Insurance companies have been relatively cautious about cloud adoption. However, the conversation among insurers has changed in the last few years, moving to “when and how” rather than “why.” Several factors are driving today’s insurance companies to move their applications and data into the cloud as they reassess their business opportunities.

These factors include:

• The need for increased agility
• Access to disruptive technologies that promote innovation
• The need for technology operating efficiencies
• The possibility of reducing infrastructure costs

For insurers navigating a complex risk, regulatory and compliance landscape, adoption of cloud comes with multiple challenges affecting a range of stakeholders, in addition to the off-premise cloud transition challenges of data privacy, architecture, system interfaces and IT security, among other critical elements.
ADVANTAGE OF MOVING TO CLOUD FOR INSURANCE: THE BIG OPPORTUNITIES

In our view the best opportunities for insurers are to move to the public cloud and benefit from the advantages of an Infrastructure as a Service (IaaS) platform, as well as to adopt a comprehensive strategy leveraging the insurance-specific solutions available on the cloud to develop intelligent and cost-effective solutions.

Examples of potential benefits include:

1. IMPROVING SPEED TO MARKET

With greater pressure to reduce the time to market for new products and services, insurers can use insurance-based cloud computing solutions to deliver greater IT agility and shorter project implementation time. Cloud-based benefit enrollment systems, for example, can fully automate the enrollment process to support real-time pricing and validation of eligibility, allowing insurers to deliver a more convenient and personalized way to shop for benefits.

2. ACCELERATING BUSINESS GROWTH

Cloud-based insurance solutions can provide better social listening and higher conversion rates from opportunity to sale through targeted campaign management and improved opportunity and lead engagement models. This could result in higher cross-sell, upsell and retention rates. Cloud can also enhance the claims experience by providing better service and better communication with end customers.
3. EXPANDING GLOBALLY
As insurers seek to expand their global footprint, cloud solutions can help foster a high level of flexibility and standardization across multiple geographies. Insurance Chief Information Officers (CIOs) are establishing strategic relationships with insurance software providers to build their own cloud infrastructure and facilitate such standardization. There are also signs of increased M&A activity in insurance and the move to cloud can make post-merger integration less difficult.

4. INNOVATING EFFECTIVELY
Insurance CIOs struggle to keep their IT application portfolios ready to support business needs. Cloud services could help them quickly deploy and test new technologies, and to collaborate within their ecosystem of alliances and strategic vendors to develop new products and services.

5. REDUCING OPERATING COSTS
According to a study conducted among insurers, projected global IT spend is trending down (2% for 2017) as firms appear to be more strategic in their investment decisions with an eye on cost efficiency. Cloud-based solutions can be less expensive than those deployed on in-house, back-end server systems and can reduce costs for licensing, hardware, and the maintenance of complex legacy systems.

For example, cloud-based benefit enrollment systems can fully automate the enrollment process for real-time pricing and validation of eligibility, allowing insurers to deliver a more convenient and personalized way to shop for benefits. Cloud services also help companies quickly deploy and test new technologies while supporting co-innovation with strategic alliances and vendors to provide new products and services. Further, cloud adoption strengthens the claims experience, with reduced claims expense leakage through superior customer service and better communication with end customers.

While potential cost savings alone represent a strong argument for cloud, cloud adoption is fast becoming one of the core IT initiatives of the entire insurance industry. A 2016 study of 400 senior CIOs found that 67% believe that Software as a Service (SaaS) would transform the insurance industry in five years or less—with 20% of all respondents falling into the “two years or less” category.
WHERE CLOUD IN INSURANCE IS GOING

In view of these real and potential benefits, it is not surprising that cloud is one of the top priority areas for insurers, evolving from a way to reduce IT overhead to a core IT initiative.

While cloud-based innovation opens doors for industry startups, it also helps large companies expand into new markets more quickly and with less risk, and generate new sources of revenue. A case in point is how larger insurers are exploring the development of utility-type platforms (for activities such as claims processing) to create new revenue streams by getting smaller insurers to pay them for doing such work.

Insurers have also been more likely to use the public cloud for non-core and support functions such as payroll, expense management, human resources, enterprise resource planning (ERP), backup and service desks, but this is already changing.

