THE FUTURE OF INSURANCE

Adaptive insurance products and why customers will demand them

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MANAGEMENT SUMMARY

Adaptive insurance products

Insurers will have to think about risk and security in completely new terms. This will be driven by the impact of technological development on customers' lives and on the processes of insurers. Providers who serve the individual security needs of customers in a completely new way and become security managers will future-proof their business: as adaptive insurance providers. Make this your **advantage!**

Adaptive products are the necessary reaction of insurance providers to changing customer expectations and needs. Those who fail to exploit technological innovation will disappear from the market within a few years.

Insurers will ultimately disintegrate their divisional organization through adaptive products and offer customers a comprehensive product that represents their individual risk profile. Of course, this adaptive insurance product will include risk coverage. However, the focus of the product is the continuous prevention of risks for the customer and the provision of relevant services.

On their way to a comprehensive adaptive product, insurance providers will become adaptive companies. Omnichannel management is the interface department that operates the intelligent contact between customer and insurance provider. Thus this department will be the very core and starting point of adaptive insurance products and the adaptive insurance company.

#1 Be faster than real time! Product recommendations are good, but predictive risk prevention is better. This will be the new standard. Make it your standard even earlier.

#2 Become established as the security manager of your customers. Think about how many security managers a customer will let into their life: one. This is an opportunity, risk, and responsibility at the same time.

#3 Stop leaving your customers in the dark about what you know about them! Let each customer decide which data they want to share.

#4 If you sell products, you will drive customers away! Stop selling insurance products and start selling security!

#5 Do you have omnichannel management in place? Develop it now! Make it the central transformation platform – for your customers and your company.

#6 Use your digital infrastructure in order to involve your customers (and your non-customers), your business partners, and all of your staff in the conception, production, and distribution processes for your services and products.

#7 Instead of thinking in terms of departments, start thinking in terms of projects! Put an interdisciplinary team together for every project. After the project is completed, members will join other teams.

#8 Give away real insurance coverage. Offer freemium insurance. This can easily be financed through the future gap left by the commission fees paid to brokers today.

#9 Develop insurance against social decline, from the loss of housing to a drop in income class.

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Foreword

Dear Reader,

Security is one of the basic human needs. However, security is no condition that can be established once and permanently preserved. Security is simply the protection from dangers and risks that can be achieved through reasonable effort and constraints. The possibilities for realizing this are numerous – insurance coverage is only one example.

However, insurers will be more effective if they view protection and security not as a static condition, but as a dynamic changing system of individual risks. The products that providers will offer as solutions in the future will be adaptive. They will be individualized and modifiable.

The present study presented here names the main drivers for the future of adaptive insurance products. It explains what players will drive which trends, and for what reasons. From the roadmaps, plans, and expectations of the major players involved, a picture of the future of adaptive insurance products emerges for the coming five to ten years. And, based on concrete strategic options, this study shows what steps you must take to help shape the future of adaptive insurance.

The trends described in this study are to be understood as long-term aids for strategic orientation. Be sceptical of trend studies which forecast that your industry will completely change overnight. This is nonsense. Most providers of insurance solutions will be able to continue their business operations for many years: granted, continue with considerably less profit, but continue nonetheless ...

The present study invites you to shape the future. Be encouraged to develop new approaches to the future by conducting manageable pilot projects in order to enter new business areas and acquire new customers, while also generating more profit than is lost by your existing business. Your success in doing this – or lack thereof – will decide whether you number among the winners or the losers of today's trends in 2026.

Please do not hesitate to contact us if you would like to use the results of this study to review your strategies. We would love to help.

We wish our readers an open-minded approach to the industry as well as an awareness, as they plan their future, that they can only influence change by actively shaping it.

Make your company future-proof! We would be delighted if this study helps you to do so.

We wish you an inspiring read...

... and a great future!

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THE STUDY

Trend cycle analysis - Not megatrends

This is not a study on Megatrends. Those who work with megatrends do so on the assumption that there are a limited number of drivers that affect all business areas equally. This is wrong. Trends exist only because industry developments are driven forward or blocked by those individuals who have the resources or authority to do so and to lead others in doing so.

Human behavior – and thus also investment decisions – always follows specific interests, desires and compulsions. These vary by industry and by industry sector. We trend researchers are able to observe this behavior on the part of decision makers; we can try to understand it, we can analyze driving and blocking factors, and we are able to generate forecasts regarding where this behavior on the part of industry players will lead. In the sciences, we call this qualitative research. The following study is based on this approach. Unlike with other industry studies, you will find no lists of percentages in the following pages. Futurists know that the future can neither be measured nor quantified – because it has not happened yet. For the most dead-on forecast possible regarding what will happen in your industry in the years leading up to 2026, no representative survey of customers or so-called experts will help, no matter how large-scale it may be – because no matter how many you might interview, they would likewise be helpless to predict a future that has not yet occurred.

The only possible way to come close to a reality that is still in development is to speak with trendsetting companies and industry players who are driving the technologies and trends that we will all meet in the future through the decisions they are making today, because you can talk to these players. Furthermore, you can try to understand their motives and compulsions. You can find out about their expectations and roadmaps for the years to come. Where their statements intersect, we can see those trends that are being pushed – or blocked – most forcefully. This provides the basis for the most realistic picture of the future of your industry that researchers could possibly offer you. You will find this picture on the following pages.

The trend research institute the 2b AHEAD ThinkTank specializes in the identification of driving and blocking factors, the analysis of opportunities and risks, and the development and implementation of business models for the future – all individually tailored to the trend cycle of specific companies. This last feature is important because the players who have a decisive influence on the business

of their organizations vary from company to company. Thus the trend drivers and blocking factors, as well as the opportunities and risks, also differ between companies – even within the same industry.

Those who handle their future responsibly will not run after the one-size-fits-all megatrends of supposed trend gurus, but will base their strategies on the goals and the roadmaps of the leading attackers and defenders in their markets. This is our mission. We would be thrilled to hear that this study has helped you succeed there, too.

THE BIG PICTURE

How will living and working environments change by 2026?

Big Picture

The Big Picture is a comprehensive overview of the future that we have prepared on the basis of the insights gained through our trend studies. These include, among others, the following trend studies published by our institute:

- The Safe Building of the Future – Trust as the Key to Smart Homes and Smart Buildings
- Textil Customers 2026 – How the Textile Industry Can Successfully Meet the Needs of the Digital Customer
- Personalized Medicine of the Future
- The Customer Dialogue of the Future – Omnichannel Management in the Logistics Industry
- HR Management of the Future – Personnel Strategies for the World of Full Employment

Nearly every level of society is facing years of extensive transformation. The living and working environments of 2026 will differ fundamentally from those we know today. This will also change the basic conditions and possibilities for corporate activities across industries, both on the financial side and also in terms of our striving for meaningful activity and personal fulfillment. The drivers behind this transition are already clearly evident.

The average life expectancy in Germany will exceed 85 years and tend towards 90. In many families, celebrating the 100th birthday of a grandparent will have become a normality. Even among other families the question will arise: What will people want to do between the ages of 60 and 85? Vacation? Work? Most are sure to experience a sort of new beginning as they enter the third active segment of their lives between 50 and 60. The phrase “new beginning” is meant literally here: a new job, a new home, a new life partner… active living will continue at that point. The arrival of retirement age with its reduced mobility and activity will be pushed back even further. People will half WANT this in order to spend those 30 years in a meaningful way, and they will half be FORCED into it in order to avoid the very real threat of old-age poverty.

People will experience their personal health as the greatest luxury of the future. Thanks to all varieties of body enhancement, health will increasingly become a purchasable consumer good: Medical food will eliminate most illness in society; brainfood will offer the custom-tailored optimization of mental performance, and the production of human organs as replacement parts will lead to further increases in life expectancy, initially in the luxury segment. The next stage will be genetic optimization, which has as a chief goal slowing – and finally stopping – the aging process.

In Germany as well as internationally, people are streaming from provincial areas into major cities. Rental costs are rising in the booming metropolises while rural areas are slowly being abandoned. Germany will have experienced a long-predicted transformation by 2026. We will then live in an era of full employment, and not only that: Headhunters will begin to show up at the door every day thanks to the approximately 3-4 million unoccupied positions in German companies.

The companies themselves will see this as a catastrophe. Not so the employees: They will have the upper hand in the employment game for the first time in decades, and thus can freely choose the job they want. This trend will push salaries upward, but will also be cause for the fact that roughly 40% of the working population will change projects – and companies – every 2-3 years as so-called "project workers." The short supply of personnel will also compel companies to develop and communicate their attractiveness as employers in new ways.

Against this background, some of the fundamental values of our society will be redefined: Security in life will remain important, but will be determined by new factors in the face of constantly available new jobs. It will more intensely be fueled by the knowledge that new solutions can readily be found even in times of crisis. Closeness will primarily be linked to the quality and quantity of interactions, not measured in meters. Trust will grow where expectations have been fulfilled. Expertise will be available round the clock in a world where countless experts – both genuine and self-styled – will strive for recognition, this is also true for the health industry; communication will be the factor that determines who will finds an audience with consumers.

The greatest change, however, between now and 2026 will find its cause in the rapidly expanding phenomenon of digitalization. In the future, digitalization will permeate all areas of life with information and communications technologies. Strategically speaking, however, the struggle for some time now has not been between computers and mobile phones. The successors to the iPad & Co. will be: iTable, iWallpaper, iMirror, iCar, iShopWindow, iShelf, iTrainSeat and so on. All objects that can thereby obtain new uses will become internet devices.

In the future, the Internet of Things will not only encompass individual buildings, but entire cities and even the entire world. Every object will have an IP address. The "Internet of Things" will become the "Internet of Everything."

New human / machine interfaces

At the same time, new, user-friendly usability concepts and new human / machine interfaces will appear. The technological hurdles for an automated and individual customer approach will be largely eliminated. Companies will have to prepare themselves for the time when electronic devices will not only recognize individual customers, but also their current state of emotions, sensitivities, and vital functions. Consumers will grow accustomed to communicating with their devices in a "human way": through language, facial expressions, gestures, and later even thoughts. Thus customers will also grow used to the fact that technology will be capable of assessing their present situation and reacting to it successfully – within fractions of a second. Electronic devices will thus become "more human" than their human counterparts, because they will know much more about the customer than the average stranger would! This presents a great risk for human experts and sales representatives, but also a great opportunity for those who know how to use the technology competently.

Devices are better than salespeople – They remember you

Indeed, the additional benefits of connected devices in the future will not come about by means of data as we understand it today: those statistical heaps of data now lying in databanks. Our present conception of data will change. The intelligent compilation and evaluation of information on users' dynamic data will also be part of our future understanding of data. Object recognition, image recognition, and observation-capable interfaces will guarantee that, in the future, everyday objects will observe the behavior of their users, combine this real world data with stationary information stored in the cloud, and produce unique and situationally appropriate prognoses regarding the current needs of the user through automated algorithms or business intelligence systems

– always accurate down to the second. It remains to be seen to what extent these devices will require an intelligence of their own or will function as part of a "smart grid" through which they are controlled situationally, yet also in a centralized manner. The question of "data" in 2026 will have little to do with the definitions we are accustomed to today. It will mainly be a question of the recognition of the user's needs ... and the prediction of their desires even before they appear.

Smartphones as intelligent assistants – The dawn of the traffic-light society

In spite of the rapid expansion of smartphone use and the resulting opportunity for consumers to use all new apps available, one basic truth of technology- and media use cannot be ignored: Only a small percentage of us are highly active users who proactively seek out, try, and use new applications. The vast majority of the world's population remain couch-potato consumers. This leads to problems when today's apps require active intervention and input by the user. The result is this: Even when the great mass of users own devices that have apps on them, this in no way means that these apps are being used.

An essential future market will thus be systems that function independently of active control on the part of the customer. Such systems "observe" their owners while they go about their daily activities, analyze the data gathered, use it to create "needs profiles," and take these profiles as a foundation for constantly filtering the environment of their owners. These systems acquire their intelligence through automated data exchange with other nearby devices. In that way, they project suitable (though entirely unsolicited) recommendations into the view of the user when the user finds themselves in an everyday situation that requires making a decision. Software designers do not describe these assistants as "programs," but conglomerates of many individual programs. Most of the necessary data will be gathered from the user's mobility profile, which will consider not only their physical location, but also, for example, their personal internet habits.
We will soon have intelligent technological assistants that owe this intelligence to data gathered from their users' everyday lives.

At the same time, we will experience a paradigm shift in the realm of data protection. Naturally, all of the predictions mentioned so far will only take place if people release their personal and user data for this kind of analysis and forecasting. This is highly probable. For, even today, we experience the same patterns and strategies when we move in the computerized world of the internet. Even there, the security of our data is undergoing a major paradigm shift. The assumption that private citizens do not want to release their data is 1980s thinking. Today's population does not want to keep its data secret. Data protection will become more important in the future, but also different, meaning that the consumer can view, change, and delete the data saved about them with a single click. There will be a system in place that ensures this. Companies that have the trust of their customers as "trust centers" will have the best chances strategically. No company really wants to annoy its customers with mass advertising that scares 90% of recipients away and is only useful for the remaining 10%. However, in order to filter out this 10%, companies will have to evaluate consumer data. And for that, they need the trust of their customers. Customers will understand this, because life is much more comfortable when you receive only useful information.

In 2026, people will live in a "traffic light society." They will have grown used to having an electronic assistant on their smartphones for every area of life that gives suitable advice, product evaluations, and tips for every possible situation. Customers, however, will not want to receive all this virtual information as rows of digits or mountains of text. They want to be told: Is this the right product or service for me, or not? In most cases, your customer in the year 2026 will trust their smartphone more than human salespeople. This will be a good thing, because the smartphone will give them better answers!

Loss of significance for salespeople ... the devaluation of the expertocracy

Let's not beat around the bush: Digitalization holds not only great opportunities, but also major risks for today's companies. When we look back from 2026, there will not only be big winners in the digital world, but also large numbers of losers as well. Because what can sales staff do when customers know better via barcode scanners and Amazon if a particular product is right for them, how other customers have rated it, and if they can get it cheaper around the corner? Today's expert, tomorrow's cashier!

This development will not only affect salespeople. What can teachers do when their students know more than the department of education requires by reading eBooks? Today's expert, tomorrow's reciter! What can craftsmen do when homeowners no longer seek advice on heating their houses, but already know from the internet which heating system is best to install? Today's expert, tomorrow's handyman! What can tour guides do when there is always someone in the group who has more to say about the history of local landmarks – thanks to their smart phone – than the guide could ever memorize? Today's expert, tomorrow's chaperon!

What will real estate agents do when their clients receive an offer for their dream apartment automatically in their smart glasses as they cross the street? Today's expert, tomorrow's doorman!

