



How Insurers Can Prepare for the **Digital Revolution**

The secret to using data, communities, and customer service to generate success



Run Simple

ROBERT AND BIRGIT'S POINT OF VIEW



Robert Cummings
Global Vice President
Insurance Business Solutions
SAP



Birgit Fien-Schmalzbauer
Head of Research and Innovation
Insurance Business Solutions
SAP

Dear Customers,

The digital economy and recent advances in technology are dramatically changing the way insurance is bought and sold, creating new insurance ecosystems and a new breed of competitors. We will see more change in the next 10 years than have been seen in the past 300 years in the insurance business.

We believe that the industry is heading towards a new insurance paradigm that focuses on risk mitigation and prevention, rather than on financial compensation for a loss. This trend will transform policy holders into customers, and leading insurers are already engaging with their customers in conversations about lifestyle, health, travel, driving, and recreational activities. We have already observed how this approach results in new products and engagement channels that turn insurance into a live business.

By 2019, there will be an estimated 2.5 billion people connected on personal and business social networks worldwide.¹ Plus, an estimated 200 billion devices will be linked to each other through the Internet of Things.² Connected cars, homes, and health will enable a connected digital economy that will change how we work, live, and function as a global society.

Leading insurance companies will use this explosion of information to turn data into insights to get closer to their customers than ever before, improve product and service offerings, and better manage risk. Targeted segmentation of customers, speed to market with product agility, and integrated risk and finance are key levers. Successful companies are reimagining their business models, transforming their business processes, and enabling their workforce to deliver new customer value and business outcomes in the connected digital economy.

SAP is supplying innovation that allows real-time access and processing across this sea of new information. We also provide cloud options across the full enterprise to provide flexibility not previously seen. These innovations are transforming restrictive legacy environments into modern connected platforms that help insurers leapfrog the market.

In this paper, we will explore the emerging trends and answer fundamental questions about the future of insurance. We are looking forward to joining you as a trustworthy partner and advisor on this transformation journey to the digital economy.

A handwritten signature in blue ink that reads "R. Cummings".

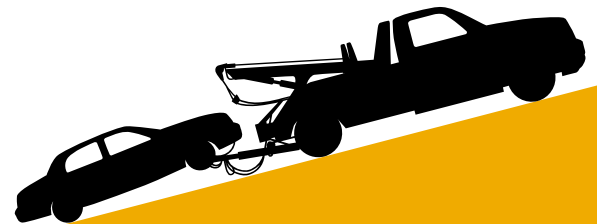
Robert Cummings
Global Head of
Insurance Solutions
SAP

A handwritten signature in blue ink that reads "Fien-Schmalzbauer".

Birgit Fien-Schmalzbauer
Head of Research and Innovation
Insurance Business Solutions
SAP

TABLE OF CONTENTS

Executive Summary	4
Top 5 Technology Trends	7
Reimagining	8
Reimagine Business Models	10
Reimagine Business Processes	11
Reimagine Workforce	12
Digital Business Framework	13
The Digital Core	15
Customer Experience	16
Workforce Engagement	17
Business Networks and Collaboration	18
How the Internet of Things Impacts Insurers	19
SAP HANA Platform – The Great Simplifier	20
How Does It All Come Together?	21
How to Start	23
Why SAP?	25
SAP is Committed to Innovation	26
End-to-End Digital Business Solution	27
SAP Global Services and Support to Drive Your Success	28
SAP Comprehensive Ecosystem	29



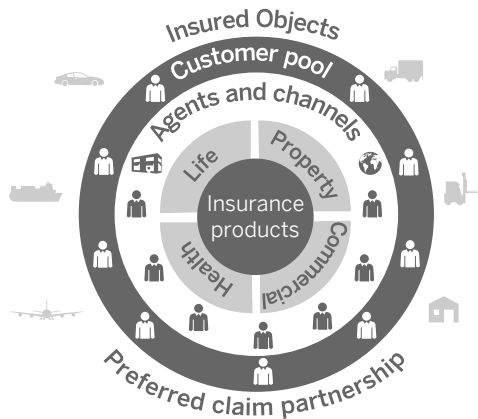
EXECUTIVE SUMMARY

Insurance transformation: Insurance today and tomorrow

Since 1666 and the Great Fire of London (the birth of modern insurance), the insurance business model has been surprisingly resilient and remained more or less unchanged. Today, most insurers segment their business around regionally focused products for specific lines of business. Insurers work with agents to convince a customer to sign a policy contract and have very little ongoing interaction with the customer.

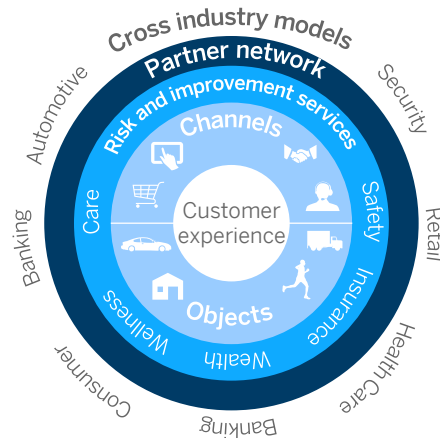
TODAY

COMPENSATING FINANCIAL LOSS



TOMORROW

+ PREVENTING LOSS



From **mathematical abstraction** of reality to influencing **physical reality**

Traditional challenges with this model

This business model is vulnerable because it neglects the ongoing customer relationship. The consumer has a relationship with an agent or broker, but very little contact with the insurer. The insurance offering itself is difficult for the consumer to understand and is usually differentiated from other products through price or brand awareness. Any objects insured (for example a home or vehicle) are disconnected from the insurer. Essentially, a policy is simply a conditional promise to a monetary payment in the event of a loss. Historically, this makes sense; there was no other feasible way to reduce risk for the customer.

The future will look different

Technology changes that assumption. It is now becoming feasible to actually increase wellness and safety, and customers will expect this of a product that purports to reduce risk.

Insurance started to change in the past decade, and now it is poised to change very rapidly as providers navigate the new digital economy and consumer behaviors. Soon customers and their digital lifestyle will be real time, with customer-centricity being critical and connectivity to objects that are being insured the norm.

Opportunities brought on by change

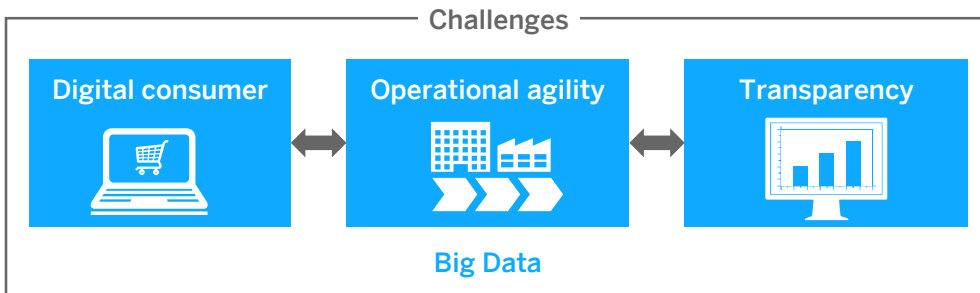
Insurers can no longer distance themselves from the consumer if they plan to stay viable. With the proliferation of new devices, such as personal fitness trackers and auto telematics, and a reliance on technology to make purchases and plan life events, insurers must address customers' digital preferences and engage them through consumer-designated channels, creating opportunities for meaningful customer experiences. The vast volume of data and insights also means that consumers will demand more personalized services, creating opportunities for new revenue channels.

Insurers will not be able to deliver these new business models on their own. The new digital economy will require transformation and investment in core insurance services, partnerships, and innovation enabling a platform for the future connected to a broader business network.

EXECUTIVE SUMMARY

Big picture: The digital economy is reshaping insurance

In order to take advantage of the digital economy, insurance brands need to consider how to leverage Big Data to become a truly digital business, adopt processes for better operational agility, and push their own levels of transparency.



Digital business models are disruptive. The rules have changed.

Do these look like traditional insurance services?

- **Esurance** insures 5 million people. Founded in 1999 as an online-only business and has grown rapidly.³
- **Haven Life**, a spin-off of MassMutual, announced it can approve consumers for new term life insurance policies in roughly 20 minutes⁴
- E-aggregators launched **Moneysupermarket**, a new channel allowing consumers in the United Kingdom to compare prices and buy insurance and other services online⁵
- New business networks from **State Farm** and **ADT** offer protected, connected homes
- **Volvo, Mercedes Benz, and Google** will cover damage caused in self-driving car crashes.⁶ Which role will insurers play in this scenario?

These challenges not only require a business mind-set and dedication; they also require a digital business core to facilitate transformation. This digital environment must be managed by modern technologies that can interact across all customer engagement channels as well as the Internet of Things.

Insurers must keep these challenges in mind as they consider changes to their business models. The boardroom needs to maintain real-time oversight in order to determine the types of systems they will need and the analytics tools they will have to deploy to take advantage of Big Data.



75%

Of insurers believe that industry boundaries will dramatically blur as the IoT and other platforms reshape industries into interconnected biosystems⁷



80%

Of insurers believe that IoT will radically change the nature of risks covered⁷

EXECUTIVE SUMMARY

Road map to the digital insurer: Steps to digitize your business

REIMAGINING

Do you have the right strategy? The starting point of the digital transformation journey is to reimagine your business with outcomes and customers at the center.



REIMAGINE

BUSINESS MODELS

The new business model is “digital first, customer first.” Insurance can no longer focus on products and risk; it needs to embrace lifestyle and opportunity.