FinanceFox AG, a Swiss provider, delivers an insurance agency customer relationship management (CRM) application on the Salesforce.com, inc. platform, and other horizontal cloud computing applications are being virtualized.3

Figure 1. Insurtechs driving cloud-based solutions

**CLOUD INNOVATION**

| **Trov, Inc.** | Offers household insurance with a smart repository of customer’s possessions through a cloud-hosted online digital locker. |
| **CoverWallet, Inc.** | Provides a concierge-like service for small businesses, giving them access to quotes, advice and policy management tools online or over the phone. |
| **The Insurer Cloud, part of the TGSL Group** | A Microsoft Corporation, cloud-based ‘route to market’ solution for insurance product creation and life cycle product management for any class of general insurance business. |
| **Versicherix AG** | Switzerland’s first peer-to-peer insurance. The technical side of the platform is open, letting investors, reinsurers and customers freely enter the system. |
| **FitSense Insurance Services Pty Ltd** | Working to price the risk for insurance across different age groups and gender. It is leveraging fitness tracking wearables and mobile app to gather and collate users’ activity data. |
| **Lemonade Insurance Company** | A peer-to-peer insurer that is focused on renters and homeowners insurance is pursuing the broader regulatory approval strategy after starting small. |

Source: Accenture, February 2018
Insurers are bringing to bear cloud-hosted applications and pure SaaS offerings on vertical use cases such as policy administration, claims management or billing management.

As seen in Figure 1, insurance disruptors are taking full advantage of the currently available insurance solutions in the cloud, exploiting cloud’s agility to enter markets with differentiated offerings in a cost-effective manner.

Larger insurers, especially those active in multiple markets, are more likely to build their own cloud, with IT departments acting as cloud brokers or setting up hybrids combining public and private clouds. Some insurers have formed subsidiaries to develop their own cloud-based core insurance applications.

In 2009, insurers Eureko BV and Achmea Holding NV (now Achmea BV) launched InShared, a 100% internet insurance company with a 100% self-service concept. Using the CynoSure digital insurance SaaS platform to drive its business model, InShared had captured 5% of the total market for non-life insurance services in the Netherlands after only 6 years.

Surprisingly, all these examples can be found in the marketplace right now. Industry associations have also established community clouds to create an environment that allows community members and third parties to cooperate. For example, the Trusted German Insurance Cloud was formed by the German Insurance Association to help members promote market standards for data exchange, contribute to higher straight-through processing rates, and reduce integration costs for redundant point-to-point connections.

IMAGINE THE POSSIBILITIES

The revolutionary nature of cloud computing is capturing the imaginations of insurance organizations’ CIOs, with its potential to largely reinvent the way the industry does business.

Consider the possibilities:

• Providing a concierge-like service for small businesses with access to quotes, advice and policy management tools online or over the phone
• Offering cloud-based services to other insurers with a utility-type model
• Developing a cloud-based route to market for insurance product creation and lifecycle product management for any class of general insurance business
• Allowing investors, reinsurers and customers to enter the system as needed
• Pricing the risk for insurance across various age groups and genders, leveraging fitness tracking wearables and mobile apps to gather and collate users’ activity data
KEY CLOUD TRENDS

Cloud is supporting and enabling major changes in insurance, from analytics and the Internet of Things to cloud-based infrastructure. Along with cloud, data is at the heart of insurers’ digital transformation.

Insurers have seen exponential growth in data volume and velocity coming from multiple channels in both structured and unstructured forms. The data is derived from a large ecosystem that includes the organization itself, as well as from external sources such as social media and third-party databases.

Data, supported by cloud, offers unprecedented levels of insight and opportunities in areas including:

**ANALYTICS**

Observers keep pointing to the growing number of high-tech devices connected to the cloud, including wearables and automobiles. Such connectivity would give insurers access to vast quantities of new information. Auto insurers, for example, could leverage cloud analytics with mobile apps and devices to track drivers’ usage habits and patterns, providing insights into drivers’ risk profiles and their willingness to engage in safe driving habits. Cloud analytics tools can help insurers measure which marketing, advertising and communications campaigns are most effective in reaching customers, helping them redesign and update outreach programs on an ongoing basis.