In the next few years, we will experience a devaluation – a loss of significance – of the expertocracy that will radically change large segments of our economy and open the way for new ones. Because: Those experts who characterize our world today will have to ask themselves: Can my expertise be offered faster and better custom-tailored by software in the future? Salespeople who do their work simply in terms of gathering, compiling, and passing on data ... will lose their share in the market to electronic assistants.

But this is no reason to stick our heads in the sand. On the contrary: Those who actively use this trend in their work will be among the winners in tomorrow's business. The real winners will be those who know how to use the capabilities of digital devices for themselves as electronic assistants and, at the same time, are able to offer their customers services that digital devices cannot.

INTRODUCTION

Adaptive insurance products

Life insurance has long been the embodiment of security and continuity – the hallmark of insurance companies. However, it is currently sailing in troubled waters. A difficult market environment, combined with falling interest rates and with new expectations about valuable lifetime options and guarantees in the face of demographic change, is posing a huge challenge for life insurance products. Classic life insurance has been becoming increasingly less profitable in recent years, both for customers and insurance providers. Several providers are currently moving away from classic life insurance solutions. Strong obligations to maintain an appropriate level of equity in order to cover materializing risks and the low-interest phase make it nearly impossible to increase customers' financial assets. On top of this come Solvency II, distribution and product regulations, and other new regulatory frameworks which demand higher performance and decreasing costs at the same time.

Politics on the one hand, and customers on the other, are putting pressure on insurance providers. Consumers frequently perceive insurers purely as service providers for the event of damages. The product – and all the more the provider – face the danger of increasingly becoming interchangeable. The example of legal expense insurance clearly illustrates this as customers only realize their need for coverage when problems are already on the board. Thus most insurance providers have a waiting period in place until customers can claim insurance benefits. However, the more frequently customers use their insurance, the more expensive it must become in order to protect against expected risks. Higher rates mean less customers and subsequently less profit. How can insurance providers bring this development to a halt or even reverse it? How can they take up the challenges of digitalization and transfer them into customer- and market-driven contemporary products and offer valuable services?

Adaptivity is the key with which insurance companies can react, will react, and must react to these changes in the coming years. Not only does it mean a new way by which insurance products can be adapted to individual customer needs, but it also holds the promise of being able to permanently adapt to changing customer needs.

Why will insurance companies developing adaptive insurance products by 2026? Because their customers will expect it from them. Because many providers from

other sectors will do so. Because their competitors will do so. This study examines the transformation of the customer dialogue, technology, and organization of insurance companies and describes how insurance providers can realize adaptive products.

To begin, we will investigate how insurance products will change through the use of technology and how this will affect customer expectations and behavior.
What are the means by which insurance providers can fulfill the performance promises of adaptive products?
Why will customer expectations in 2026 be different from today? What influence will digitalization have on customer behavior?

Based on the analysis of customer expectations, we will explore the demands placed on providers.
What technological changes will insurance companies have to initiate in order to offer adaptive products?
What are the necessary organizational changes?

The speed of change is enormous. Thus insurance companies have little time to get ready. The market is already on the move, and this will only increase with time. The next part of the study describes the many players and their business models that are attacking established insurance providers.

The goal of this study is to investigate adaptive insurance products. The concluding concrete strategic recommendations will show how you can be successful on this path.

THE FUTURE OF INSURANCE PRODUCTS

How digitalization will lead companies to adaptive products

"Digitalization does not end in the beginning or start at the end. Digitalization must be thought through and implemented from an end-to-end point of view. At the same time, digitalization is not an end in itself for companies – digitalization is a means to achieve something."

Dr. Jörg Günther, Partner, KPMG AG Accounting Corporation

Despite all the public debate, digitalization remains an underestimated phenomenon, even though it not only places production processes, distribution networks, and the communication between providers and customers on a new footing. Digitalization also changes the natural demands that customers place on the satisfaction of individual needs, constant availability, and in the fastest response time – and thus also challenges and promotes the formation of novel products.

Technological change is the starting point for adaptive products. By 2026, customers will no longer be satisfied with standardized products, standardized services, and standardized communication. They will expect an individualized fulfillment of their needs, changing the fundamental values in the relationship between customers and insurance providers.

Digitalization will see the increase of technological innovations that will allow insurance providers to adequately react to these new needs.

The Internet of Everything

"The Internet of Everything provides an enormous number of dynamic parameters that make the calculation of adaptive insurance products possilble."

Oliver von Ameln, CEO, adesso insurance solutions GmbH

Even today, various industries are exploiting the new possibilities of the "Internet of Everything" and analyzing the potential of connecting countless objects in everyday life in the interests of their business models.
Yet this technological development will have decisively progressed in the coming ten years. Now we consider the options of connecting and networking devices – in 2026, the idea of not being able to connect devices will have vanished: enter the Internet of Everything.

The Internet of Everything and the rapidly increasing

amount of data will affect how we perceive and use the related services. On the one hand, this development will be driven by customers and their direct benefit. On the other hand, companies will recognize business opportunities here. The field of services that are potentially useful for customers is equally as limitless as are the positive assumptions about sales and profits in this area.

The leap forward from the Internet of Things to the Internet of Everything is greater than that from a 56k modem to today's internet standard. Different factors will drive the rapidly growing quantitative spread and qualitative transformation of technology:

- In the coming years, the classic Moore's law – dictating that the number of transistors on microchips doubles every 18 months at a constant price – will have reached its physical limit. Present transistors cannot become smaller than single atoms and this limit is expected to be achieved in the first half of the coming decade. This knowledge alone is driving scientists and corporations around the world to search for alternatives. Thus the end of Moore's law is one metaphorical door that is closing while another one opens. The increasing performance of electrical devices will drop to zero in the long run.

- Increased performance makes it possible to make sensors and devices smaller and therefore to integrate them even more naturally into everyday devices. One important requirement for this is the expected improvement of energy supply for technological devices. In the future, the required energy will no longer be provided by incorporating batteries. Technologies that transmit energy through radio waves or via NCF are currently growing out of their infancy. The development of interfaces through which even the smallest devices can draw the required energy from their environment is enormously accelerating the development of the Internet of Everything.

- In the future, the required storage space for the increasing data volumes will be accessible at almost no cost. The further development of transmission technology and the increased speed and / or the growing intelligence and efficiency of transmission systems will be additional enablers for the Internet of Everything.

- The rapid spread of the Internet of Things is driven by companies in the areas of energy, transportation, health, production, and smart homes. This list can extended arbitrarily. Every day, more devices are being connected to the Internet of Things, a growth that can only be supported through the development of comprehensive standards. Those who own a fitness wrist band and think about buying one from another manufacturer will notice that their data will, in most cases, not be available anymore. This is a general problem in today's IoT world. Data is often stored on the platform of the manufacturer and is non-transferable. The development of common standards is the aim of consortia such as the Open Connectivity Foundation, the AllSeen Alliance or the Internet of Things Security Foundation. Companies such as Intel, GE, Cisco, IBM, Microsoft and many more are working on a manufacturer-independent interoperability of devices and on the security of those millions of new opportunities for cyberattacks. Only when applications are comfortable and secure are they attractive for the industry and for end customers. Here the expectations of industry and private users converge: They are both concerned with optimization – production optimization and the optimization of personal life.

The increasing networking of different kinds and sources of data also results in a growing basis for attractive insurance solutions of the future. As a cross-sectional industry, insurance depends on the standardization of data in a special way. Customers create additional data with every smartphone or wearable sold, every smart-home system installed, every connected car and all new networked areas of life. They are the basis for adaptive insurance products and – and at the same time – increase the need for insurances to become an elemental part of the networked life of their customers.

This results in a clearly communicable added value for customers: Insurance providers intelligently correlate this data and offer customers the right solution for every situation, be it in terms of up-to-date risk coverage or long-term benefits. Independent of a short-, medium-, or long-term insurance solution, providers will be able to address individual needs with unexpected accuracy. Here the Internet of Everything and adaptive insurance products mutually drive each other.

Customer data is used by insurance providers in order to offer adaptive insurance products. On the other hand, data volume and provider knowledge will grow as the customer uses the product.

Big Data und Predictive Analytics

"With prevention and services, the customer experience chain is considerably extended. Then providers will no longer speak with customers about damages, but how they can prevent them."

Thomas Rainer Tögel, Member of the Board, ERGO Versicherung AG

The customer of the year 2026 will live in a world full of data. However, their opportunities for autonomously evaluating the data generated by or associated with them remain restricted. This is the prime level for services: The evaluation of big data and the transfer of this evaluation to adaptive products will be the greatest added value of the data-driven decade to come that companies can create for customers.

For this, companies have to deal with three data-related challenges: At first, they need to be able to manage the vast amount of data. Today's data evaluation applications and tools are no longer suitable for this analysis. Secondly, they need to be able to process data from different sources and in different formats. Data is stored in structured data banks and emerges in an unstructured form through written and spoken language, images, numbers, events, etc. in different places every day. And finally, companies must be able to evaluate large data volumes at a considerable speed in order to allow real-time applications. These will be the standard challenges of the year 2026.

Companies use data in different ways. On the one hand, they conduct searches for connections, differences, and patterns with big data applications. From this they deduce hypotheses on causes and drivers. On the other hand, they form hypotheses about future events and the coming needs and expectations of their customers through predictive analytics applications. Both approaches are different in terms of their temporal perspective. Big data applications are followed by a reaction of the company to past events. Predictive analytics applications are followed by an action that is based on insights from past and present events. This makes the real-time analysis of data necessary. For this, providers correlate various personal data such as health data, search queries, social media content, messenger services, and data from the customer's environment. One example: From chats, social media posts, and online search queries, legal expense insurances will recognize that a customer is planning a trip to China. Even before the customer books their flight and hotel, they will be informed by their insurance provider that their legal expense insurance is not valid in China and will receive an offer that is adapted to their individual needs.

Customers already receive these offers from companies and, in the years to come, even more so from companies in different sectors. Major commerce companies from food to textiles, mobility providers, telecommunications companies, and many more are already working intensely on adaptive solutions. Common to all of them is that they are aiming to provide superior offers from their customers' point of view – and through cross-industry efforts, even increase the pressure that consumers feel. Step by step, customers will learn: Those who know me and those who analyze my data in a way acceptable to me will provide me with better offers. The glory of standard and average is fading.

Customers will transfer the resulting expectations to providers who are in contact with them. Insurance providers that begin to use big data and predictive analytics today will actively change their relationship to customers and will provide them with an advantage. In only a few years' time, they will be forced to react to customer expectations. For this, they need the competency to filter the expectations that are relevant for the customer and their situation from large volumes of data, and to put into the right context. It is not enough to tell the customer that they will soon have to expect litigation.

The insurance provider will fulfill customer needs if they protect customers from this legal dispute in the first place. The greater the amount and the higher the sensitivity of information that the customer makes available to the company, the more the customer will expect even better offers.

"Prevention is a win-win situation. For customers, the price for insurance decreases, and for insurance providers the risk decreases."

Thomas Rainer Tögel, Member of the Board, ERGO Versicherung AG

Conversely, a customer who makes a decision for an adaptive insurance product also wants to make their data available to the provider. From the evaluation, they will expect an individual and situationally-relevant risk protection – and, at best, the prevention of damages. The most important task of the insurance provider is to continuously adapt their products to the needs and the situation of the customer. This process will cause the scope of insurance coverage to change, irrelevant elements will be removed, and missing ones supplemented. The price of the product will also be dynamic. Apart from existing insurance coverage, the adaptive insurance product user is also provided with individualized offers for extending the coverage offered by their insurance.

Digitale assistance programs

"Adaptive products take the web into a new dimension: away from simply ordering products online and towards taking customer needs seriously and fulfilling them."

Dr. Nico Peters, CEO, COMPEON GmbH

In the coming years, customers will use digital assistance systems as their personal agents. These agents will have significantly evolved compared to today's existing system such as Siri, Cortana, Google Now, etc. Today users can start a search query, send text messages, start navigation, ring contacts, or enter appointments into the calender through voice control. Possibilities for personalization are restricted. In the coming years, these systems will become significantly more intelligent, will autonomously recognize situations, and will be able to adequately react to complex questions and contexts. Digital assistance systems will become intelligent, personalized platforms that, depending on the situation, access other services and thereby constantly take into consideration and adapt to users' preferences. In recent developments, digital assistance systems support users through automated responses in chats, integrate smart home controls, and react to location-specific queries with situational navigation. Apart from the evolution of systems, players are also driving the transfer of this principle into other areas of customers' lives. With their intelligent speakers, Amazon and Google are fighting over digital assistance

in the home. The promising AppleCar, known under the project name Titan, is nothing less an idea for completely rethinking the concept of cars. The digital assistance system is the focus of this development.
Whether a real vehicle made of real metal and plastic will appear to house it is not yet clear.

It is the providers' objective to integrate digital assistants into the everyday lives of customers without their consciously noticing them or needing to adapt their behavior to them. At the moment, every user still adapts their behavior to technology by controlling smartphones, laptops, tablets, TVs, washing machines, and navigation devices with a keyboard or touch pad: thus at the push of a button. The natural form of human communication is language or conversation. Powerful players such as Google, Apple, and IBM are working feverishly on systems that are able to communicate in a human way through artificial intelligence and technological innovations such as machine learning or deep learning.

Use Cases

One popular way of proving the performance of artificial intelligence are complex games. In 1997, the IBM program Deep Blue defeated chess world champion Garry Kasparov. In 2011, Watson – a computer program that was also developed by IBM – competed on the quiz show Jeopardy! against two human candidates that previously were the show's record winners. A most recent example is the clear victory of the Google program AlphaGo against Lee Sedol, the best Go player of our time. While these victories mainly served to attract media attention, other projects shift the focus to a societal benefit. The IBM system Watson has long been supporting the diagnosis of cancer and has, according to media reports, only recently diagnosed a rare form of leukemia which physicians had never identified before. Only after Watson's diagnosis did the patient receive adequate treatment. With its system DeepMind, Google is cooperating with a British eye clinic in order to improve the early detection of visual loss. Here the technology will analyze the complex scans that today are used by specialists for diagnostic purposes.

The ability to understand human language is only the vehicle for fulfilling tasks or customer needs. Today, the customer makes a decision for a digital solution depending on the task involved. They install an app with which they can perform a specific task. They use language assistants such as Siri or Cortana for a limited number of services, and they use the services of a provider directly via a website. The installation of a digital assistance system such as Viv, a new system that has been developed by Siri's programmers, will make the user's decision about which solution they will use unnecessary. No matter what they are searching for or need, they canl communicate it to their digital assistant. The system will make a relevant autonomous decision. As required, it will suggest the integration of a certain application into the assistance system – the risk assistant for insurance products, the order assistant for food delivery, the health assistant. In terms of other queries, the assistance system will take direct advantage of the web service of the provider. The digital assistance system will always be the central interface – one application for all of an individual's tasks.

