adaptable, and willing to take chances that may lead to failure. Senior leadership must be supportive of the relationship and willing to provide what is needed for it to thrive, including the time and assistance of a well-connected main contact capable of pointing the insurtech to the personnel and resources it needs at every moment. Furthermore, carriers must learn to communicate clearly, honestly, and consistently, and to form friendly connections that yield the same from any insurtech they work with.

A world of opportunity exists for insurance carriers of all types and sizes in the realm of insurtech. Taking advantage of this opportunity all starts with the simple action of devoting resources to its exploration. For smaller carriers with little to no investment ability, this may be as minor as assigning an employee to research insurtech offerings and report back to the rest of the company for their consideration. For larger carriers with substantial capital and desire to invest, this may entail establishing an innovation or venture capital arm that specializes in monitoring insurtech and carrying out the steps described above.

Regardless of size, we encourage all carriers to give as much as they can to insurtech engagement. This starts with understanding individual needs as well as the obligation as a modern business to innovate and prioritize technological advancement. With this in mind, carriers must educate themselves on insurtech, search for insurtechs that address the problems and goals they are facing, and take action with the insights provided in this report to pursue relationships essentially guaranteed to transform their businesses for the better.

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