**INFRASTRUCTURE**

Cloud-based infrastructure services are driving considerable levels of investment to develop cloud services that can be managed through on-premise and/or hybrid cloud infrastructure to guarantee flexibility. Cloud-based infrastructure is likely to change the way insurers consume and source IT and how they adapt and adjust to ever-changing rules and regulations.
THE CLOUD AT WORK: FUELING REAL-TIME OPERATIONS

The long-heralded potential opportunities for insurers to take advantage of cloud capabilities are now real, with companies saving costs and driving innovation every day. For example, **Towergate Underwriting Group Ltd**, one of Europe’s largest independently owned insurance intermediaries, used cloud to transform its operations and reduce annual IT costs by 30%.

By modernizing its IT operating model, data center, networks, telephony and end-user computing environments—all while establishing new service-management processes—Towergate lowered its annual IT costs by £3.8 million (US$5 million).

The cloud initiative transformed Towergate’s IT infrastructure from an inherited model to a market-leading solution. It reduced the number of applications from 2,600 to 222, installed new networks across nearly 100 sites and provided new computers to all employees. With this initiative, Towergate became the first insurance firm to store all data securely in the cloud, eliminating two-thirds of local servers and significantly reducing system outages. It has transformed how its employees work, facilitating collaboration through a dynamic intranet and video conferencing.

Major vendors in the cloud space, such as SAP SE and Oracle Corporation, see opportunities for cloud-based offerings. They are migrating their existing portfolios to the public cloud and building new cloud-ready applications to solve industry problems. These models should eventually allow small to mid-size insurers to select solutions offered by mega vendors, many of which were previously too expensive for them to consider. This provides insurance CIOs with both on- and off-premise deployment options to better support emerging business needs, lower the cost of application portfolios and drive down operating costs.

HYBRID

More and more insurers are creating their own cloud-based strategies to combine the advantages of private cloud with the versatility of the public cloud, forming their own hybrid cloud environment. This helps carriers integrate their existing technology and to accelerate innovation, with work performed in the cloud to take advantage of mobility, social, big data and analytics. Property and casualty (P&C) insurers are likely to prefer a hybrid cloud delivery model for core functions like product design and front office applications, including agent and broker portals.
HOW THE JOURNEY BEGINS: BLUEPRINT AND ROADMAP

For most insurers, the journey to cloud begins with the development of a blueprint for their business model.

The model may include a combination of:

1. A new infrastructure model, based on a shared pool of resources that can be rapidly configured, provisioned and released.

2. A new architecture model, for new levels of agility, flexibility and security.

3. A new application model through which completely managed “end-to-end” business solutions can be provided with low configuration and scalability (see Figure 2).
**Figure 2. Using technology to drive a new business model**

<table>
<thead>
<tr>
<th><strong>1. INFRASTRUCTURE PERSPECTIVE</strong></th>
<th><strong>2. ARCHITECTURE PERSPECTIVE</strong></th>
<th><strong>3. FUNCTIONAL PERSPECTIVE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>New infrastructure model based on a shared pool of resources that can be rapidly configured, provisioned and released.</td>
<td>New architecture model that permits new levels of agility, flexibility and security, and implementing leading edge services according to business needs.</td>
<td>New application model where completely managed end-to-end business solutions can be provided with low configuration and scalability.</td>
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<tr>
<td><strong>BENEFITS</strong></td>
<td><strong>BENEFITS</strong></td>
<td><strong>BENEFITS</strong></td>
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<tr>
<td>Infrastructure fixed costs reduction (estimated 20% total cost of ownership savings)</td>
<td>Evolve from monolithic complex apps to flexible and scalable services</td>
<td>Standard and highly scalable solutions that can be provided with low configuration</td>
</tr>
<tr>
<td>More control over operations and infrastructure service levels</td>
<td>Increase speed and reliability of services development and provisioning</td>
<td>Seamless introduction of state-of-the-art features in applications</td>
</tr>
<tr>
<td>Faster and more efficient distributed infrastructure provisioning</td>
<td>Highest levels of security/compliance</td>
<td>Abstraction of technological complexity</td>
</tr>
<tr>
<td><strong>ENABLED BY</strong></td>
<td><strong>ENABLED BY</strong></td>
<td><strong>ENABLED BY</strong></td>
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<tr>
<td>Server/network/storage automated provisioning</td>
<td>Decoupled architectures and APIs</td>
<td>Vendors’ portfolio of aaaS solutions for: Core insurance HR, ERP, CRM, project portfolio management, mail and collaboration, etc.</td>
</tr>
<tr>
<td>Non-disruptive, and fast approach with minimal application transformation</td>
<td>Microservices execution architectures</td>
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<td>Mainframe to microservices</td>
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<td>Big data architectures</td>
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<td>Lightweight front-end architectures</td>
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<td></td>
<td>DevOps models</td>
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</table>