Thus customers can quickly and comfortably complete daily tasks or have them completed automatically and transfer their data to a specific provider. The integration of single services into the digital assistance system will follow immediately after the networking of different areas of life. An intelligent home entails solutions that would improve or simplify the life at home, an intelligent car those that would make its use more efficient.

And for insurance solutions as cross-sector industries, every networked area of life is a link to new offers. By 2026 many offers will no longer reach customers if they do not match their expectations and preferences. In 2026, digital assistance systems will make a selection even before customers consciously decide for or a against a specific product. Here only those insurance providers who are eligible for selection will have reasonable chances of success. The functionality and capacity for integration into the digital assistance system will become important criteria for the selection of every insurance product.

How handling data will change by 2026

"If insurance providers lead an open and transparent discussion with their customers on how and why they are using their data, they can create understanding. If customers recognize the added value, they normally share their data on a voluntary basis."

Dr. Jörg Günther, Partner, KPMG AG Accounting Corporation

Insurance providers who offer adaptive products will be dependent on customer data. To this end, manufacturers and service providers will communicate the central added value connected to data disclosure to their customers. On the other hand, there are critics who warn against carelessly making data available everywhere and at all times. Data protection and privacy are important factors for adaptive insurance products. This discussion is currently being taken to a new level for providers. As of this year, Google users have been able to see and change what information is saved when using Google products. It is also possible to delete information that has been stored previously. Users can also deactivate personalized ads. Even after the NSA affair and numerous similar scandals, customers only marginally changed their way of handling their own data. In Germany alone, for example, more than 5.5 million users have downloaded the Android version of the augmented reality game Pokémon Go within eight weeks after its release, even though the usage guidelines contain several unlawful clauses and the volume and types of data collected are questionable. Those who change their behavior pay special attention to the security of their software and hardware. A smaller number of users also change their online behavior.
The majority will retain their habits, because the advantages outweigh the risks in their point of view.

"Ever since Edward Snowden's revelations, the level of public distrust is at an all-time-high. People are very worried about both governments and private sector commercial entities. They want companies to demonstrate to them that they are in fact respecting their privacy and embedding the necessary protections into the services offered or products purchased."

Dr. Ann Cavoukian, Executive Director Privacy and Big Data Institute, Ryerson University

At the level of the European Union, an improvement in European data protection has already been in discussion since 2012. One change that has come out of this is the new General Data Protection Regulation of the European Union that came into force in May 2016. As of 2018, the regulation will be binding for all member states. Article 25 is the first to regulate data protection by design and by default in a legally binding manner.

"Customers must make their data available on a voluntary basis. This requires companies to create a secure environment."

Mathias Harrassowitz-Kock, CEO, Keylane GmbH

Companies that begin offering their customers these services today will have an advantage. They will only develop products and services that meet the future requirements of data protection or even go beyond it. In terms of customers, they will use these changes to differentiate themselves from competitors. They will offer customers products and services with different levels of data protection. On a fundamental level, they will fulfill legal requirements, and on higher levels they will offer other options for customers who would like to pay more for a higher degree of security and privacy. Customers will have, for example, the possibility to give the data that they have released an "expiration date," to restrict access to their data to a limited group of persons, to individually allocate access rights along the value-added chain, or to anonymously transfer sensitive data. At the highest level of data protection, data will remain on the devices of customers and will be analyzed by the respective device itself. This will give rise to a digital identity that will only be shared on demand.

All customers have in common that they will expect individual additional information or offers, significantly increased convenience or other measurable added value in exchange for the disclosure of their data.

How digitalization will change values

Values that are important to the company-customer relationship are defined differently then before thanks to digitalization. Adaptive insurance products providers must know and understand the changes that are relevant to them in order to be able to fulfill customer expectations. Relevant values are trust, security, closeness, and transparency.

The value trust is changing as the information asymmetry between insurance providers and customers is nullified by digitalization. In the past, customers were able to compare the services and prices of insurance providers only with great effort, and so trusted the advice of their insurance broker or chose an insurance product based on the public image of the insurance brand. They rarely changed providers and loyalty was high. From the point of view of insurance providers, there was a broad mass of customers for whom standard products were developed for standard prices.

Already today, the information asymmetry is suspended through search engines, comparison platforms, homepages, etc. Customers are thus able to quickly compare the aforementioned parameters and change to a better or cheaper provider. They make their choice based on a specified set of possibilities. The degree of individualization is low and situational offers do not exist. Thus the image of the insurance brand and the advice from insurance brokers becomes less important. Insurance providers will need to ask themselves how they can gain their customers' trust in this new setting.

In the years to come, human experts will be replaced by digital assistance systems that can often provide recommendations more quickly and better than humans could. The electronic risk assistant can compile the most appropriate insurance policy, the news assistant can gather relevant information from all over the world, and the financial assistant can create an investment portfolio. In the selection process, assistants will take into consideration the customer's individual needs and their specific situation. Thus trust is based on fulfilled expectations and will become dynamic because it must prove itself with every contact between customer and company. In the future, companies will be faced with individual customers who expect the situational fulfillment of their needs.

Customers will also perceive security differently through digitalization. The constant availability of news and information is making one thing clear every day – nobody can guarantee security. Not in politics, not in business, and not in customers' lives. Insurance companies that act according to the new security principle will accept the unpredictability of the future as a given and will provide their customers with multidimensional answers and promises for complex questions. They will view the future as a conglomerate of possible scenarios that exist side-by-side. They will therefore promise to have adequate alternatives on hand for various future developments. With adaptive insurance products, insurance providers will not stop at offering their customers settlement for damages – this only covers the worst-case scenario. The best case is individual risk minimization and the prevention of damages before they occur.

"Taking out occupational disability insurance today is tedious to the customer. They have to fill out long forms, wondering whether they've forgotten something. If they anonymously fed their information into a provider platform or granted access to their anonymous data instead, there would be no problem."

Dr. Claudia Lang, CEO, Community Life GmbH

Insurance companies with digital business models have brought a new way of determining customer proximity to the table.

While customer proximity has traditionally been defined in physical terms, relational proximity is what counts in the digital world. Key here is the quality and individuality of the dialogue between customer and provider. The ideal situation is the same for both definitions, whether physical or relational. Insurance companies as well as customers aim for a trusting, individualized dialogue. This does not mean customer and consultant will have to be in the same room. It does not mean the consultant will have to be a human being. Neither does it mean the customer will have to be proactive themselves. The strategically critical point for relational proximity will be the customer's device display. This will be the only place where providers can gather, analyze, and proactively fulfill customer needs. The measure of customer proximity will be the percentage of the millions of digitally identified customer desires that actually translate into concrete product and service variants. Insurance providers who occupy the customer's display can put themselves ahead of the game as they will be in the best position to win and maintain the customer's loyalty. As long as an adaptive insurance product fulfills the customer's expectations regarding price and performance, that customer will have no reason to switch providers.

Digitalization will drive companies to put customers at the center of all corporate activities and to become transparent organizations. Until recently, products have been at the center of corporate interest. The focus has so far been on achieving the best price-performance ratio for a given product at a low cost while drawing maximum attention to it in the mass of competing products. This strategy worked as long as customers had less information about products than the insurance providers. Digitalization and the constant availability of information have nullified this asymmetry. Now, customers know at least as much about products as salespeople, and in some cases even more. This will make products more comparable. If customers truly become the center of interest in the future, it will not be because of any altruistic motives on the part of the providers. The true reason is that the traditional strategy of the digital world will no longer work.

In the future, insurance companies will have to understand the lifestyle, character, needs, and desires of each individual customer in order to adapt their products and anticipate risk situations accordingly. Only those insurers who manage to make their processes transparent for their customers will be able to adapt their processes and products to customer desires. The best providers will set themselves apart by involving customers in conception, production, and distribution from day one. This will ensure the individualization of products and processes right at the starting point.

What digital customers will expect from their insurance provider

"Insurance companies will stay boring until they establish a real connection to their customers and take on an important role in their lives."

Peter Ohnemus, Founder & CEO, dacadoo ag

The interplay between technological innovations, a changing market framework, and the resultantly transformed customer behaviors will require a new strategy on the part of insurance providers. This strategy will have to address changing market principles as well. The vanishing bulk business in many sectors will particularly affect the insurance business. We have already described the shrinking **standard segment** and the growing **economy** and **premium segments** in previous studies. The traditional market pyramid will have ceased to exist by 2021.

"With adaptive products, insurance providers can become value leaders and get out of the battle for price or cost leadership. This means insurance companies will focus on those customers that are willing to pay more for more services."

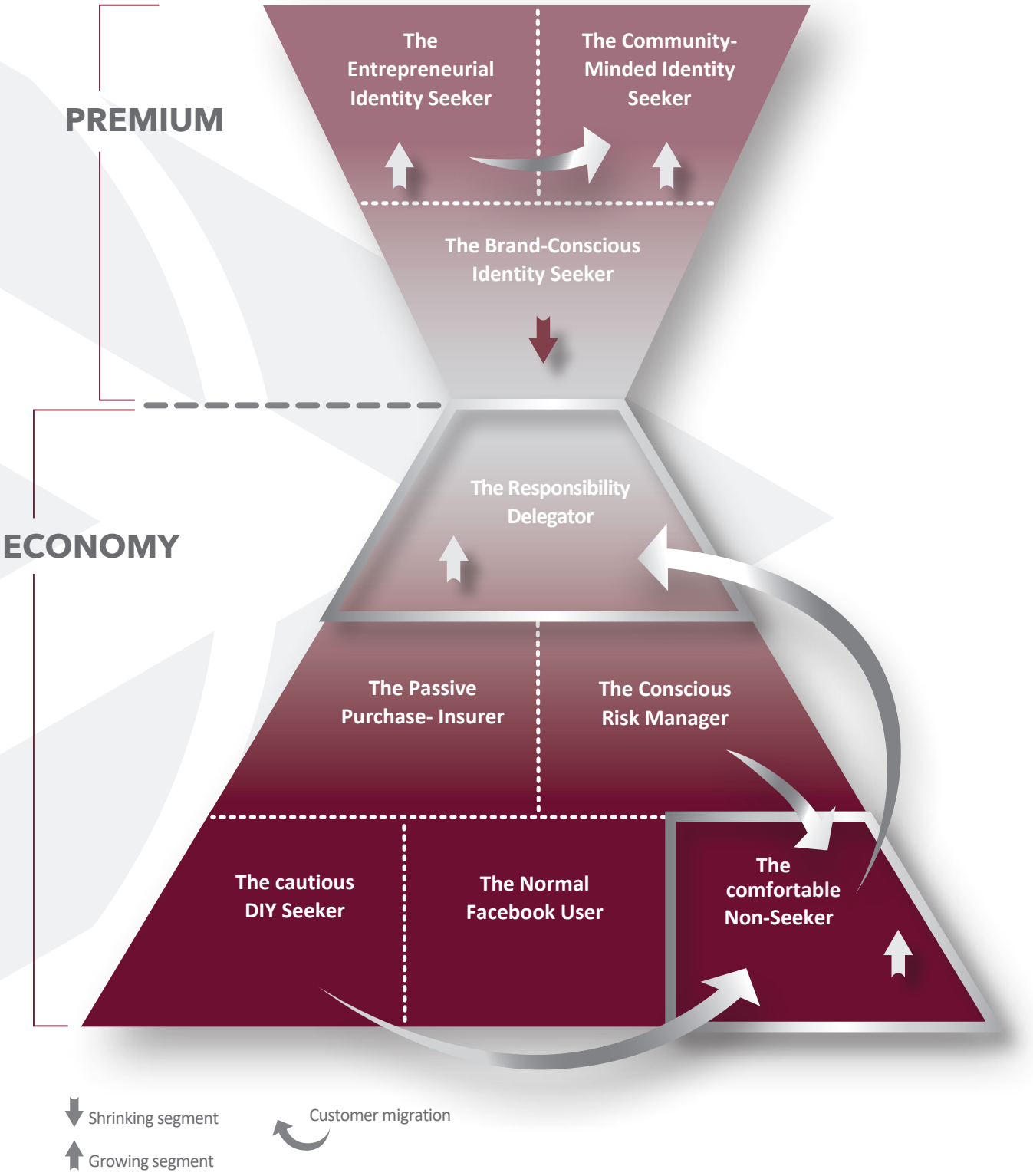
Stefan Riedel, Vice President Insurance Europe, IBM Deutschland GmbH

In the economy segment, customers will look for the insurance company that provides the expected services at the best price.

The spectrum will cover the entire range of possibilities, from basic services at low prices up to comprehensive all-inclusive coverage at the highest prices. The price-performance comparison will be based on a rational approach. Alongside the familiar price-performance comparison principle of the economy segment, a new underlying logic will emerge in the premium segment. Tomorrow's premium customers will not make their decisions based on any comparison of price and performance. They will instead use products, brands, and individuals to express their identity. In the field of insurance, insurance companies or individual products may stand for environmental protection, sustainability, fitness, innovation potential, intellectuality, luxury, wealth, a down-to-earth attitude, a strong sense of nationality, design, art, etc. There are numerous identities that customers will want to identify with. The customer's goal will be to show other people, and even themselves, that they are "extraordinary." The rapidly shrinking standard segment will be occupied by the customers who continue to delegate their decisions to the company or the broker of their trust.

When viewing the future markets of the insurance business, it is essential to remember that the areas named above are by no means monoliths. There will be six sub-segments in the economy market. While these will share the same foundational underlying mechanism of value-for-money shopping, they will nevertheless differ significantly. The premium market of the future will comprise three subsegments. These will also share an underlying principle – identity management – but here as well, each segment will be very distinct from the others. The differences between customer segments can be described in customer-centered terms based on the customers' needs, their trust in technology or other human beings, their willingness to release personal data, and their proactivity level as consumers. Each customer segment, in turn, will require different kinds of products, processes, and communication from insurers.

CUSTOMER SEGMENTATION



Two sub-segments of the economy area will show strong growth over the next few years: the comfortable non-seeker and the responsibility delegator. We expect a high customer demand for adaptive insurance products in this segment in particular. Customers will opt for a product that meets their needs and expectations, be it by their current provider or by a competitor. Competition is extremely high in both customer segments, as these segments are not only attractive for established insurance companies, but also for technology providers such as Telekom, Google, and the like.

"If insurance providers individualize their products and add other services, comparison portals will be at a disadvantage. They will no longer be able to offer a simplistic side-by-side comparison of products."