Connected wearable devices enable insurers to offer products on a lifestyle “pay as you behave” pricing model. Connected cars allow for greater collaboration and partnerships with new entrants, such as car manufacturers. With this additional information, insurers can also offer customers value-added services from their **business network**, such as health discounts on local gym memberships or by leveraging car telematics information to decrease and mitigate risk, changing the business model.



REIMAGINE

BUSINESS PROCESSES

New connectivity models, such as the Internet of Things, demand a change in business processes; they **are redefining** customer experience, changing risk **processes**, and influencing claims handling due to connected devices and insights. Advanced rules management tools allow complex processes to be **automated** or move from employee-managed to **self-service**.



REIMAGINE

WORKFORCE

Digital transformation impacts how insurance employees and partners collaborate and work. It enables insurers to **customize support from high-touch to self-service**.

The competitive drive to launch new products will **require different skills for both product managers and underwriters**. Leadership will rely on real-time insights and dashboards in order to drive business change.

PLATFORM

Do you have the right platform to run your business?

Leading insurers need technology platforms designed for digital, highly agile, real-time, and analytics-driven business processes.

SAP ensures solutions align to desired outcomes. Our digital business framework is based on the five key pillars of an effective digital strategy:

1. **Customer experience** across all channels
2. **Business network collaboration** to extend value
3. **Core business processes** (finance, risk and compliance, product management, underwriting, and claims management)
4. **Workforce engagement**, including employees and contractors
5. **Big Data and the Internet of Things** to drive real-time insights and new business models

ROI drives this significant phase of the transition to digital. It's not about any one of the above five pillars, but rather how they all interconnect to achieve business outcomes.

SAP brings it all together – from vision to realization

At SAP, we did not invent the digital economy, but we unquestionably understand where it is going. We started a journey five years ago, building the agile platform and solution for the digital economy. This involved over \$30 billion in acquisitions and billions in R&D.

SAP provides a unique combination of technology, applications, platform, reference architecture, and business process expertise. SAP not only helps you formulate your strategy, but most importantly, implement and operationalize it as well. More than 5,600 insurance companies in 107 countries use SAP solutions. We understand the power of transforming and integrating the world.

EXECUTIVE SUMMARY

Perfect storm: Five technology trends changing our world

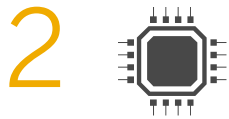
We are witnessing an unmatched environment of business innovation. Insurers can now leverage technology for risk mitigation, instead of just financial security. Available customer information allows for personalized products and service offerings that previously had been unavailable. Multiple innovations have matured and hit scale together, enabling five defining technology trends:

HYPERCONNECTIVITY



Every customer and every asset is connected. Connected cars provide telematics to car manufacturers and insurance companies. This information aids in creating targeted marketing material such as for parking, gas, and food options for consumers. Connectivity like this is disrupting all the established rules around business channels. **Connectivity drives the networked economy** with collaboration across customer, partner, supplier, information, assets, devices, and the workforce.

SUPER COMPUTING



The limits of 20th century computing power are gone. Networking and **in-memory computing** allow for the creation of infinite new business opportunities. For insurance companies, they allow for raw information to be turned into actionable insight in minutes versus hours or days.

CLOUD COMPUTING



Cloud computing is a key enabler for the digital insurer. It will accelerate time to value for new insurance business models and drive adoption of technology. Cloud capabilities allow insurers to realize significant cost savings and **free up valuable resources for innovation**.

SMARTER WORLD



Connected devices are the new normal. The proliferation of always-connected devices helps insurers offer smarter products and services. This supports better pricing and discounts directly based on customer behavior. For example, “pay-as-you-behave” products enhance customer interactions and offer rewards – customers get a behavioral score, loyalty points, and discounts.

CYBER SECURITY



Insurers are prime targets for cyber attacks due to the value of the data. Consequently, **cybersecurity is a top priority**. Multifactor authentication, biometrics, blockchain, and behavioral analytics for fraud prevention will become increasingly important and enable another layer of security in both physical and virtual environments.



REIMAGINING

THE DIGITAL ECONOMY OFFERS INFINITE NEW OPPORTUNITIES

In a connected world where every company can be a technology company, smarter products and services will change insurance and blur industry lines.

DIGITAL INNOVATION IS REAL

Insurance has traditionally been slower to innovate than other industries. However, the time has come to reimagine your entire business to take advantage of opportunities offered in the digital economy.

REIMAGINE BUSINESS MODELS

Changing customer demand, new entrants, and new technologies are driving insurers to change your business models.

- **Digital lifestyle insurer** provides a customer-centric business model putting the customer first with customer profiling, micro-segmentation, and individualized products offered in an omnichannel environment. This can support a shift toward a **digital lifestyle insurance network**, an insurance network that supports its customers' increased connectivity with the world around them.
- **Connected insurer** in a networked economy where insurance companies, device and service providers work closely together connecting devices, products, and services to deliver higher value to customers and corporations.
- **Data-driven insurer** collecting, aggregating, and leveraging information and data – a business model that applies to insurance and reinsurance. Insurers are acting like a “data hub” combined with value-added services to minimize risks. We see here the opportunity to move into a risk prevention business.

REIMAGINE BUSINESS PROCESSES

Business processes must evolve to meet the changing demands of new business models. Examples of reimagined and digitally empowered business processes across the insurance value chain include:

- **Real-time research and development teams** design new products and services, such as “pay-as-you-behave” tools, driverless cars, and fitness-based health insurance.
- **Consistent and customized omnichannel experience:** Teams promote consistent interactions with customers across all support channels.
- **One-to-one underwriting** based on personalized pricing, a “segment of one,” determined by Big Data analysis. Access to real-time information from across the enterprise allows for a one-to-one view never before available.
- **Automated claims management** can expand as supplier networks extend across the business process chain.
- **Product agility:** Leveraging a product factory with optimized processes, operational teams can incubate and implement new products and product changes with speed to market improvement of 30%.

REIMAGINE WORKFORCE

Reimagined business models and processes need an adaptive workforce with new skills and competencies.

- **New skills and new roles:** Reimagined business models enrich jobs and drive efficiency. This decreases the need for some roles but increases the need for reorganization and the demand for other competencies and roles.
- **Employees are changing** as much as the insurance customer. With a rising millennial generation and a more global talent market, new technologies and approaches are required to attract and retain talent.
- **Shift mindshare to higher-value tasks:** Digital business processes empower employees to shift focus away from manual, paper-based processing towards value-added tasks and a greater focus on analysis. This shift also allows for emphasis on underwriting, fraud, and claims and causes a shift in the skills and employee experience.
- **Digitization can improve employee satisfaction:** Having the right information at the right time can not only improve customer satisfaction, but also employee satisfaction. Having access to the right information on the right device empowers insurers to become truly Digital.



REIMAGINE BUSINESS MODELS

Disruption is all around us, driven by new insurance and FinTech players, shifting consumer behaviors, and innovative technologies. We will succeed not through incremental change, but by fundamentally reimagining our business models.

Digital lifestyle insurers have business models focused on customer-centricity. Customers' lifestyles are growing increasingly digital as they turn to devices, such as wearable fitness trackers, or programs, such as home monitoring programs, to ensure optimal health and safety. Insurers have unprecedented opportunities to apply digital tools and data to create services that enhance and fit into their customers' digital lifestyles.

Leading insurers:

- Focus on the “segment of one” by leveraging knowledge of the customer, anticipating customer needs, and presenting highly personalized service offerings when the moment is right.
- **Address younger buyers** by investing in social media, contextual marketing, and interactive needs analysis.
- Introduce innovative products and services to help customers through every phase of the insurance lifecycle – new **smart insurance concepts** will appear, combining insurance, goods, and services in an omnichannel environment.

Data-driven insurer with dynamic use of data.

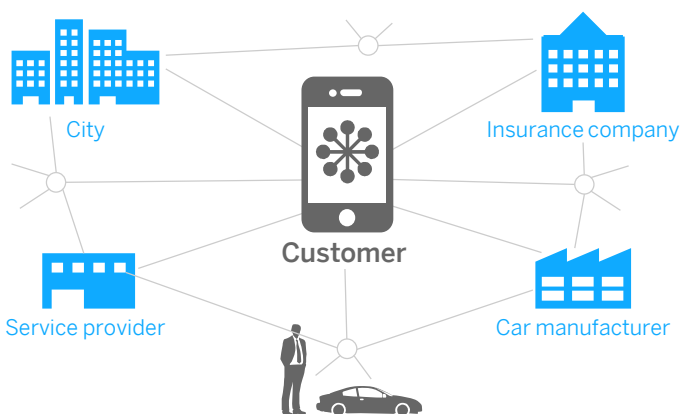
With vast amounts of data from IoT-connected devices and mobile connected customers, insurers can offer better predictive capabilities. Yet, the majority of insurers haven't capitalized, nor monetized, the information readily available. Look for opportunities to:

- **Collect, aggregate, and sell information** to other parties
- Leverage data to explore opportunities that drive more personalized, **contextual customer and corporate interactions**
- Use data for risk mitigation and protection: **sell risk protection** to private and corporate customers.

Connected insurer with cross-industry connectivity in a networked economy.

New business models will emerge within dedicated communities through collaboration of insurance with industries including automotive, the public sector, service providers, and healthcare. Connected sensors and data analytics allow insurance companies to learn more about customers and provide them with customized and next-generation experiences.

Connected insurers co-innovate with their business network and technology partners to create new products and services, generating new and increased revenue streams. The ability to adapt this platform with agility can change the way insurers look at and are looked at by partners.



