THE **ART** OF THE API

How to Accelerate Delivery of Digital Innovations
from Legacy Insurance Systems

A blueprint for extending insurance backend systems to mobile, web, and cloud rapidly, cost- efficiently, and with low risk. Let OpenLegacy help you create a seamless customer experience while improving employee productivity.

Contents

Then

In the past, customers would wait for Monday morning until the insurance company's call center opened. The representative would need to verify a customer's identity and then pull up their claim. The claim would be approved; but to transfer the money to the customer's bank account, the customer would need to sign several forms sent to them by mail.

Now

Customers expect real-time information whenever and wherever they are, without the assistance of an agent or a call center representative. The modern agent requires new tools and applications to maintain productivity in a mobile environment, including instant policy quotes.

The Future

The changing landscape requires insurance companies to adapt and evolve in record time in order to remain competitive, improve employee productivity, and increase customer retention.

Then & Now
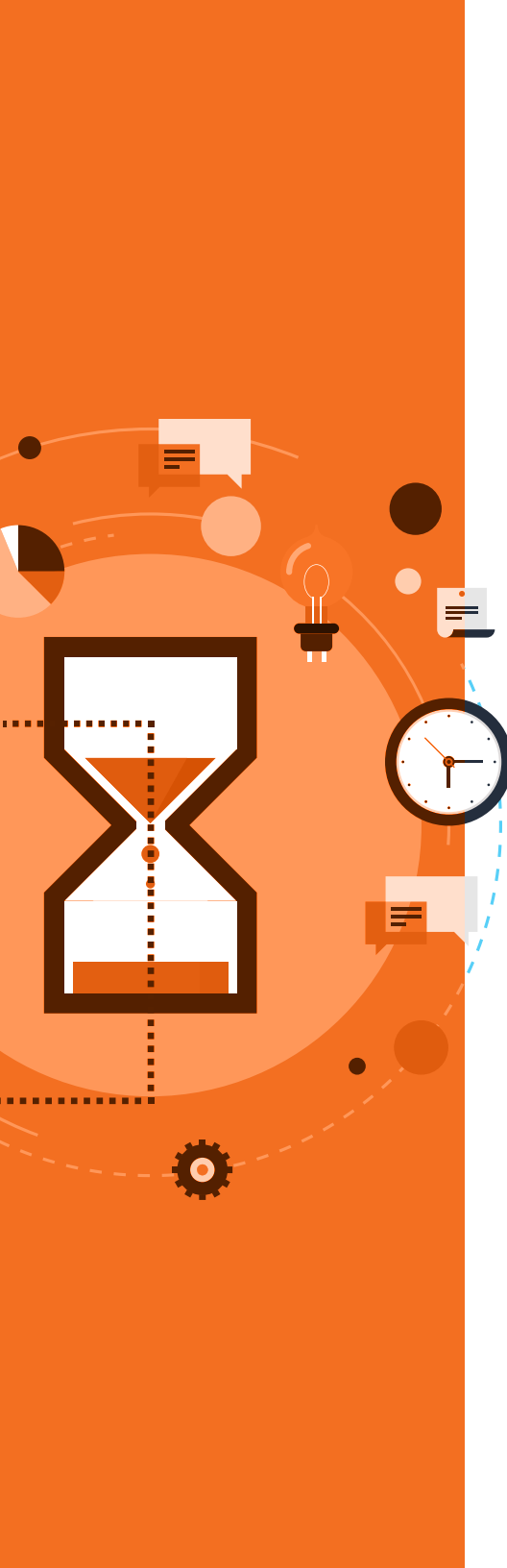## The Changing Insurance Landscape

The insurance business is changing quickly, and those who can't change are at risk of losing customers. According to IBM, over 40% of consumers got rid of their previous insurance company because they found that their features weren't advanced enough to fit their needs[1]. As in the banking industry, long-established companies are feeling new competitive threats from so-called "InsurTechs," newer companies with social savvy marketing and modern technologies. Some of these innovative new insurance firms are achieving rapid growth.

To compete, the modern insurance company must consider bold new business model transformation putting data and decision-making power directly in the hands of agents and prospects.

API software from OpenLegacy helps create new business models by making the data and processing in your legacy or back-end applications available to modern applications. The prize for this effort is delighted customers and motivated employees.

Most insurance companies have legacy mainframes, applications and midrange systems such as IBMi (commonly known as AS/400). In fact, 3,000 of the world's largest companies and over 70% of global financial transactions still rely on mainframe computers running applications in an outdated programming language known as COBOL. COBOL was designed in the late 1950s and standardized for business applications in the late 1960s.