Thomas Rainer Tögel, Management Board, ERGO Versicherung AG

The customer needs and consumer behaviors of the comfortable non-seeker and the responsibility delegator are similar. These customers will choose adaptive insurance products based on a price-performance comparison. The individualized fit and the situational adaptivity of the product will be paramount here. In other words, customers will choose products based on performance. The price will also be important, but not decisive. The result will be that today's comparison portals will significantly lose attractiveness, as these are strongly focused on comparing the prices of insurance providers who offer very similar services. When comparing adaptive products, however, customers will want to find insurance products that can best deliver the expected performance at an acceptable price. Thus, the essential market dynamic will reverse to become a performance-price ratio. To receive a precisely tailored product, customers will be willing to let their behavior be tracked and to integrate the provider's electronic risk assistant into their digital assistant system. The customers' great trust in technology is based on the fact that they will view the risk assistant's suggestions for changes to adaptive products or to their own behavior as relevant.

Digital assistant systems will continuously fulfill customer expectations – even better than human consultants can.

Over the course of their lifetimes, comfortable non-seekers will often migrate to the segment of the responsibility delegator. Higher levels of income, less available time, and greater responsibility for family and children are the reasons why customers will hand over responsibility for their complex risk profile to a human consultant. At the same time, however, they will not want to forego the benefits of technology. Customers will integrate the consultant's electronic risk assistant into their own digital assistant systems and release their customer data to the consultant and the consultant's technological solutions. Up to a certain budget constraint, predefined by the customer, the consultant will make decisions about the adaptation of products. Where necessary, the consultant will contact the customer with a recommendation for action.

"The more younger customers enter the market, the higher the risk for large insurance companies to lose market share. Digital natives tend to get on board with digital providers instead."

Mathias Harrassowitz-Kock, Director, Keylane GmbH

The segments described above will grow significantly by 2026. In ten years' time, digital natives now between the ages of 20 and 25 will be especially attractive for insurance providers. A large percentage of these digital natives communicate with companies in a digital manner, have grown up with and trust technology, and are happy to share their data in exchange for added value. By 2026, they will be middle-aged and enjoy a comfortable level of income. They will recognize the importance of insurance coverage – providers will not have to convince them of this necessity. In addition, they will have the financial means to expand their insurance protection beyond basic coverage. They will expect a digital business model from their insurance provider. From their human consultant, they will expect to be addressed as equals, especially when it comes to technologically supported products and services.

Insurance companies that start treating potential customers of the coming years as their customers today

will achieve an advantage in the next few years. Young people often lack interest in insurance products, the expertise to evaluate their relevance, and the financial means to take out insurance. This lack of expertise is one of the causes for mistrust in providers. In the past, lack of knowledge led to a brand-based orientation or the delegation of responsibility to human consultants. Today, this leads to disinterest and mistrust in brands and human consultants. With increasing age, these non-customers will become potential customers. Providers of adaptive insurance products can leverage this opportunity by showing non-customers the relevance of risk coverage and risk minimization now and establishing a relationship with them that can later be monetized.

"In the future, prevention will become more important for customers than traditional risk coverage. This is where the opportunities for new value flows will lie for insurance companies."

Jürgen Stoffel, Managing Director IT, Hannover Re

Insurance providers who offer adaptive insurance products will provide their non-customers with a freemium model.

Insurance companies will also employ prevention to protect customers from unwanted events and will offer them consultation regarding their individual risk profile if customers integrate the provider's electronic risk assistant in their digital assistant system. The degree of precision offered by this prevention will depend on what data the customer shares with the provider. If the customer uses this service, the provider will understand the customer's needs and behaviors and will thus be able to offer them individualized solutions for upcoming events such as their first apartment, graduation, their first job, etc. This way the provider will gain an advantage over competitors as they will always be able to offer customers the first and most individualized solution based on shared customer data. With this service, providers will also have the ability to show customers that they can fulfill their expectations regarding individualized fit and recognition of risk-relevant situations even before the customer purchases an adaptive insurance product. The freemium model will function without the need for human consultants except in rare cases. This means today's commission fees will disappear, and this gap will finance the freemium model. By fulfilling customer expectations, recommendations and information that are both individually and situationally tailored will lead to increased trust for providers of adaptive insurance products.

THE ADAPTIVE INSURANCE COMPANY OF THE FUTURE

How adaptive products will lead to adaptive companies

Technological innovations and the resulting changes in customer needs and behaviors will be a call for insurance companies to restructure their own organizations. In 2026, customers will naturally expect insurance providers to fulfill their individual and situational expectations. On the way to fulfilling these expectations, however, changes will have to be made within insurance companies. On the one hand, technological prerequisites will have to be met in order to exploit the opportunities offered by the Internet of Everything, big data, and predictive analytics. On the other hand, organizational changes will be necessary in order to provide adaptive insurance products.

"A new, simplified IT system will only change something if customer access, products, rates – the whole process – are also simplified."

Jürgen Stoffel, Managing Director IT, Hannover Re

Changed customer needs will cause insurance providers to offer adaptive insurance products by 2026.

If they do not, other providers will. Launching an adaptive insurance product requires technological prerequisites that insurers have not yet fulfilled. Fulfilling these prerequisites is a cultural and financial challenge that insurance companies will soon have to face.

Insurance companies will experience external pressure as technological innovations such as big data, intelligent prognostics, and the Internet of Everything are driven by various players from very different areas. Customers have grown used to Google always offering the fastest route in real-time, Amazon constantly recommending the right products, and new suggestions from Spotify every week for songs that fit their taste in music. In a few years' time, customers will shift these resulting changes in consumer needs and behaviors towards insurance providers, forcing them to offer similar solutions. Insurance companies will have less than ten years to achieve this. However, customer expectations for these solutions will begin to appear significantly sooner.

A summary of the situation offers the following picture: The IT systems of today's insurers have largely grown over a long period of time and are highly complex. In some cases IT systems have been outsourced to separate companies acting as a service provider for the actual insurance company. Today's systems are not efficient enough to handle the anticipated changes in customer expectations and technological possibilities. These changes can already be expected within the next five to ten years, meaning insurers will have to start reorganizing their IT systems as soon as possible. It should not be expected that this transition will happen without any resistance within the company, as IT is a highly sensitive topic. The reorganization of the IT system will mean not only technological, but also cultural change for the company.

"Insurance providers who work together with companies from other sectors will be more successful in the market."

Daniel Siegrist, CEO, Coop Rechtsschutz

The above mentioned points alone are enough to show how complex and serious the initiation of this change is. It is also uncertain which reorganizational approach will be the right one. Some consulting companies recommend redeveloping the entire corporate IT system from scratch, others suggest expanding the existing IT system. There are pros and cons for each approach. However, the actual questions insurers will have to ask themselves is not: Do I need a new IT system or do I update the one I already have? The real question is: What IT system does the company have to have in order to fulfill customer needs and offer the products the customer desires? The answer to this question leads to a catalog of requirements insurance providers need to fulfill. Prerequisites for adaptive insurance products will be at least high performance and the ability to quickly react to changing customer situations. Adaptive insurance products will not only consist of individual elements of today's insurance segments. This means the IT system will also have to enable fast, cross-departmental performance.

In the next few years there will be more cooperation between companies; networking with external partners will therefore become essential. As customer needs and expectations change continuously, IT systems will have to become adaptable – and this will have to happen within the next five to ten years.

"Insurance companies will need a modern IT system in order to represent the processes for adaptive products."

Frank Löffler, Chairman, asspario Versicherungsdienst AG

The time frame alone barely leaves room for a proprietary new development, while an update could hardly be combined with the focused customer orientation tomorrow's market will demand. Insurers will thus need a third option. Examples include acquiring a company with the relevant infrastructure, collaborating with a competent partner, or outsourcing to an IT-as-a-service provider.

Insurance companies that offer adaptive insurance products will rely on a decentralized IT system. This will entails a new understanding of data. Data is mostly static today. It is also stored for the insurer's benefit, not the customer's benefit. Customers fill out forms and insurers feed this data into a database which makes it possible to later retrieve this data and filter it into groups with common characteristics. Customers have no access to their data. In the next few years customers will expect insurance companies to share the benefits of the data they have shared as consumers. Customers will expect insurers to collect and analyze data automatically. Data management will become dynamic. Cloud-based services will be the technological center of customer data and the providers' applications and analytical findings. Here, business intelligence systems or machine algorithms will draw situational prognostics about customer needs based on the user's dynamic data and the information stored about them. As a result, customers will receive personalized information or solutions without being asked. In the next few years, dynamic data and static information will be complemented by further data types.

Even today, personality traits can automatically be detected through voice analysis. The company PRECIRE TECHNOLOGIES from Aachen, Germany, specializes in the decoding of written and spoken language. With the help of natural language processing, data mining, and scientific findings from linguistics and psychology, this technology provides information on an individual's emotions, personality, motives, attitudes, individual linguistic competence, and the communicative impact of their way of speaking. Insurance providers who want to use, for example, quantifiable findings about the perception of risks for individual clients, will have to secure possibilities for converting this data into concrete business solutions. Increased data diversity will only be an advantage if companies can offer customers these findings in the form of products or services.

Within the next five years, companies will begin gathering and analyzing their customers' emotions. By 2026, thought recognition systems will have become a realistic objective; first attempts have already appeared. Since 2011, bioinformatics company EMOTIV has been developing a headset that can visualize brain activity and emotions. With the help of the headset, a user can control items in the digital world using only their mind. The possible fields of application are extremely diverse: medicine, psychology, market research, learning support, computer control, gaming, etc. In 2026, adaptive solutions and information will be based on static and dynamic user data, personal characteristics, emotional data, and the detection of brain signals. Providers will then offer their customers solutions and provide them with information before their customers even recognize the desire for these. By using individual and situational customer data and analysis in real time, insurance companies will shift their data strategy from internal use to external representation.

In order to achieve this goal, providers of adaptive insurance products will need decentralized applications.

Only decentralized applications will be able to gather and analyze the heaps of customer data in real time and to implement the necessary differentiations in security levels. This includes security during the transfer, storage, access, and evaluation of data on part of the provider. The encryption of data during transfer and storage in the cloud has already been convincingly achieved. With its program Boxcryptor, the firm Secomba has developed a solution that encrypts data on the customer's end device before it is stored in the cloud. The company received the Deutscher Gründerpreis award for this achievement in 2014. By now, the solution has been further expanded by the web-based transmission of encrypted data thanks to Whisply. The challenge for insurance companies, then, is to analyze data that has been stored in this manner. Initial approaches have already existed since the late 1970s. Homomorphic encryption enables software to analyze encrypted data without the need for encryption. The goal of the Microsoft Research Lab is to take this method to the next level in order to analyze data at high speeds and with almost 100% accuracy – again without the need to decrypt it first. Every market working with sensitive, personal customer data and analyzing it for the customer's benefit could profit from these developments.

However, decentralized IT systems and the safe encryption of data are merely the foundation for the actual technological challenge providers of adaptive insurance products will face within the next few years. The fast and precise analysis of data gathered through the Internet of Everything and its combination with available customer data will be the preconditions for successfully providing adaptive products. Without this analysis, this data will offer no benefit to the customer. Today it is already possible to offer policy holders individualized products by analyzing customer data to determine why a given event happened.

After this analysis the product is individualized. The result of a continuous repetition of this process is a highly customized, versatile product. In order to evolve from an individualized to an adaptive insurance product within the next few years, the analysis of situational data will be necessary as well. In this case, waiting for an event to happen and then individualizing the product afterwards will no longer be enough. The aim of this analysis is to offer the customer adaptation before a negative event has occurred. By 2026, insurance providers will have taken even a step further. They will provide the users of adaptive products with situationally-appropriate additional information in order to prevent a negative event from happening or to force a positive event to occur.

By 2026, companies will be confronted by a much larger amount of data than now. Even today, only a small fraction of the data gathered through the Internet of Things is actually processed and stored. The use of cloud-based services alone will not fulfill customer expectations for the stability and speed of data analyses in 2026. Big players such as Cisco, Dell, Intel, or Microsoft are thus driving the development of fog computing, a complementary solution. Along with promoting their own interests, these companies as well as others have joined forces as the OpenFog Consortium. Together, they are developing a unified infrastructure for fog computing services.

Stakeholders are thus shifting the benefits of cloud services as closely as possible towards data sources, and thus also to the customer. Fog computing services are subsidiary, decentralized services. They will gain increasing importance for adaptive insurance products by 2026, as the analysis of situational customer data will need to be done in real time. The results will have to reach the customer without delay, even given an unstable internet connection. Fog computing services are more suitable here. The combination of fog and cloud computing is useful for insurance providers because capacities freed up in the cloud can be used to analyze vast amounts of data – for example the generation of collectives based on large data volumes.

Fog computing is not intended to – and cannot replace – cloud computing, but can complement it. Those insurers who combine both technologies will be able to better fulfill customer needs. In view of the technological capabilities at hand, the short-term adaptation of adaptive insurance products can carried out quickly and close to the customer. With other use cases, cloud services will continue to become more efficient, more cost-effective, and more scalable than fog computing. The symbiotic relationship of these services will drive the development of the Internet of Everything by significantly increasing the amount of data which can be processed and by fulfilling customer expectations regarding speed and stability.

"The crucial factor for an insurance provider's success is a customer- and process-oriented IT landscape that includes everything the customer expects."
Frank Löffler, Chairman, asparIo Versicherungsdienst AG

The benefits of big data, predictive analysis, and machine learning will not stop at the analysis of customer data. Over the next few years, providers will also benefit from using these tools in internal processes. In some areas, they will even need these solutions in order to effectively serve customers at all. This aspect will gain importance by the middle of the next decade. Within the next ten years in Germany, for example, companies will no longer have sufficient qualified personnel for existing positions. This demographic development will drive the automation of tasks in many sectors, and for insurance companies as well. This will first happen in areas characterized by repetitive tasks, where efficiency can be increased through automation – for example the automation of a company's entire mail system: The mass of unstructured data from incoming messages via post, email, chats, and social media will automatically be forwarded to the relevant department or person. Time-consuming, error-prone, and costly selection and delivery can thus be eliminated.

However, if insurance companies do not have sufficient qualified personnel, automation will also pay off beyond a certain point in areas experts considered unfeasible even a few years before. At the latest, automation will show its worth when the alternative is that a service can no longer be offered due to staff shortages.