2.1 million
At least 2.1 million organizations are connected through our business network, the world's largest.⁸



KPMG
“Those that are able to create the partnerships to develop the right products and services to meet future market demand will ultimately win the race.”⁹



REIMAGINE BUSINESS PROCESSES

Digitization will impact every aspect of the insurance value chain, from customer interaction, through underwriting, to claims management. Insurers can use this to their advantage. Leading insurers are addressing the following areas to great success.

Consistent and customized omnichannel experience

Successful insurers:

- Offer a consistent omnichannel experience and 24x7 dialog in order to retain customers
- Use social networks as a source of information; management of affiliated groups is getting more and more important
- Suggest products and services in real time based on geo-localization and profiles, offering micro-/ad hoc insurance combined with retail offers
- Provide accurate individual pricing based on better data-driven risk profiles

Automated claims management

Successful insurers:

- Transition to fully automated no-touch claim handling
- Extend the business chain across the company and tap into supplier networks (e.g., for goods replacements)
- Predict and prevent damages by leveraging connected devices and geo-location data
- Offer valued-added services in addition to insurance contracts supplied by partners
- Reduce fraudulent claims through the use of better self-learning fraud detection solutions
- Evolve into risk managers by enhancing customer interactions and proactively sending out alerts, warnings, and advice through connected devices

One-to-one underwriting

Successful insurers:

- Increase the speed and accuracy of the underwriting process, leveraging the availability of more data
- Improve risk evaluation by leveraging sensors and connected device data
- Use customer data for more refined risk segmentation and pooling, for more attractive pricing with a more profitable risk profile

Product agility

Agile insurers:

- Design new products by making use of connected objects, integrating them in pricing, new services, risk, and fraud management, etc.
- Incubate new products with embedded, user-defined testing rules, configuration by business users on multiple products in parallel
- Utilize product factory concepts to build a library of product features that can be assembled and implemented improving speed to market by more than 30%

Real-time research and development

Innovative insurers:

- Develop a digital strategy and digital culture with a “fail early, fail often” mentality
- Analyze digital threats and opportunities, potential scale, and alternative responses
- Look outside the usual competitors at disrupters in other industries to determine if they are competitors, partners, or both

71% Of respondents to an SAP/Forrester survey cited improving the use of data and analytics to improve business decisions and outcomes as a high IT priority in the next 12 months.¹⁰

67% Of respondents to an SAP/Forrester survey cited expanding the use of Internet of Things (IoT) technologies as a top-ranked IT priority in the next 12 months.¹⁰



REIMAGINE WORKFORCE

Digitization changes how employees learn, interact and grow. The digital economy places high demands on the skill sets, competencies and flexibility of the workforce.

New skills and new roles enabled by the digital transformation: Reimagined processes automate manual tasks, enrich jobs, and drive efficiency. This decreases the need for repetitive tasks and some of the associated roles that operate on structured data. They also create the demand for new competencies, such as the need for data scientists in insurance and better underwriting knowledge. Insurers must develop and calculate new insurance products and premiums for “pay-as-you-drive” and “pay-as-you-live” concepts.

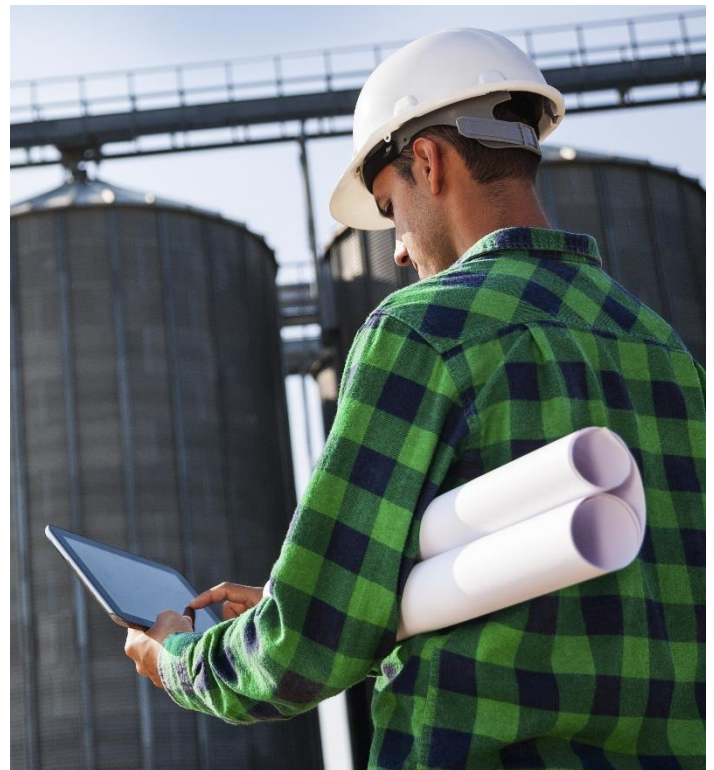
Employees are changing as much as the insurance customer. In a global talent market, new skill sets, flexible employment arrangements, and a rising Millennial generation make it more challenging to train workers and develop leaders. People are the most important asset to an insurance company, but many are struggling to collect and analyze the data required to develop leadership and create cultures of continuous learning. We must equip staff with the right tools to feel comfortable in the digital economy.

Shift mind share to higher value tasks through digitized operations. Digital business processes empower employees to shift the focus away from manual paper-based processing towards value-added tasks. Digitizing processes will free up resources to provide higher-value decision making and analysis. Skilled underwriters and claims people will support higher-complexity risk assessments, pricing, fraud detection, and claims handling.

“One of the major roles that HR can play is helping to see what types of roles and talent are needed to be successful in five years.”¹¹

George Murphy, Lincoln Financial Group (Philadelphia-based insurer)

Digitization can improve employee satisfaction. Employees are happier when supplied with the right information at the right time on the right device: Predictive and self-learning systems that interact with employee devices and business processes allow insurers to redefine sales and service operations. Mobile devices such as tablets enable insurers to innovate and deploy intuitive solutions for sales and agency managers. Having access to the right information on the right device empowers insurers to become truly digital.



86%

Of companies cite leadership as one of their most important challenges, yet only 10% believe they have an excellent succession plan.¹²

40%

Of employees say HR has a good understanding of their skill sets.¹³



DIGITAL BUSINESS FRAMEWORK

A SIMPLE AND PROVEN APPROACH TO VALUE CREATION THROUGH DIGITIZATION

Every insurer requires a simple digital approach to build a pragmatic and executable vision of its digital strategy.

DIGITAL BUSINESS FRAMEWORK

Get to know the five pillars of your digital strategy

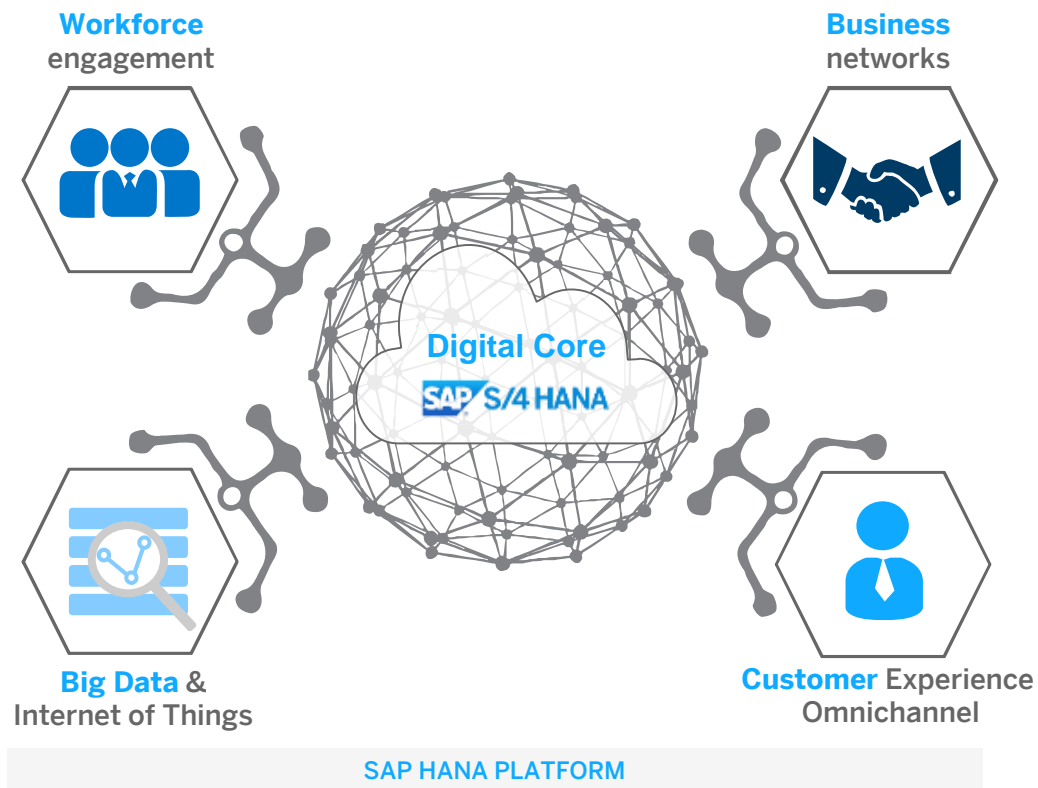
The digital economy is still evolving, which creates challenges for insurance companies as they transform into a digital business.

But, by aligning transformative actions with the five pillars of digitization, businesses can more easily transition in stages, creating a digital core and extending digital functions across the enterprise.