Wait for Opening Hours | Verify Identity with a Person | Wait for Claim Approval | Wait for Forms by Mail | Sign Paper Forms | Receive Money

Past

Customer Experience

Future

Get Real-time info anywhere—No Agent

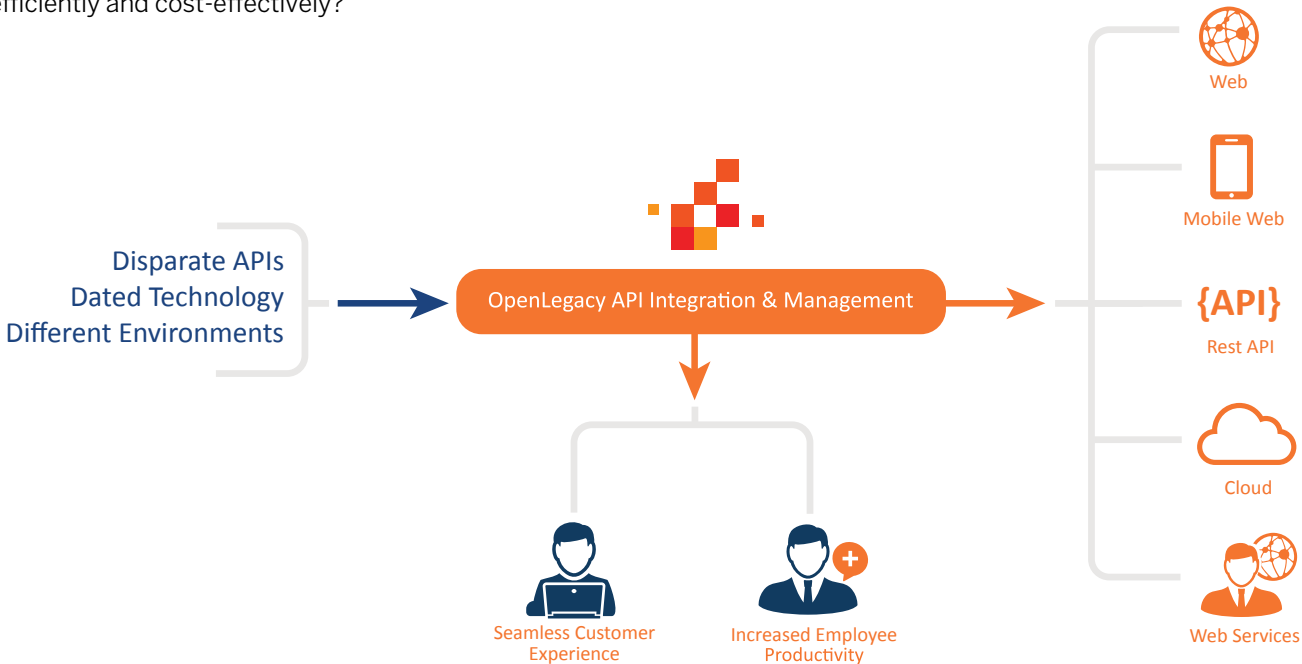One integrated App to Access & Update Customer Data

Imagine a computer program from the 1960s: Blocky green text on a black background, no mouse input (text commands and arrow keys only), and depressingly slow speeds. Imagine using that software program to deliver quotes to insurance customers in an era where smartphones and modern user interfaces exist. Imagine trying to retain customers or add new services while using this technology, all the while knowing that newer, more modern competitors are inexorably moving ahead.

How can insurance companies leverage new technology in order to put themselves on the same playing field as those who aren't operating with the same constraints? How can they do it quickly, efficiently and cost-effectively?

The answer and subject of this eBook is "APIs and microservices." Microservices break-up monolithic legacy applications into smaller, independent business processes. Application programming interfaces (APIs) can then be used to open up this data from legacy systems so it can be used by developers to create digital applications for mobile, the Internet or cloud. Organizations can bypass complex existing architectures, access systems of record directly and get it all done with Java programmers using familiar, open-standards tools.

Disparate APIs
Dated Technology
Different Environments

OpenLegacy API Integration & Management

Web

Mobile Web

{API}
Rest API

Cloud

Web Services

Seamless Customer Experience

Increased Employee Productivity

What it Takes to Succeed as an Insurance Provider Today

The insurance provider of today's world must have these characteristics to succeed:

1. **Customer-centric:** They must facilitate a customer experience that is seamless, personalized, and effortless by integrating an intuitive user interface containing data and processes from disparate systems and applications across the organization. According to PWC, 71% of insurance customers use digital research before buying a policy.[3]

2. **Mobile-centric:** They must give customers and employees anytime, anywhere access to the information and services they require -- across devices, locations, and applications. PWC research also indicated that 68% of insurance customers were willing to download and use an application from their insurance provider.