The benefits of automating repetitive processes such as claims management are, first, scalability and the cost-effective substitution of human labor. Second, automation allows for an increase in quality as it substantially decreases susceptibility to errors. Third, process speed goes up as well. However, automation will become more difficult as tasks grow increasingly complex. Thanks to major breakthroughs like blockchain technology, possibilities here will increase within the next few years. Insurers will be able to significantly decrease costs for adaptive insurance products by letting computers handle continuous adaptation and administration processes. Smart contracts based on blockchain technology are now managed by autonomous algorithms; human intervention is not needed. In the last few years, a competence network has been established in the Swiss canton of Zug; the area is now known as Crypto Valley. Among many other blockchain companies, the Ethereum Foundation is based here. Ethereum is a decentralized platform for smart contracts. The long-term plan is for an interface that can also be understood by laypersons – i.e., customers – in the future.

"In the future, products will be adapted very frequently and with minimal effort due to smart contracts and blockchain technology. This will be essential for adaptive products."
Jürgen Stoffel, Managing Director IT, Hannover Re

Insurance companies that also automate complex tasks will gain an advantage as they will be able to guarantee a seamless and efficient delivery of the expected services.

This automation will be necessary for adaptive insurance products as it would be too time-consuming and expensive to manage a continuously changing contract through human staff.

Which areas insurance companies will automate, however, will not primarily depend on whether they can do so. The customer will decide for themselves the areas where automation offers added value. Thus process automation is yet another field that needs to be conceived from the customer's perspective – and this under consideration of the expectations of each individual customer segment. The consequence for insurers: All tasks that actually create added value for customers through automation will be automated. Customers with a strong affinity for technology will not demand a human reply when sending an inquiry to their insurance provider. They will demand a fast and precise reply – and an "artificial" one is no problem. However, customers who mistrust technology will expect a human reply to their inquiry. Insurers will have to determine before – or during – automation whether customers want automated service and are happy with the process. Only during direct dialogue can the customers' reaction to new products and services be determined. As in other markets, insurance companies will collect customer feedback before and after launching new products or services and continue to adapt them accordingly. Those insurers who involve their customers in the development of their organizations and IT systems will gain an advantage here. The simple need to fulfill various customer needs and expectations means that providers must create a range of various adaptable solutions as well. In a few years' time, insurers will not simply offer adaptive insurance products; they will become adaptive companies themselves.

THE FOUNDATION FOR ADAPTIVE PRODUCTS

The new role of omnichannel management

Providers of adaptive insurance products will need to restructure their organizations. These organizational changes will determine the new business framework. The new conditions have to be chosen in a way that changed customer needs can be fulfilled with the help of technological innovations. The starting point for strategic planning – and the core of changes – are customer expectations and behaviors. The goal of adaptive insurance products is to individually and situationally cover the customer in the best way possible. The question of how to reach this goal will serve as the foundation for organizational planning.

"Omnichannel management is a "must have," not a "nice to have." If you call your insurance company, you expect them to know who you are and which insurance policies you hold. In other markets this is a given."

Jürgen Stoffel, Managing Director IT, Hannover Re

In the future a functioning omnichannel management system will connect and coordinate all possible contact points. This connection and coordination will be designed from the customer's perspective.

Therefore, the customer will have the same perception of the brand on every channel and touch point. The prerequisites for reaching this goal are diverse and will deeply interfere with the existing organization of insurance providers. These range from customer-oriented corporate management to breaking up traditional segments along with the resulting new forms of partnership. Some insurance companies have thus established a new business unit for their digital business model. The focus on the digital business model takes place alongside the established business model.

"In a relatively short time, the biggest change will be that customers will no longer accept any form of clearly standardized communication. I think that customers will very quickly develop the following expectation: If I write an email with a complaint or to receive information, I will expect a reply suggesting that someone has really read what I have written and will also appropriately handle everything communicated beyond the factual content of discussion."

Dr. Dirk Gratzel, CEO, Precire Technologies GmbH

Those insurance providers who offer omnichannel management in the next few years will have an advantage as they will be the only ones able to provide their customers with the appropriate solutions and information through the right channel of communication. The "right" channel will depend on the customer's needs and expectations and their relevant situation. The electronic risk assistant that users of adaptive insurance products have integrated into their digital assistant system will be the most important channel of communication with their insurance provider. Users in the economy segment will be the comfortable non-seeker and the responsibility delegator in particular. Here, customers will have the ability to choose from a wide selection of providers for electronic risk assistants. Their decision will depend on how easy the communication with their provider is. In many cases, the risk assistant will be the customer's first touchpoint with an adaptive insurance product. The customer's loyalty will be still very low at this point, and they will change software if they are unhappy. Customers will send their data to the provider through an interface. This is where insurers will already have to start communicating with customers in the way these customers prefer. Companies will have to provide information and solutions in a digital way while remaining approachable for the customer on every channel. Every employee at every touch point will know who is reaching out and why.

"In the future, products will be adapted very frequently and with minimal effort due to smart contracts and blockchain technology. This will be essential for adaptive products."

Jürgen Stoffel, Managing Director IT, Hannover Re

What is true for the comfortable non-seeker is also true for the responsibility delegator. Here, the insurance consultant will act as an intermediary between provider and customer. On their mobile devices, responsibility delegators will also use a risk assistant recommended to them by their consultant. The consultant thus receives the data collected by the customer. Then customers receive individualized information and solutions from their consultant.

At this point the insurance provider's omnichannel management system will be geared towards the consultant. The consultant will handle the coordination of the communication channels between themselves and the customer. They will also be the ones to communicate the provider's information and solutions to the customer along with a relevant recommendation for action. In the future, consultants will also obtain the customer's authorization to make decisions in their name for specific risk areas and within a specified budget. This will mainly concern products that do not require considerable consultation. Those providers who can differentiate between the consultant's communication behavior and the customer's needs will be able to put themselves ahead of the game.

"Simple options are best for the customer. Customers want the best possible insurance coverage for their budget without investing much time."

David Zahn, CEO, i-finance GmbH

Overall, the development of adaptive products will cause a change in the sales approach of insurance companies as well. According to today's logic, the most important step for insurers is the analysis of the various risks the customer is exposed to. Based on this, insurance companies offer customers products that cover as many risks as possible. Depending on budget and risk perception, the customer then decides on buying one or more products in the best-fitting variant A, B, or C. The products are moderately individualized, but also cover some risks the customer is not exposed to and may not cover others the customer is exposed to. The approach behind adaptive products, however, is a continuously changing risk portfolio. This means that a basic analysis of the customer's risk situation will continue to be relevant, but is only the starting point for a continuous risk analysis and relevant reactions to the results. This process will need to be as simple as possible for the customer. This also includes the question of who will be responsible for covering the risks requested by the customer. If damages occur and the customer is not insured in this case, it can mean one of two things. First: The customer thought that they were insured, but were not. Second: The customer had consciously opted against insurance coverage in the past.

There is an easy solution for the first scenario – the insurance provider will prevent this from happening. This is the quantitative approach to the problem. The better the digital assistance system works, the less these cases will occur. The qualitative approach deals with cases that happen in spite of prevention. In case of damage, the customer will not wonder why this risk is not covered, but how to deal with the damages. Those insurers who view the customer's problem as their own and deal with it in a solution-oriented way will put themselves in a winning position. Insurance companies that cannot – or do not want to – do this will lose their customers to the competition.

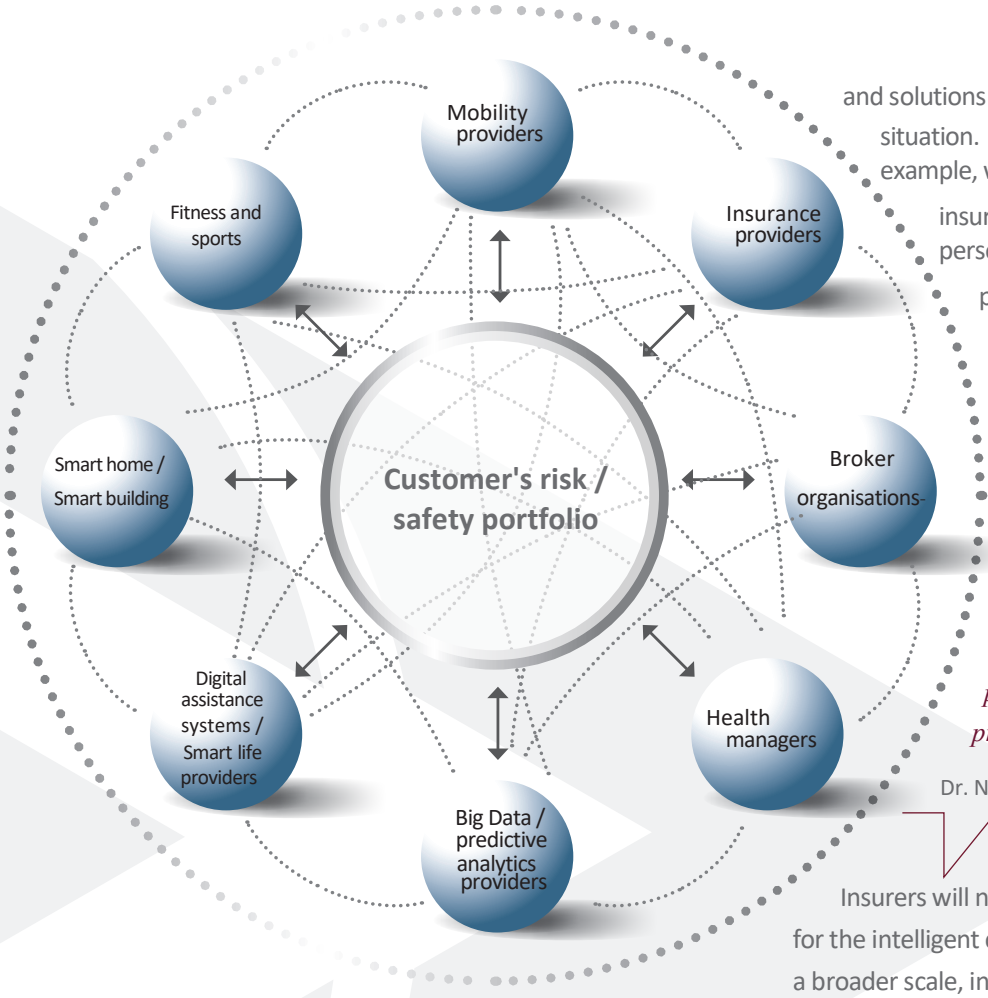
The second case concerns transparent communication. The customer will need to have a simple overview of their insurance protection at all times, and the insurer will have the responsibility to inform the customer about the consequences of a gap in protection with any significant elevation of risk or change in life situation. As a customer-centric solution, retroactive insurance could also be considered here. This option will reduce the risk of the customer switching to a new provider. If they do so, they will do so across the board: They will not only move to a competitor for part of their adaptive insurance needs, but will take their entire risk portfolio elsewhere.

The defining characteristic and the basic operating principle of an adaptive insurance product is the individualized and situational adaptation of the product after purchase. Insurers will only be able to gather, analyze, and intelligently use data generated by the customer at various places with the help of omnichannel management.

"A new ecosystem of providers will emerge around adaptive products. In the next few years it will become apparent which role insurance companies will play in this ecosystem – pulling its strings or simply supplying it."
Stefan Riedel, Vice President Insurance Europe, IBM Deutschland GmbH

In the near future, insurance providers will no longer deal with linear purchase processes and potential annual adaptations to insurance coverage. Customers will become the center of a network of stakeholders over the next few years. The individual stakeholder's goal will be to protect customers from risks, prevent the occurrence of damages, and quickly and efficiently regulate damage claims. Apart from established insurance providers, other stakeholders will also attempt to occupy customer interfaces in this network. On the one hand, players who generate added value for customers through the analysis of their data will be particularly attractive. On the other hand, customers will trust those stakeholders who use their knowledge of the customer for the customers' benefit at all contact points. Players who fail to fulfill these customer expectations will be irrelevant to the customer of the future.

The customer's safety net



"Insurance companies have to use customer data for the customer's benefit in a way that is not annoying to the customer."

Peter Moor, Director Business Development, Swiss Life

A customer's positive perception of adaptive insurance products will depend on the relevance of the solutions and information offered. Those insurers that limit customer contact to a degree the customer is comfortable with – despite the numerous other possibilities adaptive insurance products can offer – will have an advantage. The scale for this comfort zone is certainly broad and depends on the customer's individual needs and expectations. If solutions or information do not address customer needs, providers will lose their customers to competitors. The provider's information and solutions will need to fit the customer's current situation. Comfortable non-seekers, for example, will fail to understand why their insurance provider is inviting them to a personal meeting to adapt their risk profiles.

Responsibility delegators, however, will be confused if their insurance provider contacts them directly and not through their human consultant.

"Insurance companies need the courage to try new things with customers – channels, products, structures, processes – and promptly react to customer feedback."

Dr. Nico Peter, CEO, COMPEON GmbH

Insurers will not only use omnichannel management for the intelligent control of customer communication. On a broader scale, insurers will also be able to drive cross-departmental work and innovative capability. Omnichannel management will serve as the interface between key departments such as customer knowledge, sales, customer service, marketing, etc. It will manage cross-channel marketing and sales. Omnichannel management will also interface with product development that is geared to creating adaptive, omnichannel-capable products. The interfaces between omnichannel management and specialist departments will be open in both directions, allowing for existing products and processes to be quickly adapted to customer expectations and feedback. Insurance providers with an omnichannel management system will be able to position themselves favorably as it will help them to create the foundation for an adaptive insurance organization. Here, insurers will be able to channel customer needs and expectations in order to continuously adapt their organizations to them.

"Digitalization is always an integral cross-sectional process that has to include the entire company, with customer benefit as the focus."
David Zahn, CEO, i-finance GmbH

Insurance companies that can quickly add new types of risk coverage to their product portfolio will have an advantage over their competitors. This means product development for adaptive insurance products will need to be fast, compartmentalized, and data-driven. The components of adaptive insurance products will have to be small enough to continuously cover both individual risk situations and, through their interchangeability and adaptability, the individual risk profile for every customer. This will also include significantly increasing the precision of exclusions for risk and risk coverage. The contractually excluded risks of individual customers can thus be decreased to better reflect the customer's actual profile.

"Minimum viable products are the key to a product development process that truly focuses on customer benefit."
David Zahn, CEO, i-finance GmbH

Providers will fulfill customer expectations by being able to integrate newly discovered risks into their product catalogue on short notice. A mandatory prerequisite for this is the ability to include the continuous change of adaptive insurance products in policy conditions in a legally valid way. Like the product itself, these conditions will also become adaptive.

Insurance companies will be able to generate added value for their customers by using available data from the Internet of Everything to create new risk groups and calculate rates. The necessary actuarial work by insurance companies will significantly change due to the new product development process. In 2026, biometric parameters, for example, will be more diverse than today. They will represent the customer's risk situations more accurately and in a better way than today's collectives can, and will no longer be bound to a specific insurance sector.