The approach of reimagining business models, business processes, and work helps create a digitization road map.

A single end-to-end platform enables digitization of the entire business process. The five pillars of digital strategy provide a strong foundation for insurers as they enter the digital economy.

1. Outcome-based **customer-centric** experiences across all channels
2. Expanded **business networks** that accelerate growth and co-innovation through collaboration
3. Re-platformed **digital core** business processes that bring together transactions and analytics in real time to make the business smarter, faster, and simpler
4. Smarter and engaged **workforce** across all employees and contractors
5. **Big Data** utilizing the **Internet of Things** to drive real-time customer engagements and enable better regulatory compliance and risk management





THE DIGITAL CORE

Paving the way for the future. SAP is working with insurers around the world to help them transform into digital insurers.

While supporting central business processes, a digital core also makes new business models and opportunities possible:

Expand in new markets

Tap into business networks to enter new markets and offer new products and services with agility and flexibility.

Introduce new business models

Reach new policyholders in new markets with adaptive operations.

Sense and shape demand

Sense and respond to dynamic policyholder demand in real time across physical and virtual channels.

Create a consumer-grade user experience

User experience is key to accepting digital change. It drives adoption, user engagement, and employee productivity.

Simplify prediction and simulation

Access business insights with the help of simulation and prediction tools to drive smarter decisions, improve reliability, and enable better risk assessment.

Deployment choice and lower TCO

Simplicity is key for technology platforms. Insurers can deploy in-house or in the cloud. In-memory computing also has a significant impact on TCO and can free up funds for infrastructure investment.

Simplify with SAP

SAP S/4HANA provides a platform that can process massive amounts of data in real time for both transactional and analytic data. It provides a 360-degree view of the customer and the enterprise and integrates the front, middle, and back offices. SAP S/4HANA provides a modular platform that meets the challenges of the industry across life, health, property, casualty, and reinsurance. In addition, the SAP HANA Cloud Platform can be the single enterprise data source for SAP S/4HANA and the rest of your solution landscape to support your digital modernization program.

A digital core enables real-time forecasting, reporting, and risk management, maximizes customer experience, manages a global workforce, and **drives efficiency across the network.**

SAP S/4HANA

Life and pension | Health | Property and casualty | Commercial | Specialty | Group





CUSTOMER EXPERIENCE

Customers demand simple, seamless, personalized experiences on the channels that match their lifestyle needs.

Three key trends are reshaping the insurance buyer's experience:

Insurance customers hold all the power

Consumers have immediate access to product and price information. Comparisons, recommendations, and feedback are instant, allowing them to make informed and quick decisions – anytime, anywhere.

Each customer journey is unique

Consumers choose their own journey, often using multiple channels creating a non-linear buyer's journey. Leading insurers create a seamless journey – today only 12% of companies say they can provide a seamless handoff between channels.¹⁴

Customized, personalized interactions

Customers offer up more data than ever before. But they also expect insurance providers to use Big Data and sophisticated analytics to predict and react to changing consumer needs, creating personalized, customized experiences across all channels.

70%

Of very satisfied customers build a favorable impression when their needs are met in three or more touch points¹⁵

Only 11%

Of financial service organizations have a unified 360-degree view of the customer and are able to provide a consistent experience across products and channels¹⁶

57%

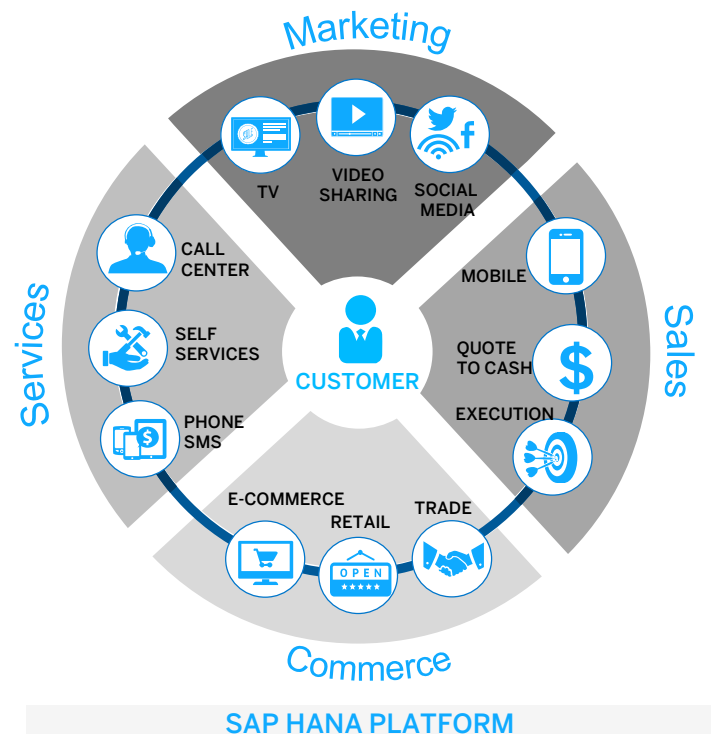
Of the buying process is completed before a first interaction with sales¹⁷

SAP enables a lifestyle insurance experience

SAP HANA is a single platform that allows insurers to deliver an insurance experience that fits with customers' increasingly digital lifestyle. It brings together marketing, sales, services, and commerce to ensure seamless digitization of the entire customer experience. SAP solutions for customer engagement and commerce powered by the SAP HANA platform enable a 360-degree view of your customer, real-time interaction, and sophisticated, predictive analytics.

The SAP solutions for customer engagement and commerce enable insurance companies to:

- **Engage customers on the channels they choose** at any moment in their journey
- **Deliver personalized experiences** in context with each interaction
- **Create a single, harmonized lifestyle experience** for your customer
- **Orchestrate business processes** across marketing, commerce, sales, and service





WORKFORCE ENGAGEMENT

The world is getting smarter in the digital economy, but **complexity is overwhelming the workforce.**

Complexity is the enemy of workforce engagement. People are working harder but are not necessarily accomplishing more. Employees do not always have access to the consumer-grade technology they enjoy outside of work to enable them to work smarter, faster, and better. Five forces need to be addressed:

Changing of the guard

Over 50% of the workforce will be from the Millennial generation by 2020.¹⁸ Insurers must devise a workforce strategy to make employment in the industry attractive for the digital generation.

Rise of contingent labor

Insurers have traditionally turned to contractors and service providers to add skills and lower fixed costs, and that trend continues to increase. There's now a need to digitally integrate this workforce with all business processes to increase efficiency and improve team collaboration.

Continuous reorganization

Insurers need to be flexible but cannot continually restructure to adjust to the new reality without disrupting efficient operations.

Persistent complexity

The business of insurance is only going to get more complex as insurance companies add regions, channels, new services, networks, and increased regulation. The only solution is a digital platform, with operational agility and consumer-grade technology to enable an engaged workforce, thereby simplifying processes.

Workforce automation through digitization

Digitization allows insurers to create adaptive businesses that value the specialists who build and run the digital enterprise of the future. Product agility enables improved speed to market from operational product specialists, instead of requiring IT programming specialists. Digitization is changing the roles, as well as the types of skills required by insurers – not only are the insurance customers changing, but so is the workforce.

41%
Increase in **contingent workforce spending** in the past five years¹⁹

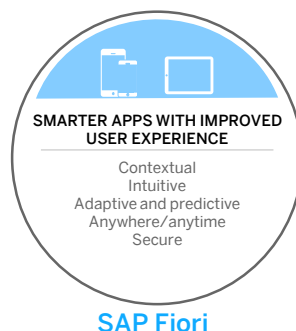
34%
Of executives feel that they've made progress in building a workforce that can meet future business goals¹³

30%
Of executives say their companies give special attention to the particular wants and needs of Millennials¹⁹

Improve total workforce productivity. Simplify with SAP

SAP S/4HANA, in combination with SAP SuccessFactors solutions, SAP Fieldglass solutions, and SAP Fiori, provides the tools for total workforce engagement and advanced analytics you need to digitize your workforce. Success will require:

- **Attracting the best people:** Recruit and onboard the best experts and simplify work
- **Managing the total workforce lifecycle:** Simplify by integrating recruiting, onboarding, performance, compensation, and learning
- **Creating smarter apps with greater user experience:** Enable the workforce to easily access the right information across any device





BUSINESS NETWORKS AND COLLABORATION

By reimagining business processes, insurers can remain competitive and serve customers in the digital economy.

Consumer demand is changing. Today's insurance customer has more information, references, and alternatives than ever before. But insurance companies can leverage networks and scale to evolve their business processes and provide customers with increasingly satisfying experiences.

Consumer-grade insurance buying experience

Consumer-facing applications must be effortless to learn and simple to use, as is the case with personal use apps such as Snapchat, Instagram, or Vine. Low adoption rates due to complexity drive customers to alternate channels. This costs money from both bad spend and lost opportunity.

Network of networks

An open network serving a single market, such as travel, suppliers, or labor, is valuable to its ecosystem. But a vertical network that connects to other vertical networks in real time is revolutionary and can only be accomplished through a shared set of cloud-based services built on top of the SAP HANA Cloud Platform.

Business connectivity at scale

The greatest challenge and opportunity in connecting vast ecosystems is the exponential data growth generated and consumed by the network. Connecting millions of partners and processing petabytes of data in real time are the core requirements to becoming the de-facto standard. Only SAP offers the platform to meet this challenge.