Source: Accenture, February 2018
To help drive insight into cloud savings and benefits, Accenture leverages a robust financial model that considers key elements such as budget, P&L, cash views and costs associated with ramping down legacy apps. While the potential cost savings alone represent a strong argument for cloud, each insurer’s cloud adoption is part of a broader strategy toward effective digital innovation. The degree to which savings can be realized within each depends on the cloud deployment model chosen. Savings will be spread across different areas such as labor, software, server, storage, network, data center and security.

The journey will be different for each insurer. We have, however, observed that five core guiding principles are almost always applicable:

1. **TRANSITION NON-CORE SERVICES TO CLOUD**
   Using BPaaS (Business Platform as a Service) insurers can have a service provider handle work that does not yield a competitive advantage—such as human resources, procurement, trade settlement and accounting—at a lower cost with higher quality.

2. **INCREASE SAAS COVERAGE**
   Wherever possible, carriers should reduce software development and maintenance costs by increasing the use of SaaS.

3. **ASSESS AND MIGRATE OTHER APPLICATIONS TO IAAS/PAAS**
   Carriers can use standardized IaaS and PaaS (Platform as a Service) platforms to reduce support costs for custom codes that provide a real competitive advantage.

4. **REDUCE USE OF CUSTOM CODE**
   Insurers should quantify and measure their progress toward reduction of custom code in the organization, moving to alternative platforms for better quality and a lower cost to maintain.

5. **REDUCE VENDOR COUNT BUT MAINTAIN COMPETITION**
   A well-designed provider ecosystem can help reduce operational complexity while maintaining pressure on pricing through competition.
Many insurers begin moving to the cloud by starting with non-core business functions. To get and stay on the path to becoming a truly cloud-enabled organization, insurers should undertake a strategic assessment to set the direction of IT.

With a clear understanding of how cloud could increase shareholder and business value, companies can plan and implement a cloud platform and infrastructure deployment program including elements of private, public and hybrid cloud.

Moving to cloud requires a clear tactical vision, strong governance, durable processes and intelligent delivery technology. With these elements in place, insurance companies can accelerate operations and improve a range of functions, from how they conduct modeling, analysis and integration to how they detect anomalies.

Attaining these benefits requires material modernization and re-engineering of insurance applications—most of which were built for traditional, on-premise platforms. However, the application modernization process itself prepares insurers for a state of cloud resilience known as “cloud native.”

Application modernization also facilitates the transition toward microservices, as well as technology and design pattern re-use—which can reduce technical debt and increase agility.

With platform and infrastructure transformation under way, insurers can prepare for an application migration program, with applications inventoried and the migration type and effort determined. Importantly, cloud provides support for insurers’ moves into important new technologies such as robotic process automation (RPA) and artificial intelligence (AI), making it easier to implement these technologies but also offering the structure needed to organize and access the vast quantities of data generated by such innovations.
Accenture has strong relationships with all the major cloud providers and cloud solutions providers, which has helped position the firm as a leader in cloud transformation services. We have developed a large catalog of tools and accelerators to help clients conduct efficient cloud transformations.

Typically, we see larger firms moving to a multi-cloud environment, while smaller firms take a single cloud provider approach. Each insurer should consider which operating model and cloud management platform is most appropriate for its business.

Although most cloud discussions involve technology, the operating model is the critical linchpin—as it involves people, processes, tools and governance. Cloud solutions are non-uniform in nature, so insurers should be aware that multispeed operating models will co-exist for years to come, while people, process and tools remain interoperable. The right operating model is key to increased agility, technology operating efficiencies—and reducing infrastructure costs. As seen in Figure 3, Accenture has developed a proprietary Cloud Operating Model framework specifically for insurers.