Insurance providers with an omnichannel management system will have the capacity to better reach their customers as they establish cross-sector customer dialogue through an intelligent layer positioned between specialist departments and sales which encompasses the entire process from product development on to marketing, sales, and regulation. Here providers will develop communication strategies tailored to individual customer segments. Insurers who address the needs and expectations of the individual sub-segments in their communication in a targeted way will have an advantage over those companies that only communicate with their customers through products. Therefore, customer expectations regarding price-performance ratio or identity management will be fulfilled. Adaptive insurance products will thus be part of the provider's response to the needs and expectations of the comfortable non-seeker and the responsibility delegator.

The knowledge of what content and communication channels are right for the customer will be provided by the omnichannel department. The sales department will then be responsible for implementation. Over the next few years, this will lead to a differentiation of the sales department based on customer needs and expectations. This differentiation will be driven by the disappearance of the standard segment and the loss of information advantage caused by digitalization. Insurance providers who structure their sales organizations according to customer segments will be able to position themselves favorably. In this way, they will make sure that customer expectations are met by their sales departments. Insurance providers will not set up their sales teams according to product categories such as adaptive products, but according to the needs and expectations of individual customer segments. The sales team for the comfortable non-seeker will consist of tech-savvy employees who interact with customers as equals on all digital channels. Like its customers, the department will always be online. It will closely work together with the insurer's analytics department in order to proactively fulfill new customer needs.

As soon as customers change customer segments permanently or regarding a given situation, the insurance company of the future will adapt communication and sales accordingly. For example, if the comfortable non-seeker changes to the segment of the responsibility delegator, the insurer will communicate with the customer's consultant from this point on and no longer contact the customer directly. Insurance companies that recognize new customer situations early and acknowledge the changed needs and expectations regarding communication will be able to leverage this opportunity.

"A digital business model requires cross-departmental organizational units and strategies which insurance companies generally do not have yet."

Dr. Jörg Günther, Partner, Consulting KPMG AG Accounting Corporation

THE BUSINESS MODELS OF THE FUTURE

Adaptive insurance products will drive and open new business models

"In ten years' time, insurance products will look completely different. They will be geared towards the customer's individual risks, not towards insurance segments."

Mathias Harrassowitz-Kock, CEO, Keylane GmbH

Up to this point, the study has examined how ongoing digitalization in almost all areas of work and life will establish adaptivity as the new standard for products over the next few years. This will be true in all sectors, for both tangible and intangible products. Only those companies that are able to tailor their products to individual and situational customer needs – at the very least in real time, but even better predictively – can hope to be competitive. Due to the requirements for the speed and scope of exploitation, this can only happen digitally, a situation which will lead to a new starting point for the development of insurance companies. Trend Area 2 has shown how the insurance company of the future will need to be comprehensively conceived around its IT system – and the IT system from the customer's perspective. Therefore, an insurance company developed around the IT system will have to include the necessary flexibility and transformability in its organization as well.

Trend Area 3 has highlighted how adaptive products will also lead to adaptive forms of organization. This will mean a more intense transformation process for a tradition-steeped market with complex processes, but is also crucial for a promising position on the insurance market of 2026. Because this is the goal of the change to adaptive insurance products: an economically successful, technically competent, and communicatively convincing market presence. More specifically: for every customer a substantial and reliable relationship with the insurance provider of their trust.

"The majority of insurance companies are not prepared to comprehensively fulfill the demands of a dynamic market. This is why most insurance companies know that they have to do something now."

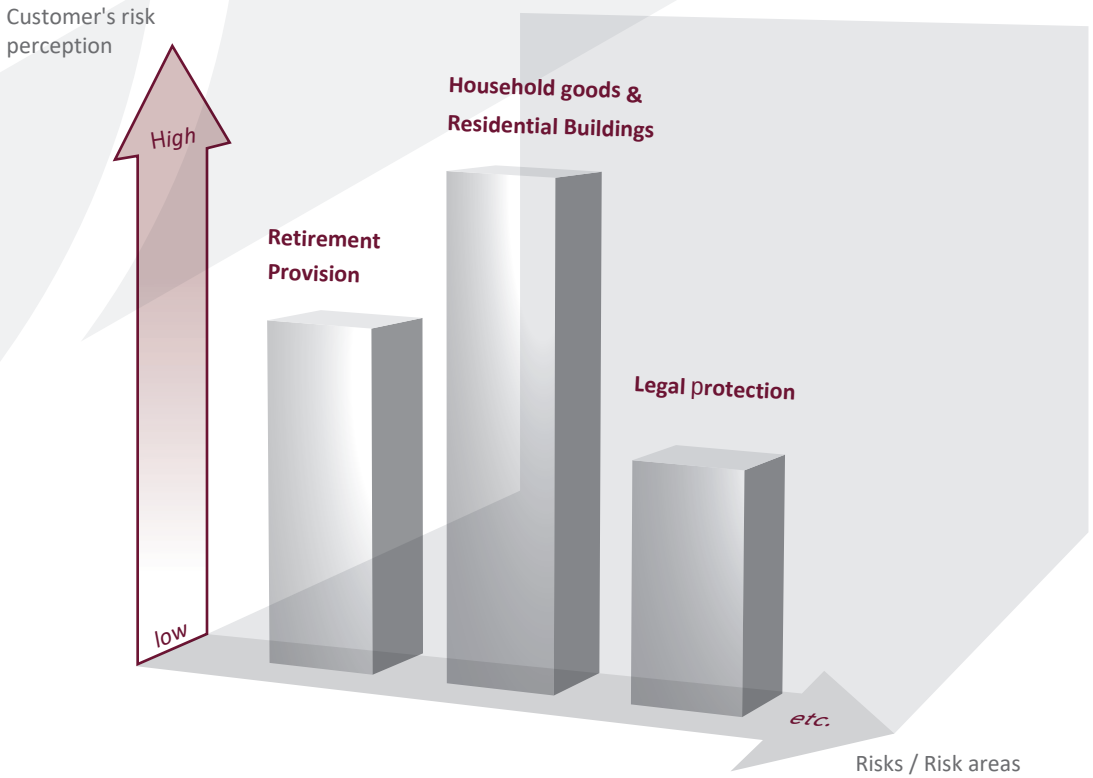
Oliver von Ameln, CEO, adesso insurance solutions GmbH

The transformation of insurance companies and products can already be seen. The term "standard product" has vanished from providers' vocabulary or is used only to distance themselves from the concept.

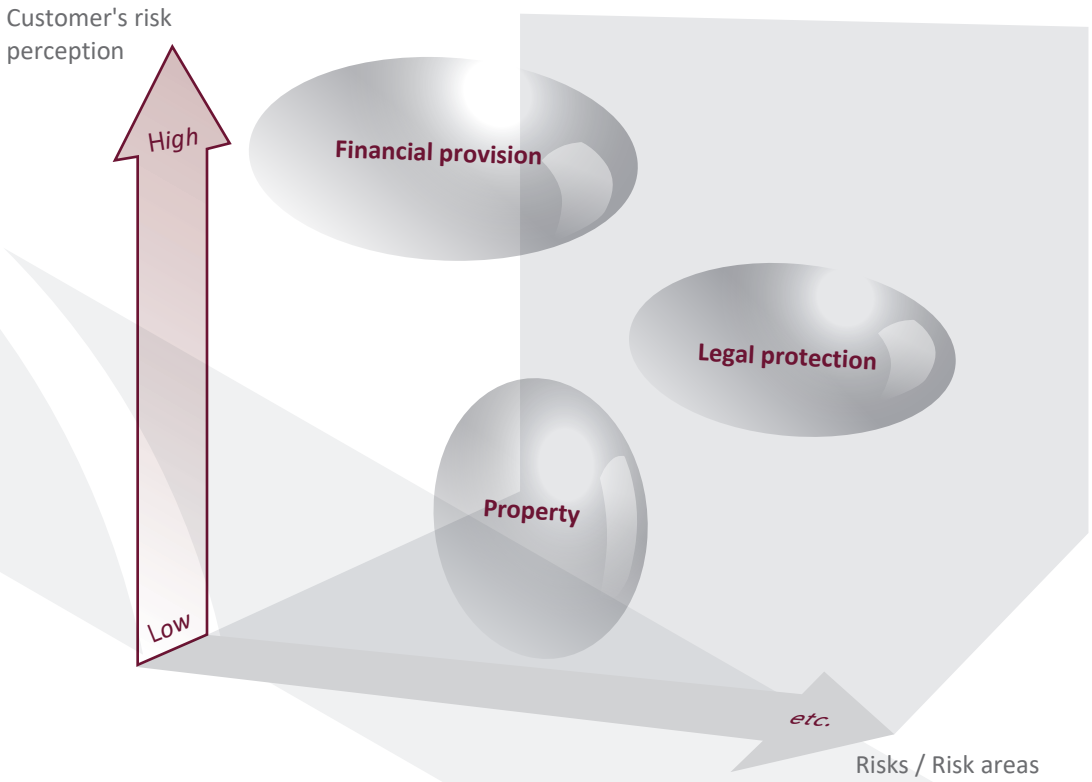
However, insurance companies still have a long way to before they can offer comprehensive adaptive products. Today the market mainly consists of modular products. This means the products of the individual insurance segments have been divided into smaller units which customers can combine as they like. In addition, customers have more freedom to decide on policy durations. Situational insurances with a duration of only a few hours are no longer exceptional. The next step towards adaptive products is the extensive qualitative transformation of products. Every modular or situational product is a framework in which the customer's risks are integrated. If it does not fit, it will be adapted – for the insurer's benefit. For adaptive products, the principle goes: If it does not fit, it will be adapted – for the good of the customer, every day. These products will be complemented by a variety of services which protect customers from individual risks in their daily lives and increase safety.

Customer needs and expectations will substantially drive the growth of insurance-related services. Solutions defined as non-insurance services today will become the core of insurance services for individual customers tomorrow. At first, insurance providers will implement this in individual segments. Initial approaches here can be found with telematics rate plans for the motor vehicle sector or for occupational disability insurance. In order to take the final step towards a comprehensive adaptive insurance product, insurance companies will stop thinking in segments – at least from the customer's perspective. The customer will buy an adaptive product which covers their entire risk portfolio. Insurers will only have a few years to complete these steps. This will not occur in ordered succession in an organized market. Instead it will be driven by various players, at various places, and at high speed. The transformation of the market is picking up speed.

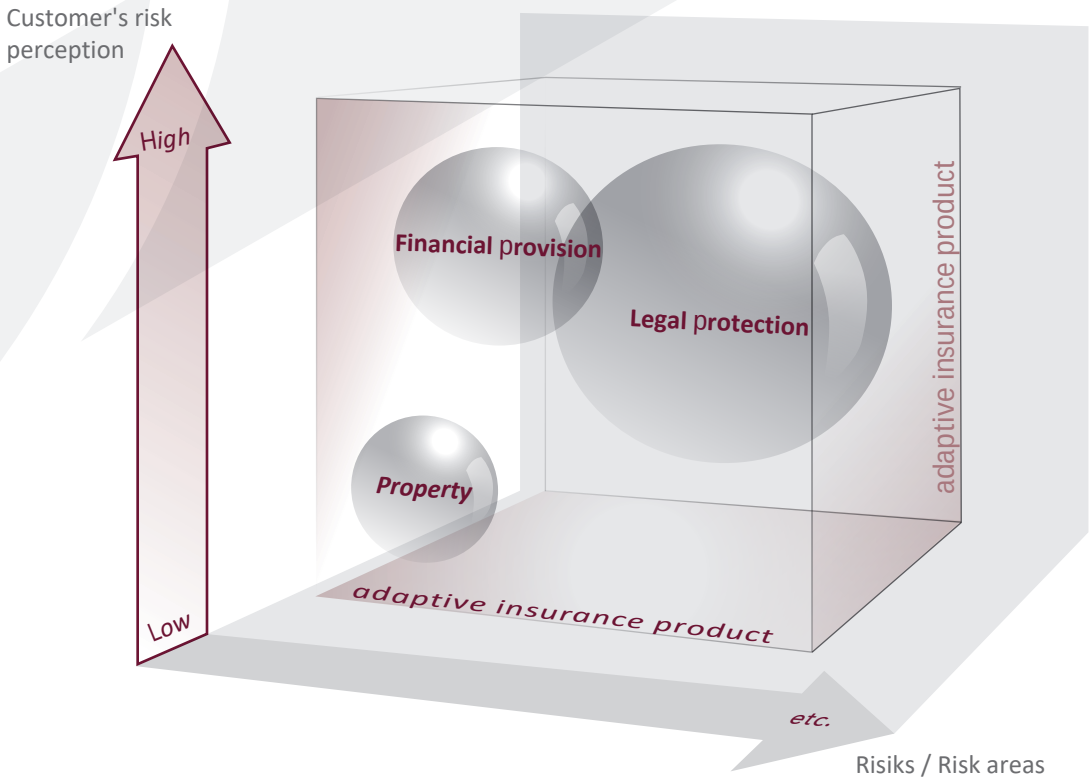
Today: The insurer's perspective



Today: Changing customer expectations



2026: The comprehensive adaptive insurance product



"Insurance companies are changing because external pressure and pressure on the market keep growing."
Mathias Harrassowitz-Kock, CEO, Keylane GmbH

The German insurance market, for example, is attractive for attackers simply because of its size. In 2015 the turnover for insurance policies in Germany was €194 billion. This was achieved through 428 million policies: 303 million policies for property insurance, 91 million life insurance policies, and 34 million private health insurance contracts. New providers can already benefit from conquering small parts of this market. Development in niche markets that seem too small and unprofitable for established companies can also be beneficial for insurtechs. For this reason alone, traditional insurance companies will have to face a rapidly growing number of attackers in the next few years that will occupy specific (and manageable) market segments through digital business models, intending and expecting to scale these afterwards almost arbitrarily.

Internationalization will also drive this change. Certainly, traditional insurance services are subject to national and European law. However, the more important communication interfaces and the integration of products into the digital lives of customers becomes, the more efficacious international developments will be. Insurance law will remain country-specific while IT systems and user experience at the customer interface will become more and more international. Uber, Google, Facebook, and Amazon have set the benchmark for customer communication – across all industries.

However, attackers do not only set new standards for customer communication. They also change market structure by consciously betting on partial risks and partial markets. Metromile offers a vehicle liability insurance that is billed according to every mile driven and therefore consciously only makes sense for infrequent drivers. Although the company theoretically insures frequent drivers as well and is generally open to everyone, due to its price structure, insurance policies become disproportionally expensive above 10,000 miles per year. This means the model is exclusively geared towards a specific market segment. Metromile specifically addresses this market through marketing and sales, showcasing its strong points in digital communication and app integration. This example reveals a pattern: Attackers increasingly tend to identify certain segments as profitable and focus exclusively on these. Traditional providers then involuntarily become insurers for the less attractive market leftovers – unless they are able to keep up with the attackers' agility and adaptivity. In general, this effect is of course already familiar in the insurance markets for health and nursing care. However, the momentum caused by the large number of insurtechs in various insurance segments is new.