50%

Of networked companies are more likely than their peers to have increased sales, higher profit margins, and be a market leader²⁰

50-75%

Faster transaction cycles are being achieved with the Ariba Network²¹

25-50%

Of travel bookings are "out of compliance" with limited corporate control or visibility²²

Simplify collaboration with business partners on SAP's business networks

SAP's business networks provide powerful capabilities to digitize processes across both your business and customers – this connectivity to the business network allows you to extend processes beyond the four walls of the business with:

- **A solution already at scale** and covering all spend categories (direct and indirect material, labor and services, travel and expenses) across 1.8 million+ suppliers and potential customers
- **Business networks operating on a global basis** with near zero downtime and compliant with global data security standards
- **An extensive offering of services** from partners in financing, payments, supplier certification, and other segments





HOW BIG DATA & THE INTERNET OF THINGS IMPACTS INSURERS

The most **dramatic changes** in the digital economy will be driven by hyperconnectivity, Big Data science, and customer experience. These will **transform nearly every insurance business**.

When we observe the full potential of connected devices and platforms: new products and services, new risk coverage (for driverless cars, shared economy platforms), new business models, partnerships, etc., we see that the opportunities are limitless. Collaborative opportunities could include:

Connected car and fleet

Sensors installed in vehicles analyze driving behaviors, including accidents and breakdowns. They can provide tracking information to improve risk selection and prevention. This enables “pay-as-you-drive” pricing with discounts or fees, allowing for individualized customer relationships and, in the end, increased profitable growth.

Connected home and building

Connected sensors and cameras in buildings detect intrusion, carbon monoxide, smoke, water, and other risks. Concierge services can be offered in emergencies, and historical data can be used to assess risk. The net business benefit is improved loss ratios and customer satisfaction with optimized loss prevention.

Connected health and lifestyle

Connected wearables and devices support the analysis of health behaviors and provide information on health conditions for individuals and groups. This actionable information allows for better patient care and improved health and management of chronic diseases.

Connected economy and new alliances

A networked economy can develop among insurers, sensor companies, and service providers to share the data and the opportunities, thereby growing insurers’ market share, increasing the size of the pie, and improving profitability.

3 billion

Internet users and an expected 30-50 billion connected devices by 2020^{23,24,25}

80%

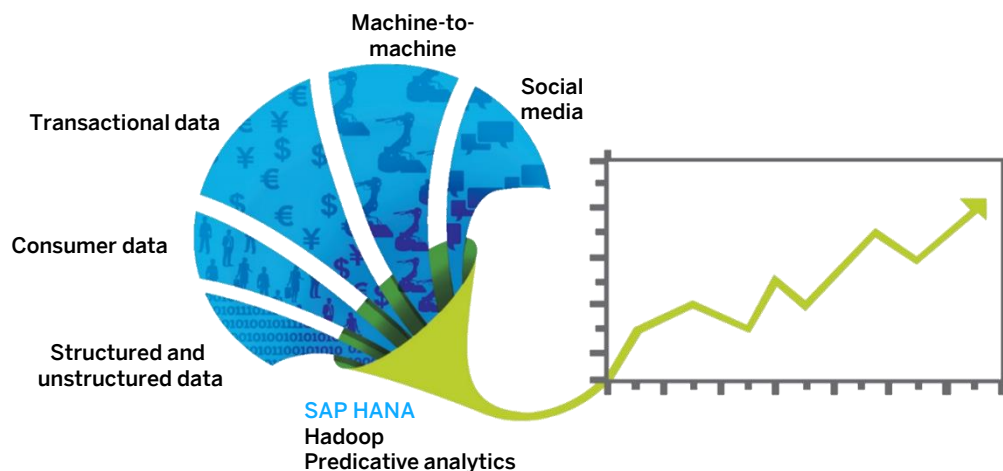
of companies that invested in IoT increased revenues²⁶

Key benefit

Real-time communication Data from vehicles, properties, and individuals are gathered and analyzed in real time to provide timely, relevant insights and information to users²⁷

Connect, transform, and reimagine with SAP

With SAP HANA, Internet of Things edition, insurers and partners can take embedded device data, analyze data for real-time insights, and apply this information across the value chain to drive business decisions and models.



SAP HANA PLATFORM – THE GREAT SIMPLIFIER

SAP HANA is the ultimate simplifier. It is the platform for digital insurers

Dream, develop, and deliver with SAP HANA Cloud Platform

SAP HANA Cloud Platform gives insurance the mobile, collaboration, integration, and analytics capabilities you need to dream big, develop fast, and deliver everywhere, with the following capabilities:

Application extensions

Extend current cloud and on-premise solutions for deeper customization, enhanced business flows, and more.

Real-time analytics

Engage customers, optimize business processes, and access new revenue with real-time analytics apps, powered by SAP HANA.

New cloud apps

Quickly build innovative customer-grade and insurance apps for today's always-on, mobile, social, and data-driven world.

Extended storage capabilities

Holistically manage all structured, unstructured, and infinite data streams with flexible combinations of data stream processing, in-memory technology, disk-based columnar storage, and Hadoop-based storage solutions.

Data footprint reduction

Significantly reduce memory footprint and TCO. In ERP systems, we have seen ~6x reduction by SAP HANA's dictionary compression. Removing aggregates and actual and historical data separation further reduces the footprint up to ~10x.

Eureko Sigorta

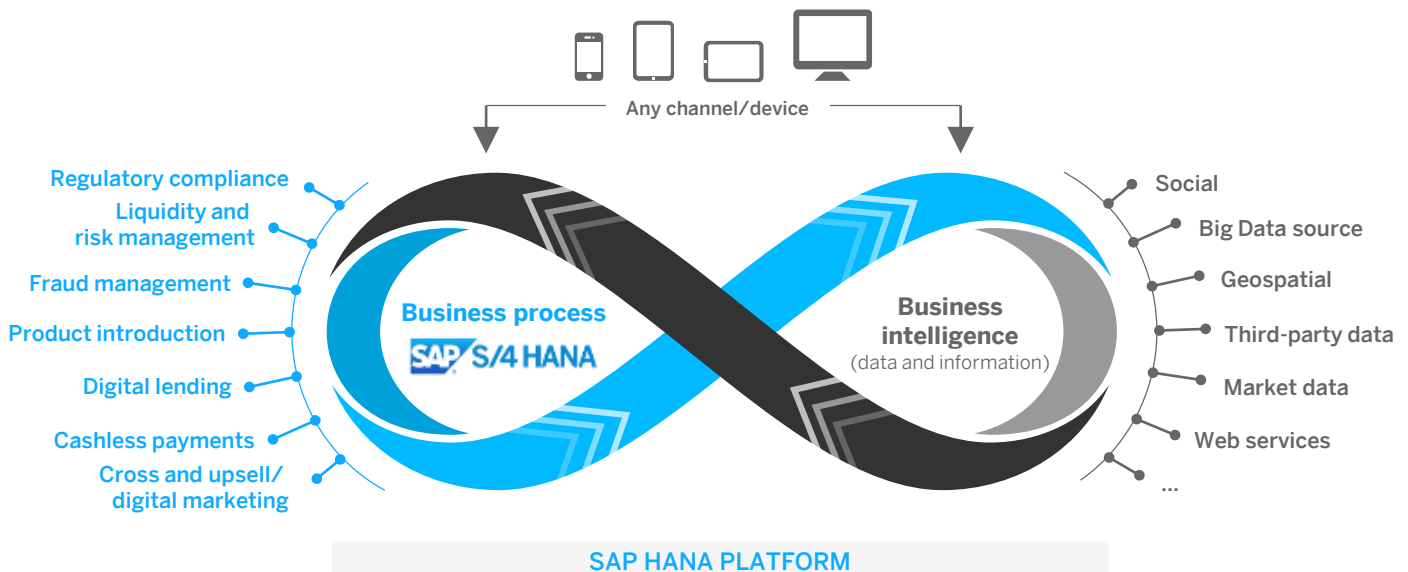
"With SAP Business Suite powered by SAP HANA and SAP BusinessObjects BI, we have real-time access to data and more flexible analytics. It allows us to use our time more effectively and focus more on our customers. Our goal is to increase operational efficiency and, in turn, customer satisfaction."²⁸

Nordea Life & Pensions

"SAP Business Planning and Consolidation powered by SAP HANA helped us transform our finance model and performance management processes, giving us new ways to provide superior value to customers and shareholders"²⁹

The SAP HANA platform is...

Real-time, in-memory platform • 10x data footprint reduction for ERP • Extended storage, including Hadoop • Open architecture • Developer-friendly • Embeds mobile and analytics • Secure • Cloud-ready



HOW DOES IT ALL COME TOGETHER? – EXAMPLE

THE FIRST END-TO-END ENTERPRISE INSURANCE SOFTWARE IN THE CLOUD



The future is available today

As a digital insurer, you can now benefit from a modern, end-to-end software platform that covers all lines of your business along the complete insurance value chain.

A platform with industry best practices built right in to accelerate time to market

The technology stack holds all essentials, from workflow to authorization management, and a database to handle Big Data requirements. You can even leverage this platform across countries, managing multiple languages and multiple currencies.

For the first time you are allowed to completely focus on your core competency to build better insurance offerings and strengthen customer relationships.

Simplify with SAP

SAP is working with insurers around the world to help leverage opportunities in the way to transforming into a digital insurer. For instance:

- **Transformational simplicity** as implemented by U.S. motor insurer AAA, cutting the time customers spend making a claim in half

- **Platform innovation** as accomplished by AOK, Germany's largest health insurance provider. AOK created a scalable platform for 24 million insured
- **Modeling automation** as used by British insurer AVIVA to build predictive models to analyze customer acquisition

The cloud is available today

Technology now allows for great flexibility and multiple deployment options for mission-critical solutions, integrated components in the front, middle and back office, as well as integrated suites. These options include hybrid as well as full cloud options. Full deployment in the cloud removes the burden of running your own datacenter. We'll even help you outsource management of the applications. This disruptive approach to applying technology to the business helps you effectively manage the five digital business pillars.