Accenture’s worldwide cloud factories and certified specialists do the heavy lifting so clients don’t have to worry about the complexity of migrating or building new applications.
Figure 3. Cloud operating model – a process view

Source: Accenture, February 2018
EFFECTIVE CLOUD MANAGEMENT

Cloud costs can grow rapidly and should be managed carefully. An effective cloud management capability can be the difference between achieving the business case and missing the mark.

Ideally, a company will adopt automated management tools to achieve more control over costs, improve governance and increase accountability in its cloud consumption. Effective cloud management is comprised of five critical components:

1. Cloud operations, including support, cloud engineering, cloud service management, service desk and monitoring.

2. Security operations, defined as flexible cyber and data protection services that can secure cloud environments and infrastructure.

3. Cloud enhancement services, or managing cloud costs through analytics, actionable recommendations and operational improvement, as well as application remediation and re-architecture.

4. Application management, including support, ongoing maintenance, enhancements and upgrades.

5. Business process operations, the business layer on top of cloud technology assets and services that is focused on delivering improved business outcomes.

Application management is a particularly important aspect of any enterprise cloud plan. Proper architecture, design, development, testing, maintenance, modernization and renewal can help insurers achieve cost efficiencies, continuous optimization and ongoing innovations within their application portfolio.

Automated management tools deliver cost controls, governance and accountability in cloud consumption. Through DevOps, we continue to deliver business value past the “go-live” date and allow the client’s technology, skills and culture to evolve with their business needs.
Evolving regulatory requirements also pose a significant challenge to organizations, as they address regulators’ questions about their ability to properly assess operational risks before moving to the cloud. In response to these issues, Accenture has developed the Accenture Cloud Risk & Regulatory Compliance Framework, a robust, cost-efficient, compliant and secure approach that:

- Focuses on eight dimensions of operational risk and 83 underlying risks to assess and identify gaps and design controls.
- Incorporates global and local jurisdictional restrictions such as banking secrecy, data residency and information barriers to plan the overall journey timeline.
- Provides a set of recommendations following the assessment results.

Accenture uses a three-step process to help banks and financial services firms effectively assess their operational risk exposure:

**STEP 1** Conduct an operational assessment across the firm for navigating to the cloud.

**STEP 2** Review lower level controls, conduct analysis to identify gaps, and document solutions, including mitigating solutions and prioritizing quick wins.

**STEP 3** Create a roadmap for the overall journey with a focus on aligning with regulatory approval timelines and risk mitigation.
RAISING THE BAR ON SECURITY

Based on Accenture’s experience with global financial services and insurance deployments, data privacy, security, and risk management, we have formulated a comprehensive approach and recommendations to address the full spectrum of data privacy and security concerns.

Because of the complex regulatory and legislative landscape in which they operate, insurers are particularly concerned with security and risk. This environment makes it critical for an insurer to identify data privacy, security and regulatory compliance risks for an effective cloud transition. A careful assessment of this landscape should be paired with a reliable security operating model. The good news for insurers is that an increasing number of their peers have now made the move. A solid security reference architecture, in combination with understanding and leveraging the precedents, can ease the journey.

WHAT’S NEXT

Insurers may see the journey to cloud as daunting, but our experience indicates that five key steps can help make for a smooth transition:

1. Establish clear objectives.
   Before undertaking a move to cloud, insurers should determine what they hope to achieve in terms of cost savings, operational improvement and accelerated adoption of new technology.

2. Assign ownership and responsibilities.
   The cloud transformation initiative calls for clear ownership and the assignment of key responsibilities to business owners, the IT team, and outside parties.

3. Satisfy security and regulatory concerns.
   Insurers have to keep data secure and private, but they should also take steps to make regulators understand that proper controls are in place.

4. Create a comprehensive roadmap.
   A detailed roadmap helps keep the transformation initiative on course while reducing potential business disruption.

5. Incorporate appropriate metrics.
   Measuring the right key performance indicators (KPIs) accurately and effectively helps identify early wins and build momentum as the transformation takes hold.

The cloud landscape is complex and continues to evolve rapidly, but, with a strategic, comprehensive approach and the right ecosystem, insurers can use the cloud to take giant steps toward creating the business models, operating efficiencies and customer experiences needed for success in a digital era.
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REFERENCES


4. InShared LinkedIn page. Access at: https://www.linkedin.com/company/575174/

5. OutShared web site. Access at: https://www.outshared.com/outshared


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