"Most of the time people do not think about taking out legal expense insurance until they already have a legal problem or this is clearly imminent."
Daniel Siegrist, CEO, Coop Rechtsschutz

The following is an example from the field of legal expense insurance: Flightright has taken a position in a niche market, competing with providers for personal legal expense insurance products. Customers give Flightright the authority to file compensation claims against airlines due to delayed or canceled flights. If successful, the company receives 25% of the amount paid. In this case the customer does not need legal expense insurance to assert their rights. The company offers a service: Customers do not have to take care of filing a claim. They do not have to take any financial risk and only stand to win: They only pay in the event of success. This happens passively, meaning the commission will be deducted from the amount of compensation.

One example from the field of private retirement provision is the German startup VorsorgeKampagne

[1] Source: Gesamtverband der Deutschen Versicherungswirtschaft e. V.

that offers their customers a comparison of commission-free net rates – with online consulting and a digital insurance broker. Although this is a pure sales platform, the company thereby puts pressure on others as it only lists commission-free rates. Some insurance companies currently do not offer these and are therefore not visible on the platform.

"Startups operate differently than established insurance providers. They try new ideas with the customer first and worry about the regulatory conditions later."
Oliver von Ameln, CEO, adesso insurance solutions GmbH

The fields of activity for insurtechs already depict the entire value chain of insurance providers. On the one hand, they address individual customer needs with digital solutions at different times during the customer journey. Insurtechs therefore act as drivers in the following areas:

- Offering new forms of risk coverage (e.g., short-term policies, niche and annex insurances, etc.)
- Digital contract overview and optimization via broker apps
- Offering support and / or assistance services (e.g., health care, driving school, etc.)
- Insurance solutions based on the Internet of Things (e.g., telematics rates for motor vehicle insurance, telematics rates for term life insurance or occupational disability insurance, etc.)
- Combination of insurance and financial services (e.g., grouping of accounts, insurance contracts, and other assets)

On the other hand, technology providers also drive the internal digitalization of insurers. This includes providers from the areas of big data and analytics, underwriting, contract management, fraud detection, and so on.

Insurers who integrate individual new business models into their value chain or use them as a template for their own developments will secure an advantage here.

"The basic principle of insurance is to bundle up similar risks into collectives. However, it is also possible to create collectives by accumulating various distinct risks."
Oliver von Ameln, CEO, adesso insurance solutions GmbH

In the end, this development shakes up the basic principle of insurance products: bundling risks in a collective in order to make them manageable. The diversification of risks into groups, on which the calculation of rates is based, will change by 2026 due to the enormous amount of available data. The amount of comparable parameters for the combination of risk groups will rise. This means insurance providers will increasingly rely on analytics technologies for detailed analysis and prognosis over the next few years. The result of this individual and situational customer monitoring will be a detailed risk calculation for each customer. Individual insurance customers will no longer need to be grouped into fixed clusters, neither will they have individual insurance contracts. In the field of long-term insurances in particular, it has ultimately already been a case of pure fiction to impose a risk class identified at a single point in time on customers that remains with them for the rest of their lifetimes. Big data will enable insurers to assign risks to temporary clusters differentiated by components and probabilities, and thus to form groups which less resemble fixed sociodemographic categories than multidimensional risk spaces. The basic principle of insurance products will therefore be reinterpreted: The collective admittance and coverage of individual persons as a dynamic and variable real-time process.

A prerequisite for this formation of clusters will be customers who are willing to share their data in a way that allows them to be clearly identified. This willingness will vary according to customer and segment. This illustrates once more the complex interaction between customer relationship and the IT system: Only customers who are in contact with their insurance provider, who have built a

trusting relationship, will be willing to share their data with the insurer. The customer, not the insurer, will make up for the lack of data on the provider's part. Only insurance providers who are able to handle all of their customers' (differentiated) big data will be capable of offering them individualized and situationally appropriate solutions in a way that leads customers to feel that trust in their providers is warranted.

The resulting business models are numerous and have already been occupied by the first attackers: IT expertise will become a service just as much as the anonymization of personal data. The Swiss organization dacadoo ag has developed a health index which sends health data to insurance companies. The index comprises physical data, data on emotional well-being, and lifestyle data. The customer only discloses a score between 1 and 1000, without the provider knowing how this has been generated. Vice versa, insurance providers can also use these scores to share them with customers. Regardless of provider, they offer transparency and comparability with other customers.

"Transparency is key for adaptive insurance. Insurance companies and customers will need to become more transparent."
Peter Ohnemus, Founder & CEO, dacadoo ag

Fairly recently, property insurances with short-term contracts for specific situations were the Next Big Thing. Numerous publications suggested the possibility of taking out casualty insurance for the next half hour at the ski lift via text message or using an app to expand automobile collision insurance to Eastern Europe at the border. Both can be considered solved – and generally of course do not represent a revolution of the insurance business. Today, startups like AppSichern offer services such as casualty insurance for visiting a concert or sporting event. This coverage only applies to the day of the event. Due to the short duration and high risk, the price for this one-day-coverage is substantially higher than constant coverage. Nevertheless, customers use this solution because the product addresses a relevant situation and the final price is lower than a comparable annual rate.

For purchase insurance and related policy types, the background situation is also relevant; in most cases buying a product. The customer buys a new bike and is afraid someone will steal it. Although customers could cover this with their household insurance, providers use this situation to sell separate policies. This offers added value from the customer's perspective as it is ideally adapted to their requirements in that particular situation. The superiority of adaptive solutions is beginning to show. Price is no longer as important for comparison purposes. As soon as the insurance provider has access to the customer's data, the provider will also be able to offer a safety-related purchase recommendation along with the product insurance. Even today, insurance providers cover the risks of digital solutions for situational or modular supplements like purchase protection. Insurers can win back the customer interface by providing customers with a quick, painless digital sales process. The insurtech Mass Up, for example, offers insurance companies and broker organizations a digital platform for supplementary insurance as a white label solution.

At the same time, it is becoming clear that, although selectively fulfilling customer needs is satisfactory for both parties, this is not enough to mark a change in the industry. The adaptive insurers of the next decade will be one crucial step ahead. They will draw their superiority from being integrated into the overall smart life of the customer. This is where adaptive products will be able to unfold their true potential.

"The future of insurance companies will no longer simply be paying for, but solving problems. Otherwise insurance will become a mere accessory for other services."
Thomas Rainer Tögel, Member of the Board, ERGO Versicherung AG

In Trend Area 1, this study has already demonstrated how the Internet of Everything will incorporate and shape the living environments of policy holders.

Companies that do not establish a prominent place here will be at risk of being overlooked and will no longer play any significant role in customer communication. However, competition for landing a place in the overall smart life of the customer will be stiff. To illustrate: How many insurance apps would you grant room on your the home screen of your smartphone? More than one? Hardly. So how many insurance companies would you give broad access to your real-time data? In the long run, customer attention and trust will develop in line with this bottleneck for all business models in the insurance sector. In return, the role of the digital assistant will become a profitable position regardless of whether an individual insurance provider can fulfill any need for coverage by the customer. For the customer, adaptive products and digital risk assistants will be the sole interface to the topics of risk and security. If the insurance provider cannot fulfill a customer's individual need in this respect, this will increase the probability that the customer will change insurance providers or will install a different digital assistant system. This change will happen comprehensively. Insurers will not only lose one policy, but every possible policy and the customer as well.

This will be the core of business models: the role of digital risk manager for the individual customer, an intelligent assistant system that will be able to provide integrated solutions for risk management based on the diverse data of the individual customer and vast pools of insurance data. The electronic risk assistant will essentially serve as a control unit, making extensive use of artificial intelligence mechanisms and automated recommendation systems.

Those who associate robo-advisors with R2D2 miss the true potential of digital assistants. The more they are connected to the customer's digital life, the stronger they are. The more invisible they seem, they more effective they are. This will redefine the broker's function in tomorrow's digitalized society: available 24 / 7, always well-informed about needs, preferences, and values, and always able to analyze and process the most complex situations and turn them into appropriate solutions and services.

"Robo-advisors will be one of the largest innovation drivers of the coming years. They will substantially change the insurance market."
Dr. Nico Peters, CEO, COMPEON GmbH

Even if the electronic risk assistant is offered by one insurance provider, it will still allow the integration of every policy, even those of competitors. The electronic risk assistant will then grant different providers access to customer data based on various privacy levels. MyDiverso already offers a digital insurance file as a white label solution for insurance providers and broker organizations.

The types of data are limitless: They range from vital functions, income, and place of residence to mobility profile, employer, expertise, gene pool, and social behavior. Obviously not every customer will share all of this data. The customers' individual behavior will also change frequently over time. This will give differentiation to the customer segments of the future that 2b AHEAD has already presented in detail in previous studies on the insurance sector. The challenge for insurance companies will be to develop and communicate customized solutions even with a scalable amount of data.

Here the sale of individually offered insurance products can also occur separately, for example via text message or app, or customers will be able to choose framework agreements and contingency solutions.

"Adaptive insurance products should be able to calculate risks as well as rates automatically and in real time."
Peter Ohnemus, Founder & CEO, dacadoo ag

This will be the foundation of an insurance model for private retirement plans: An assistant feature that calculates industry- and personal-health development in real time based on disposable income and versatile prognoses for income and needs development, determines which premiums are currently appropriate and how they can best be invested – and not only suggests this transaction but also executes it. With relevant feedback loops, the digital risk manager will thus become a learning system: adaptive private retirement provision.

"Individual legal expense insurance products mostly attract customers who already have a current legal problem. By integrating legal expense insurance into other insurance products, this form of 'anti-selection' can be counteracted."
Daniel Siegrist, CEO, Coop Rechtsschutz

Thanks to adaptive products, some traditional insurance products will diffuse into other products or product worlds in other areas. One example: Legal expense insurance will become part of adaptive mobility insurance, an assistance feature that will combine the right means of transportation with the appropriate risk coverage. The assistant will suggest the right means of transportation based on preference, available alternatives, and the risk parameters weather, traffic, and physical condition, and will add necessary coverage to the existing insurance product – traffic liability protection for the road, private legal expense insurance for the flight, casualty insurance for the bike ride to the park. For the customer, legal expense insurance will therefore no longer be as strongly focused on a problem or damage event. It will be viewed as a useful addition to a relevant situation.

"Conquering and retaining the customer interface will be the key competitive area of the next few years."
Peter Moor, Director Business Development, Swiss Life

In 2026 insurance products will look different from today. Only insurance providers who actively take the route of transformation will continue to be relevant to the customer. Especially the competition surrounding which digital risk assistant customers install will determine who will be able to successfully occupy the market for adaptive products. Insurance companies will gain an advantage over their competitors the more they can integrate ONE adaptive product into the customer's smart life. If customers need a second product to cover individual sub-risks, providers will allow the competition to enter as well. Insurance companies that move to implement customer expectations and technological possibilities at an early stage will be able to gain a head start. This implementation, however, is no switch that can simply be set from 0 to 1, from the present to the future. Implementation will consist of a variety of steps, from modular products to individualized products, from individualized products to continuously changing products, from adaptive products for various fields to a comprehensive adaptive insurance product.

STRATEGIC RECOMMENDATIONS

How to make your company future-proof

Due to rapid technological development, insurance products will change over the next few years – they will become adaptive. On the one hand, this will mean a new form of products for insurance providers. On the other, it will cause radical changes in their own structures and organizations. The following strategic recommendations will help companies from the insurance sector to prepare for the future – start today to gain a head start!

Be faster than real time!

Product recommendations are good, but predictive risk coverage is better. In 2026, big data and intelligent prognostics will be standard. Make this your standard even sooner.

1. Invest in big data infrastructure to gain the capability to manage and analyze data generated from all touch points and to provide personalized and situational solutions.
2. Do not be satisfied with individualized or situational products. Use intelligent prognostics to protect your customers from damages.
3. Develop an electronic risk assistant for end customers.

   Get this assistant on the smartphone display of your customers and then your non-customers as well. Motivate your brokers to conquer your customers' displays with this risk assistant system.
4. Quickly implement new forms and means of collecting and analyzing data to proactively fulfill new customer needs. As soon as you are able to reliably analyze personality traits, motives, emotions, etc., you will find customers who want to use these opportunities.
5. Name a Chief Data Officer. While your Chief Information Officer is strategically and operationally responsible for the technological implementation of data collection and analysis, the Chief Data Officer will decide on the strategic and operational management of this data.

Stop leaving your customers in the dark concerning what you know about them! Let every customer decide what data they want to share.

1. Assume that many of your customers will want to share their relevant data.

if this means added value for them. Show your customers this added value.

2. Develop all products and services according to the principles of privacy by design. Offer your products and services with different levels of data protection. Exceed regulatory requirements even in your basic-level solutions.

3. Allow your customers to view, edit, and even delete information stored about them.

4. Give away smart devices such as wearables to your customers. Associate a clear customer benefit to sharing data and make data collection fun for the customer. Let customers decide if they want to share their data with you.

5. Be a real-time risk indicator for your customers. Use a traffic light system in your communication: Green = "everything is fine," etc.

By selling products you will drive customers away! Stop selling insurance products. Start selling security!

1. Become your customers' security manager. Think about how many security managers customers will let into their lives: one. This is an opportunity, risk, and responsibility at the same time.

2. Give customers the opportunity to analyze their own risk situation and continuously control their risk coverage. Only customers who control their security needs themselves will trust your advice, your recommendations, your solutions, and decide to establish a long-term customer relationship with you.

3. You will need sales structures that move away from serving both sides of the "digital or analog" split. Instead, you need structures that always work fast and on time for customers – and according to their desires. There will no longer be room for competing sales channels.

4. Start regrouping your customer segments. The traditional market pyramid is already null and void. Implement a dedicated communication strategy for each customer segment.

5. Insurance products are only the starting point of the customer relationship. Develop services that fulfill the individual and situational security needs of your customers.

6. Take the initiative and actively approach customers. But only approach consumers when you have identified an individual customer's specific need and can fulfill this with a custom-tailored solution. Each approach must have a clear benefit for the customer.

7. Stop rewarding only the team member who closes the sale. Instead, start paying small bonuses to everyone in the company who helps increase a customer's long-term value. Make long-term customer value quantifiable.