AGEAS, an SAP insurance customer in Asia Pacific recently leveraged this cloud approach and available new technology and went live with the insurance industry's first end-to-end insurance software solution in the cloud. This implementation provided for a 30% improvement in speed to enter the market in a new geography.³⁰

Just 18-20 months

for Ageas to generate ROI, rather than three to five years, by streamlining operations through SAP's end-to-end enterprise software³¹

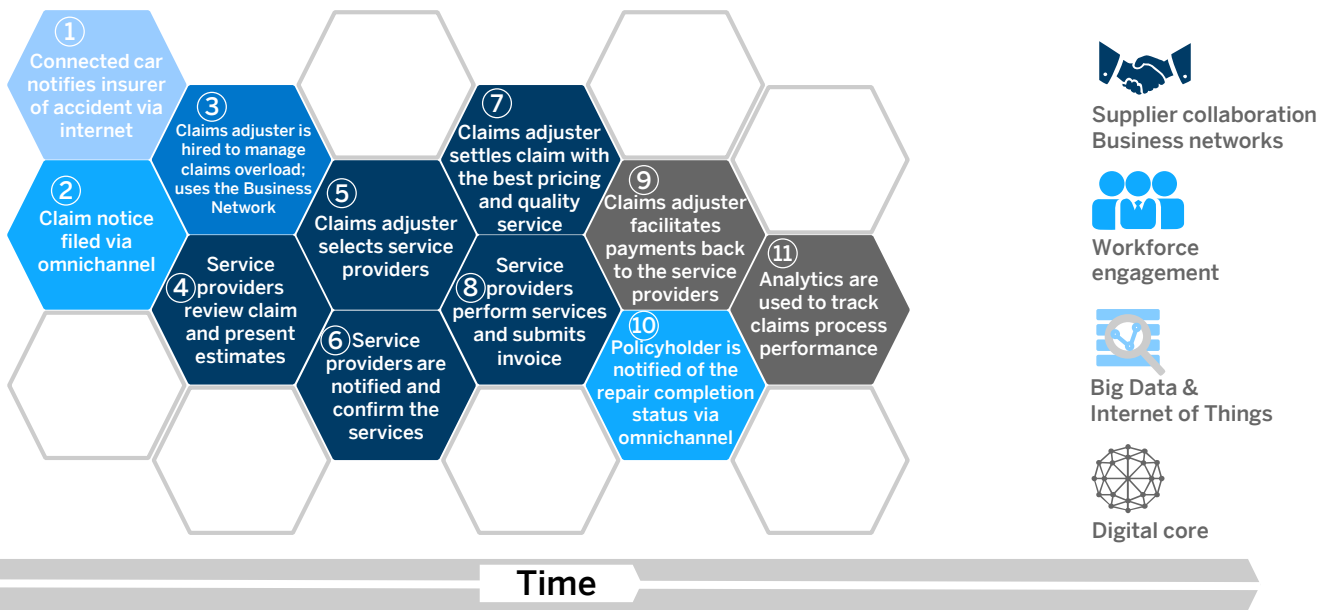
Cut 20-40%

of the expected cost for Ageas to introduce a comprehensive set of integrated insurance solutions in the first five years³¹

HOW DOES IT ALL COME TOGETHER? – EXAMPLE

Each of the five digital business pillars delivers individual business value. Next-generation business processes will span multiple pillars to drive efficiency internally and across the business network, connect to devices, and enhance the omnichannel experience. Digital core processes enable insurance companies to more effectively process notification of claims, proactively detect fraud, increase automation of the claims process, and reduce overall spend.

DIGITAL BUSINESS SCENARIO: CONNECTED CLAIMS MANAGEMENT



The scenario enables many benefits for insurers, including:

- Interaction with customers on claims processing and other services across many channels
- Full transparency for claim processing, while adjusters can leverage the network to settle claims with the best pricing and service
- Collaboration with service providers in real time, notifying them of services needed, confirming work, and approving invoices

- Fraud prevention methods that enable alerts at notification and processing stages and provide sophisticated network and predictive detection models
- The ability to track claim process performance in real time. If necessary, adjusters can be hired to manage claims overload using the business network
- Notification to policyholders regarding repairs, completion, and status via their preferred channel
- Additional services the insurer can easily provide to improve customer engagement and satisfaction

“With SAP Claims Management, we can cover the entire claims process, from first notice of loss to the close of a claim.”³²

Frank Lippok, DEVK Insurances



HOW TO START

**THE JOURNEY TO DIGITAL
INSURANCE BEGINS WITH A
CAPABILITY ANALYSIS THAT
RESULTS IN YOUR
TRANSFORMATION MAP**

HOW TO START

JOURNEY TO BECOMING A DIGITAL INSURER

The journey to define new business models for your organization requires a systematic approach. Start by identifying the business opportunities, necessary disciplines, and potential roadblocks.

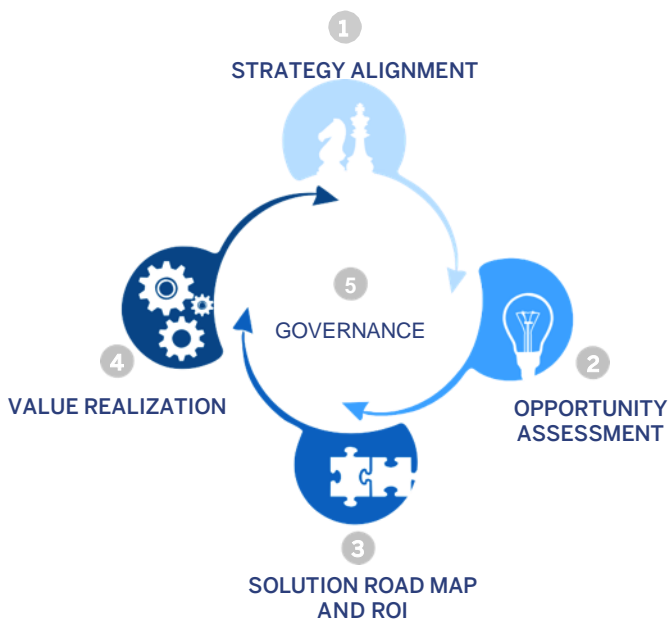
The collaborative value and innovation framework

Insurance companies embarking on a transformation journey need to start by reimagining the business with a focus on the customer and business outcomes. In the future, successful insurance companies will:

- Prioritize individual customer experiences and needs
- Move beyond risk protection to risk prevention using data and analytics
- Make money from value-add services, not from investments
- Have a workforce and digital infrastructure capable of responding to the constant disruption of the new digital landscape

Innovation requires a new level of collaboration. SAP has developed a framework that supports a continuous and holistic partnership model designed to drive true collaboration and engagement.

The five steps of [SAP's collaborative value and innovation framework](#) are:



1. **Strategy alignment**: Understand your strategic direction and identify initiatives
2. **Opportunity assessment**: Opportunity deep-dive based on strategic initiatives and prioritization based on value
3. **Solution road map and ROI**: Document end-state solution and business case including benefits, TCO, ROI, and strategic road map
4. **Value realization**: Deliver transformation on time, on budget, and on value
5. **Governance**: Maximize investments and accelerate value creation with governance based on executive engagement, value delivery, and continuous innovation



WHY SAP?

**SAP HELPS DIGITAL INSURERS
BUILD A DIGITAL CORE, EXPAND
BUSINESS NETWORKS, AND
LEVERAGE IoT**

SAP IS COMMITTED TO INNOVATION

- Vision** Help the world run better and improve people's lives
- Mission** Help our customers run at their best
- Strategy** Become the cloud company powered by SAP HANA



- **78K employees** representing 120 nationalities
- **310K customers**
- SAP operates in **191 countries**



- Solutions for **25 industries and 12 lines of business**
- **98% of top valued brands** are our customers
- **76% of the world's transactions** managed on SAP



- **110 million** business cloud users
- **2.1 million connected** businesses
- **\$800 billion+** in B2B commerce
- **99%+ of mobile devices** connected with SAP messaging



- 2011 **SAP HANA** launched
- 2012 **SAP Cloud** launched
- 2014 **SAP business networks** are the largest marketplace in the world
- 2015 **SAP HANA Cloud Platform**
- 2015 **SAP S/4HANA:** Most modern ERP system



- Insurance solutions **since 1997** for all lines of business
- **88% of insurers** in the Forbes Global 2000 are SAP customers – 5,800+ in total
- **25 of the 25** top global insurers in the world run SAP

FEWER PROCESS STEPS*

Using SAP Claims Management, AAA cut the time customers spent making a claim in half by adopting faster, streamlined first-notice-of-loss intake. AAA also reduced agent training time by 50%, initial incident reporting time by 38%, and call handling time by 13%.³³

FASTER ANALYTICS AND PROCESSING*

For Zurich Insurance, testing and validating the SAP HANA platform for finance transformation resulted in 1,000% faster reporting cycles, with 65% faster financial close process improvements.³⁴