8. Rethink security: not as the security you promise, but as the security your customer currently demands.

9. Abandon thinking in line with the price-performance logic of comparison calculators. Individually and situationally shape each customer's service and product portfolio – the resulting price will also be individual.

10. Make an individual security promise to each customer. In case of damages, keep your general security promise to help any customer at any time.

11. Traditional property insurance coverage is weak. Even though it covers part of the financial loss, it does not avoid work, pain, and the actual damage itself. Only damage prevention fulfills a real customer need.

12. The distinction between insurance services and non-insurance services stems from a regulatory approach, not a customer-centric approach. Solve problems! If good advice can solve problems, give advice. If financing models can solve problems, use them.

13. Sell the competition's insurance products. Not in secret, but actively. Do this everywhere your competition can better fulfill your customer's need for security than you can. Only companies that occupy and hold the customer interface by establishing customer trust will be able to sell individualized and situational security to the customer.

Do you use omnichannel management? Develop it now! Use omnichannel as a centralized platform for transformation – for your customers and your company.

1. Create a digital infrastructure for communicating with your customers, business partners, and for corporate communication. Integrate all channels into an intuitive application – of course also for mobile users.

2. Use your digital infrastructure in order to involve your customers (and non-customers), business partners, and your entire staff in the conception, production, and distribution processes of your products and services.

3. Invest in your IT infrastructure! Put the customer at the center of the system logic. Create a frontend for customers that allows end customers to effectively use your intelligent IT system.

4. Transform your call center into an omnichannel center. Leave the management to intelligent software. Which communication channel the customer prefers, how pressing the customer's problem is, what employee best fits the customer's personality – these are all things that software can know better than humans.

5. Establish an effective digital team. If you do not have the right resources for this, look for them in other sectors.

The transformation of customer needs in your industry is far from complete. Be prepared for this – organize your company as an adaptive organization.

1. Let go of traditional insurance segments – at the very least in customer communication, support, risk analysis, and product development.

2. Organize your product development to be data-driven, compartmentalized, and fast. Adapt your contract conditions to this new process as well.

3. Stop thinking in terms of departments! Think in terms of projects! Set up interdisciplinary teams for each project. After completing the project, members will join another team.

4. Name a Chief Change Officer who coordinates project-specific requirements, tasks, and responsibilities.

As the saying goes: Those who don't move with the times, time will move on without. Develop new business models that will be able to replace today's collapsing insurance business.

1. Compare your products and services with those of Google, Amazon, Apple & Co. – this is what your customers do.

2. Give away real insurance coverage. Offer freemium insurances. This can easily be financed through the future surplus left by today's broker commissions.

3. Be prepared to face the fact that your customers will want to manage their own risk portfolio themselves. They will determine a fixed monthly budget (and / or a remaining residual budget) and then look for the best way to secure their lifestyle at this amount. Actively furnish this cus-tomer need with products and services.

4. Develop insurance products against social decline, from the loss of housing to a drop in in-come class.

5. Transfer your retirement-provision services into a financial assistant model. Who will need a bank if they can use your intelligent financial assistant? No one! Who will need you if your bank offers individualized, intelligent financial management? Again: no one. You decide!

6. Become a security partner for non-insurance companies as a white label provider, and enable them to present themselves as security managers.

THE AUTHORS

Scientists, trend researchers and strategy consultants

Michael Carl

Michael Carl is Managing Director Research & Consulting at the 2b AHEAD ThinkTank. He is responsible for the methods and content of the institute's future studies, manages their implementation and guides the development of specific strategic recommendations. He is also a sought-after keynote speaker on trend and future-related topics.

After his studies in Theology in Germany and Great Britain, Michael was active in journalism, working as an editor and moderator for various public and private radio broadcasters. After several years as personal advisor to an ARD radio director, he moved to the corporate sphere. Initially Michael established and managed the strategy office of the Berlin Brandenburg radio network, where he was responsible for major structural, strategic, and HR projects. Michael is also experienced as an independent consultant for strate-gic and organizational development. His passions are music and his literature blog.

Robert Schnoeckel

Robert Schnoeckel is a Senior Researcher in the 2b AHEAD ThinkTank's Research & Analyses team. He provides conceptual and organizational leadership and support for individual trend studies and analyses across the entire development process. Prior to this, Robert gained considerable knowledge of customer needs and expectations working closely with the institute's clients as its Customer Experience Manager.

Before his time at 2b AHEAD, he served as Project Manager in a renowned HR consultancy and gathered significant experience in the areas of PR and publicity as part of an international logistics company. While studying German Literature and Political Science in Chemnitz and Jena, Robert collaborated in the first historical critical publication of the collected works of Pre-Romantic poet Christoph Martin Wieland. He lives with his wife and son in Leipzig. A passionate athlete, he has run several half marathons and has spent more than twenty years playing soccer.

THE METHODS

The Delphi Method and Qualitative Expert Interviews

The present study is a qualitative, empirical study using the Delphi method. This method is a future-studies method that takes its name from the famed oracle of ancient times. It was developed during the middle of the last century in the US and is used for the preparation of forecasts. Because hardly any expert in these complex times is able to successfully observe several mutually influential fields of expertise at once, Delphi method studies draw on the assessments of several experts, each with their own specialist knowledge. The interviews are conducted using a twostage process.

During the first phase, the experts are asked individually to give their personal assessments on specific topics over the course of guided expert interviews. In the second phase, in contrast, they are presented with the collective results of the first round. The experts are then asked to hold to their positions from the first phase, or to integrate the results of the first phase into a revised assessment of the subject matter.

The selection of the expert study participants is particularly important for this scientific approach to trend research. For this reason, a so-called "trend cycle" is compiled in a workshop format after an extensive desk research phase covering existing topic-related studies and publications.

The trend cycle constitutes a list of all of those companies within and outside of a given industry whose resources are sufficient to ensure that the strategic decisions they make today will have a significant effect on the future of the target industry, either because other players are sure to follow their example, or because they can successfully push their business models thanks to the influence they have over the market. One expert was chosen out of each relevant group of industry players who did not merely speak about their own company, but was also able to give an overview of their group.

In two interview waves, the investment decisions, business expectations, and trend statements of the experts given in the context of guided expert interviews were analyzed and evaluated. A total of 15 experts were chosen. The experts were confronted with initial theses in private conversations and asked to give their assessments on the future developments in question. Then the expert statements underwent qualitative analysis and were grouped into the following four trend areas: technological prerequisites and their effect on customer needs and behavior, technological and organizational demands on insurers, and future business models. These trend areas compile the essential statements made by the experts about adaptive insurance products.

To conclude the study, strategic options for insurance companies were derived from this analysis. These recommendations are based on a synthesis of the exploration of the trend areas, the statements given by the experts, and the picture of the future and expert knowledge of the 2b AHEAD ThinkTank in innovation management strategies.

THE EXPERTS

Investment decision makers, strategy leaders, and future experts

Oliver von Ameln
CEO, adesso insurance solutions GmbH

Adesso insurance solutions contributes to shaping the digital future of the insurance sector. Adesso insurance solutions offers a comprehensive IT solution, allowing insurance companies to focus on their core business. Oliver completed our panel with the perspective of technology providers.

Mathias Harrassowitz-Kock
CEO, Keylane GmbH

Digital thinking is in Keylane's DNA. Keylane develops and implements flexible benchmark software for the core processes of life, property-casualty, and pension insurers. Mathias enriched our panel with his technological perspective on adaptive insurance.

Dr. Ann Cavoukian
Executive Director, Privacy and Big Data Institute, Ryerson University

Digitalization and privacy do not contradict each other. Ryerson University is rethinking data security and data protection in the digital world. We discussed the issue of data security with Dr. Cavoukian.

Dr. Claudia Lang
CEO, Community Life GmbH

Community Life exploits the benefits of swarm intelligence with high precision. As an insurance community, Community Life has entered the market for adaptive insurance products with this new business model. Dr. Lang completed our panel with the startup perspective.

Dr. Dirk C. Gratzel
CEO, PRECIRE Technologies GmbH

PRECIRE is revolutionizing the possibilities of speech recognition. PRECIRE encodes written and spoken language and offers fascinating insights on the interplay of personality, communication, and behavior. Dr. Gratzel spoke with us about the possibilities of human / machine organisms in the area of adaptive insurances.

Frank Löffler
CEO, asspario Versicherungsdienst AG

At asspario, great emphasis is put on security and sympathy. Asspario Versicherungsdienst AG is an underwriting agent that offers efficient and cost-effective solutions for the German insurance market. Frank bolstered the panel with new concepts for property insurance.

Dr. Jörg Günther
Partner Advisory, Consulting KPMG AG Accounting Corporation

KPMG has understood the digital transformation of the insurance business. The leading consulting company knows that insurance providers do not trade with physical goods, but with the customer's trust. Dr. Günther told us how insurance companies can handle the digital transformation.

Peter Moor
Head of Business Development, Swiss Life

Swiss Life's priority is the future of their customers. The largest Swiss life insurance group offers their customers a comprehensive financial pension scheme. In this panel, Peter was our expert for future developments of the industry.

THE EXPERTS

Investment decision makers, strategy leaders, and future experts

Peter Ohnemus
Founder & CEO, dacadoo ag

Dacadoo will revolutionize health insurance. Dacadoo offers a comprehensive digital health platform where individuals can easily determine and track their health status and well-being in a fun way. Peter's views from the perspective of a startup complemented our panel with regards to technology.

Daniel Siegrist
CEO, Coop Rechtsschutz AG

Coop Rechtsschutz is different. Coop Rechtsschutz wants to amaze its customers and partners with high-quality services and unconventional solutions, re-defining access to the field of law. Daniel completed our panel with the perspective of a designated industry expert.

Dr. Nico Peters
CEO, COMPEON GmbH

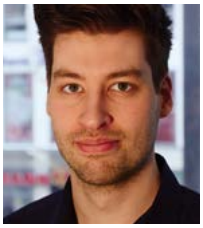
COMPEON takes financial interactions to a new level. COMPEON GmbH is an expert in the development and operation of portal solutions that specializes in financial services and enabling financial service providers and commercial customers anonymous communication. Dr. Peters expanded our panel with the views of a technology provider.

Jürgen Stoffel
Managing Director Information Technology, Hannover Re

Hannover Re does things differently than other companies. The listed reinsurance company is the contact point for primary insurers looking to reinsure their risks. Jürgen served as our expert for all questions about IT for insurance companies.

Stefan Riedel
Vice President Insurance Europe, IBM Deutschland

In the future, the core of the insurance industry will be data and access. IBM helps its customers to correctly use this data and access. Stefan discussed new ecosystems in the insurance sector with us.



David Zahn
CEO, i-finance GmbH

I-finance is about thinking insurance and doing solutions. I-finance simplifies complex pension solutions while providing transparency and offering customers maximum benefits – commission-free. David spoke with us about the development of private retirement provisions.

LITERATURE, STUDIES, AND ARTICLES

Places of inspiration

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GLOSSARY

adaptive products
Product characteristic which describes products or services that are both individualized and situational, and adapt to the respective needs of the user even after being purchased.

assistance systems, digital/ electronic
Software (e.g., smartphone apps) for customer advice and support which gives recommendations based on data analysis. Services providers and third parties can – among other things – offer customers individual products through these systems. Precursors are today's comparison portals.

big data
Denotes enormous heaps of data which are too large to be evaluated by human effort alone. This data results mainly from the evaluation of internet use, but also from other devices such as cameras, micro-phones, etc. In order to process this mass of data, new technologies and analysis systems are necessary.

blockchain
Blockchain technology makes it possible to transact digital exchanges without a middleman. All transaction-related information is stored in a decentralized system, which increases transparency and also means that information in the system can no longer be changed.

body enhancement
Refers to any kind of improvement, both physical and mental, of the capabilities of the human body and its external appearance.

brainfood
Foods that improve mental performance or reduce stress.

brainwave-recognition
Brainwave recognition, for example to control computers or prostheses through thought commands.

cloud
An IT model in which data is not saved on dedicated hardware, but rather on the internet so that it is avail-able at any time from any location with an internet connection.

cognitive computing systems
Cognitive computer systems develop the ability to understand humans, to learn from them, and to inde-pendently make decisions based on learning algorithms and artificial intelligence.

customer journey
This term refers to the totality of all points of contact between a customer with a brand – in direct commu-nication with the company or in indirect communication about the company or product – either before, during, or after the sale.

Internet of Things / Internet of Everything
The Internet of Things refers to the increasing networking of all objects in everyday life and in business. Every object will get its own IP address.

contact point / customer interface
Potential situations or locations where the customer can be approached directly and personally (consulting conversation, store, website call-up), and also the contact persons through whom the company and the customer come into mutual contact.

M2M
Machine-to-machine interaction refers to the flow of information and to automated communication be-tween terminals; e.g., containers, shelves, products, vehicles, etc., which allows an increasing level of au-tonomous processes in production and logistics.

man / machine organism
Koint of contact and interaction between humans and devices, often with the use of technological support from sensors or displays, etc.

mobile payment
Wireless payment over a mobile telephone and digital payment services.

Moore's Law
A law which states that the computing power of computer chips, calculated according to the number silicon transistors on the chip, will double approximately every 18 months at a constant price. It has proven valid since the 1950s.

omnichannel-management
A continuation of the multichannel or cross-channel approach. The coordination and control of activities of all company divisions according to a strategy of creating, across all communication and touch points – and with-out media interruption – a unified one-to-one experience for the customer.

Point of Sale (POS)
Sales location from the perspective of the consumer, for instance a local retail shop.

GLOSSARY

predictive analytics / smart forecasting
Predictive analysis refers to an approach which combines different statistical methods – such as data mining and fact finding – in order to generate forecasts. This technology enables, for example, an early recognition of customer requirements and thus the ability to offer a product that has already been individualized to fit the customer's needs – if they so desire.

sharing economy
The systematic lending of objects and items and the mutual provision of spaces and surfaces, especially through private individuals and interest groups, i.e., the sharing of human and physical resources. The term was coined by the Harvard economist Martin Weitzman.

smart home/smart building
Buildings will become intelligent through the use of technology. While smart home refers to private homes, rented apartments or condominiums, the term smart building comprises intelligent functional buildings such as public buildings, hotels, company buildings, or factories.

tracking
The "tracking" of products (B2C or B2B) or customers (B2C) for information exchange. Companies collect this information to – among other things – individualize their offers and sales approach.

trendcycle
A compilation of all those businesses – both within and beyond a given industry – which possess sufficient resources that the strategic decisions they make today have a significant influence on the future of the industry.

trust-center
A trustworthy external entity – also referred to as a "trusted third party" – that certifies the identity and trustworthiness of a given communication partner.

usability
The usability of a product or service for a given customer. This includes use context as well as the desired effects and aims in order to optimize customer satisfaction.

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