IMPROVED PERFORMANCE*

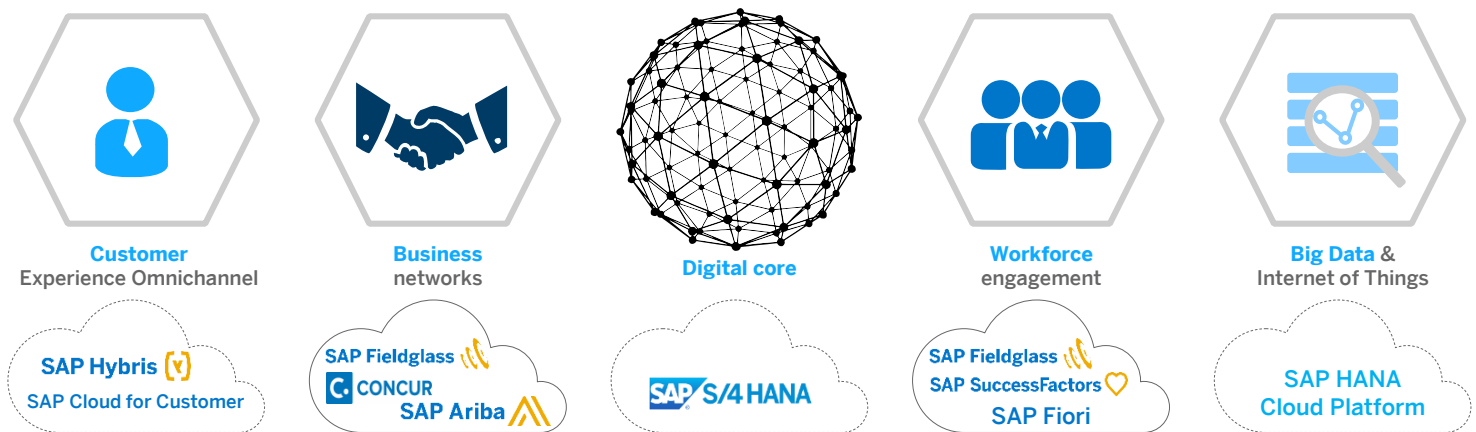
Aviva experienced a significant increase in the number of propensity models used within the company, with more than 30 models in production. It increased the return on marketing and campaign response rates by identifying customers most likely to respond by using SAP predictive analytics solutions.^{35,36}

*Full data available from SAP

END-TO-END DIGITAL BUSINESS SOLUTION

Through innovation and more than \$30 billion in strategic acquisitions, SAP has designed the best solution portfolio backed by our digital enterprise expertise. We are the largest cloud company with 80 million+ users, and we have the fastest-growing portfolio to support the entire digital insurance value chain.

With our comprehensive SAP for Insurance portfolio, we help you become customer-centric, reduce costs and complexity, and easily manage regulatory and risk compliance. SAP is the number one choice to help turn your digital vision into reality.



SAP brings the expertise, assets, and proven methodologies required to support the development of your digital business strategy. These capabilities will be leveraged throughout SAP's collaborative value and innovation framework.

EXPERTISE

- Experts in **25** industries and **12** lines of business
- **6,000+** design thinking experts – sales, services, development
- User experience of the future
- Enterprise architecture
- Data scientists
- More than 5,600 insurers run SAP for Insurance in 107 countries

ASSETS

- **60+** business process benchmarking and best practice assessments
- Innovation case studies
- Infrastructure to drive proofs of concept
- Rapid deployment solutions to accelerate digital transformation
- **13+** co-innovation and living labs

METHODOLOGY

- Business case methodology
- Benchmarking
- Value partnership framework
- Business transformation management
- Business process management
- Organizational change management
- Design thinking

SAP GLOBAL SERVICES AND SUPPORT TO DRIVE YOUR SUCCESS

In the new digital economy, simplification and business innovation matter more than ever.

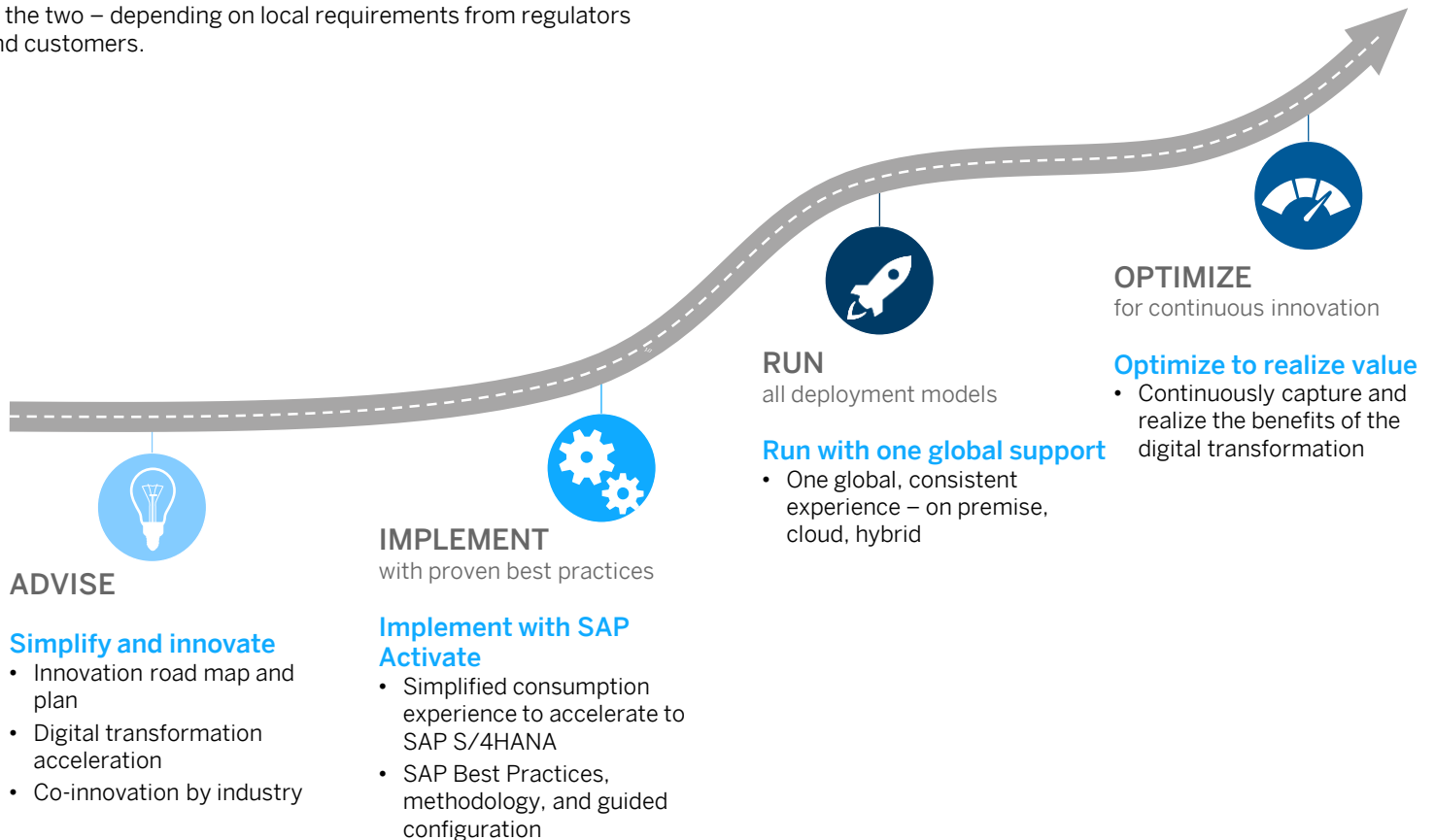
This puts pressure on insurance brands to innovate, while offering tremendous opportunities for those brands that are willing to take the leap, whether you are an established insurance brand, a new market entrant, or a startup. Innovating the customer experience is key.

Process optimization is therefore also key – from the very first customer interaction through each back-end system – this is now a precondition for economic success.

SAP offers industry-specific solutions that enable insurers to innovate, simplify, and transform. Our scalable, flexible solutions are built on the latest technology, and our customers decide where to run them – on premise, in the cloud, or a hybrid of the two – depending on local requirements from regulators and customers.

Rely on the 30,000 service and support professionals who help shape your digital road map and bring it to life. Our business transformation services help you turn strategy into an actionable road map, always with an eye on business benefit, controlled risk, and long-term success. We apply our proven SAP Activate methodology and use a factory approach to offer best-in-class value realization. Our premium services/SAP MaxAttention ensure ongoing success from planning to implementation and operations.

SAP's global services and support guide you in the definition and implementation of your digital transformation agenda. Our people provide leadership, industry insight, and technology expertise – our promise is to maximize your short and long-term value-add from SAP.



Learn | Extend / Innovate | Engagement Foundation | Support

SAP COMPREHENSIVE ECOSYSTEM

Orchestrating the world to deliver “fast value”

Our comprehensive ecosystem for insurance brands offers:

- Integration into a wide range of business services (banking, travel, contingent workers, key vendors)
- An open architecture: choice of hardware and software
- Complementary and innovative third-party solutions
- Wide reach – partners to serve your business of any size, anywhere in the world
- A forum for influence and knowledge
- A large pool of industry experts with broad and deep skill sets
- Thought leadership and industry expertise

Our insurance partner ecosystem includes, among others:



BUSINESS NETWORK

- 2.1 million suppliers
- 200 major travel partners (air, hotel, car)
- 50K service and contingent labor providers

INFLUENCE FORUMS AND EDUCATION

- User groups across all regions
- SAP Advisory Council for Insurance
- SAP Community >24 million unique visitors per year
- 2,650 SAP University Alliances
- 20,000+ partner resources educated on SAP for Insurance portfolio



IMPLEMENTATION SERVICES

- 500+ SAP partners in the financial services industry
- 5,000+ consultants trained in financial services core solutions

INNOVATION

- 1,900+ OEM solution partners to extend SAP solutions
- 3,200 startups developing SAP HANA apps
- 30+ financial services partner solution co-innovation initiatives

CHANNEL AND SME

- 4,800 overall channel partners
- 400+ active financial services partners

PLATFORM AND INFRASTRUCTURE

- 1,400 cloud partners
- 1,500+ platform partners
- 500+ financial services partner development resources trained in the SAP HANA Cloud Platform

ADDITIONAL RESOURCES

Outlined below is additional external research that was used as supporting material for this white paper.

1. Number of social network users worldwide from 2010 to 2019, Statista .
<http://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>
2. "A Guide to the Internet of Things," Intel, IDC.
<http://www.intel.com/content/www/us/en/internet-of-things/infographics/guide-to-iot.html>
3. "Geico vs. Esurance: Two Options for Cheap Car Insurance", NerdWallet, February, 2015
<https://www.nerdwallet.com/blog/insurance/geico-esurance-options-cheap-car-insurance-2/>
4. "Massachusetts Mutual Unit Rolls Out Online Life Insurance Approvals", The Wall Street Journal, May 2015
<http://www.wsj.com/articles/massachusetts-mutual-unit-rolls-out-online-life-insurance-approvals-1432039741>
5. "Money Supermarket, one of UK's first aggregators to shake up the market", The Digital Insurer, <http://www.the-digital-insurer.com/dia/money-supermarket-revolutionises-the-aggregator-landscape/>
6. Can't accept autonomous liability? Get out of the game, says Volvo, Auto Blog October 9, 2015
<http://www.autoblog.com/2015/10/09/volvo-accept-autonomous-car-liability/>
7. "Are you ready to be an Insurer of Things?", Accenture Strategy, 2015 (Page 4)
https://www.accenture.com/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Global/PDF/Strategy_7/Accenture-Strategy-Connected-Insurer-of-Things.pdf
8. Source: SAPFact Sheet,
<http://sapassets.edgesuite.net/sapcom/docs/2016/04/cc7f80ab-6a7c-0010-82c7-eda71af511fa.pdf>
9. "KPMG, A New World of Opportunities: The Insurance Innovation Imperative", Dieter Becker, Global Head of Automotive, KPMG Sept. 2015 (Page 31)
<https://assets.kpmg.com/content/dam/kpmg/pdf/2016/01/the-insurance-innovation-imperative.pdf>
10. "The Internet of Things has the Potential to connect and transform Business", Forrester, August 2015 (Page 4)
<http://go.sap.com/docs/download/2015/08/54f65c37-3b7c-0010-82c7-eda71af511fa.pdf>
11. Oxford Economics, Worldwide Study 2014, Workforce 2020, Industry Fact Sheet: Financial Services, page 1
http://www.sap.com/bin/sapcom/en_us/download/adasset.2015-05-may-28-11.workforce-2020-challenges-and-opportunities-for-financial-services-oxford-economics-pdf.bypassReg.html
12. "Global Human Capital Trends 2015: Leading in the new world of work", Deloitte University Press, 2015 (Page 17, 19)
<http://www2.deloitte.com/content/dam/Deloitte/at/Documents/human-capital/hc-trends-2015.pdf>
13. Oxford Economics, Workforce 2020, Industry Fact Sheet: Financial Services, page 3
<http://news.sap.com/wp-content/blogs.dir/1/files/SME-fact-sheet-091114.pdf>
14. "44 Facts Defining the Future of Customer Engagement", Forbes, October 2014
<http://www.summa.com/blog/8-questions-every-executive-should-ask-about-customer-engagement>
15. "2014 Global Consumer Barometer Index, American Express and Ebiquity", 2014, page 5
<http://about.americanexpress.com/news/docs/2014x/2014-Global-Customer-Service-Barometer-US.pdf>
16. SAP Benchmarking*
17. "The Digital evolution in B2B Marketing" Customer Executive Board, 2012, (Page 2)
<https://www.cebglobal.com/content/dam/cebglobal/us/EN/best-practices-decision-support/marketing-communications/pdfs/CEB-Mktg-B2B-Digital-Evolution.pdf>
18. "Millennials at work, Reshaping the workplace" PwC, 2011,
<https://www.pwc.com/m1/en/services/consulting/documents/millennials-at-work.pdf>
19. "Workforce 2020: Building a strategic workforce for the future" Oxford Economics, 2014,
<http://www.oxfordeconomics.com/workforce2020>
20. "The rise of the networked enterprise: Web 2.0 finds its payday" McKinsey, 2010,
http://www.mckinsey.com/insights/high_tech_techomms_internet/the_rise_of_the_networked_enterprise_web_2_0_finds_its_payday
21. "Building the Networked Business of the Future", SAP Insider, April 2015
<http://sapinsider.wispubs.com/Assets/Articles/2015/April/SPI-building-the-networked-business-of-the-future>
22. SAP Benchmarking*
23. "ITU releases 2014 ICT figures " UN International Telecommunications Union, 2014,
http://www.itu.int/net/pressoffice/press_release/s/2014/23.aspx#.VaaCmaPD_IW
24. "Seize New IoT Opportunities with the Cisco IoT System" Cisco,
<http://www.cisco.com/web/solutions/trends/iot/portfolio.html>
25. "EMC World 2015: '30 billion connected devices by 2020' . ITPro, 2015,
<http://www.itpro.co.uk/storage/24560/emc-world-2015-30-billion-connected-devices-by-2020> (Soundbite is from EMC)
26. "2015 TCS Global Trend Study on IoT, Press Release TCS, July 22, 2015",
http://www.tcs.com/news_events/press_releases/Pages/Internet-of-Things-TCS-Global-Trend-Study-2015.aspx
27. World Economic Forum: The Future of Financial Services - "How disruptive innovations are reshaping the way financial services are structured, provisioned and consumed", Semra Ensari, Finance and Risk Management Group Director June 2015 (Page 74)
http://www3.weforum.org/docs/WEF_The_future_of_financial_services.pdf
28. SAP Customer Success Story, Gitte Aggerholm, CFO 2014 (Page 29)
http://hana.sap.com/content/dam/website/sap_hana/en_us/PDFs/ebooks/SAP%20Business%20Suite%20powered%20by%20SAP%20HANA.pdf
29. "Delivering Instant Value for Insurance Companies", SAP Customer Success Story, 2014 (Page 12)
<http://go.sap.com/brazil/docs/download/2015/10/14b33775-467c-0010-82c7-eda71af511fa.pdf>
30. Ageas: Accelerating Growth in an Expanding Market with SAP Insurance, SAP Customer video,
<http://www.sap.com/asset/detail.2015-09-sep.ageas-accelerating-growth-in-an-expanding-market-with-sap-insurance-ctv-mp4.html>
31. Global Insurance Group Ageas Adopts Industry's First End-to-End Enterprise Insurance Software in the Cloud Thanks to SAP, October 22, 2015,
<https://news.sap.com/global-insurance-group-ageas-adopts-industrys-first-end-end-enterprise-insurance-software-cloud-thanks-sap/>
32. "Insuring Customer Satisfaction Through Streamlined Processes", SAP Customer Success Story <http://www.sap.com/customer-testimonials/insurance/devk.html>
33. Auto Club Group: Cutting in Half the Time Customers Spend Making a Claim with SAP Claims management, SAP Customer Success Story, 2013 (Page 2)
https://dam.sap.com/mac/preview/a/67/JJEg00dPwlnUHnHJSwxwSJJXNjNjSPxXlxEmHk00xXSDXJXsXL/17028_BTS_17028_en.htm
34. Driving Business Value with SAP HANA, SAP Customer Success Story, 2015 (Page 37)
http://hana.sap.com/content/dam/website/sap_hana/en_us/PDFs/ebooks/37721_HANA%20Business%20Value%20eBook%20Update%20March%202015_final.pdf?isSubmittedAfterAuth=true
35. Predictive Analytics, SAP Customer Success Story, 2014
http://www.sap.com/bin/sapcom/fi_fi/download/asset.2014-05-may-09-21.aviva-building-predictive-models-with-ease-using-sap-infinitesight-pdf.html
36. Aviva plc Optimizes Its Marketing Campaigns with Predictive Analytics, customer video, August 5, 2014
<https://www.youtube.com/watch?v=AAMthskE-64>

Note: All sources cited as "SAP" or "SAP benchmarking" are based on our research with customers through our benchmarking program and/or other direct interactions with customers

Note: Some images used under license from Shutterstock.com

Note: Logos contained in this document are used with the permission of SAP's partners.

SAP Statement of Confidentiality and Exceptions

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. This presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation and SAP's strategy and possible future developments, products and or platforms directions and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this document is not a commitment, promise or legal obligation to deliver any material, code or functionality. This document is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. This document is for informational purposes and may not be incorporated into a contract. SAP provides this information as guidance only to illustrate estimated costs and benefits of the predicted delivery project. These materials may be based upon information provided by you, information provided by other companies and assumptions that are subject to change. These materials present illustrations of potential performance and cost savings, and do not guaranty future results, performance or cost savings. SAP assumes no responsibility for errors or omissions in this document, except if such damages were caused by SAP's willful misconduct or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

© 2016 SAP SE or an SAP affiliate company. All rights reserved (05/16).

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. Please see <http://www.sap.com/corporate-en/legal/copyright/index.epx#trademark> for additional trademark information and notices. Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors.

National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP SE or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.