3. **Innovative and agile:** They must support rapid business and technical innovation. They must implement new business functionality and user interface quickly to stay ahead of the competition and keep up with ever-evolving technology. Also, it is essential that they quickly introduce new business models such as direct-to-consumer and independent agents and brokerages.

Transformation Challenges
Why is it so difficult?

Digital Transformation can be painful. Digital transformation initiatives involve multiple business processes and a variety of technological solutions from different vendors. This can result in extremely complex, lengthy, costly, and risky IT projects. According to McKinskey[4], 17% of IT projects go so badly that they can threaten the very existence of the company.
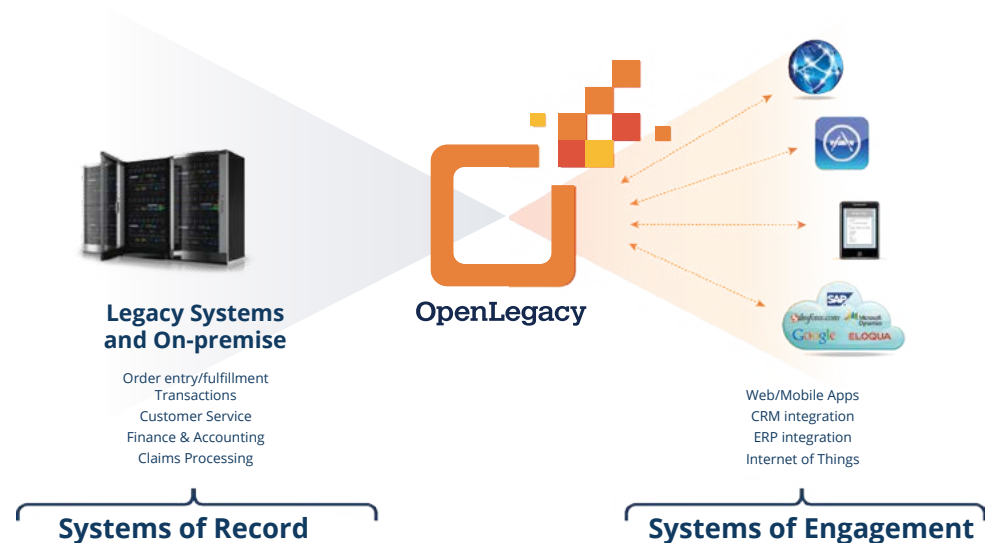
There are many challenges that can slow transformation, such as disparate applications, an out-of-date "legacy modernization" stack with an ESB and SOA, or different application platforms like in-house and cloud. The integration often involves critical business functions like claims management, policy management, document management, and other applications like CRM, finance and accounting. These functions often don't perform well when ported to the cloud or mobile devices.

As just one example, imagine a scenario in which a legacy application must expose information to users browsing on mobile devices. While it's possible to do this with a variety of workarounds, what's likely to happen is that the influx of mobile device users overloads the capacity of the legacy application to serve information. Mobile device users will encounter unacceptable latency issues as a result and will become dissatisfied.

Similarly, many legacy applications – including both those common to all businesses and those specific to insurance companies – have a difficult time integrating with the cloud. One example shows that 30% of companies find that their applications don't perform as intended when relocated to the cloud.[5] Companies that choose to modernize their legacy infrastructure by moving it to the cloud are taking a significant risk.

By contrast, companies that choose to modernize their service offerings with APIs and microservices will find that their legacy applications don't just perform as intended – they'll perform better. Microservices, for example, are designed to be independently deployable. It's entirely possible to set up a microservice in a cloud environment while connecting it to a legacy application on-premise. By reducing layers of complexity, microservice-based APIs often process transactions very quickly . One customer reported performance improvement from 330 milliseconds to 70 milliseconds.

API and microservices integration can defray the risks of modernization or migration. Instead of viewing legacy systems as a problem that needs "fixed," smart legacy API integration opens up new models of distribution and makes possible a seamless customer experience and Increased employee productivity.

**Legacy Systems
and On-premise**

Order entry/fulfillment
Transactions
Customer Service
Finance & Accounting
Claims Processing

OpenLegacy

Web/Mobile Apps
CRM integration
ERP integration
Internet of Things

Systems of Record
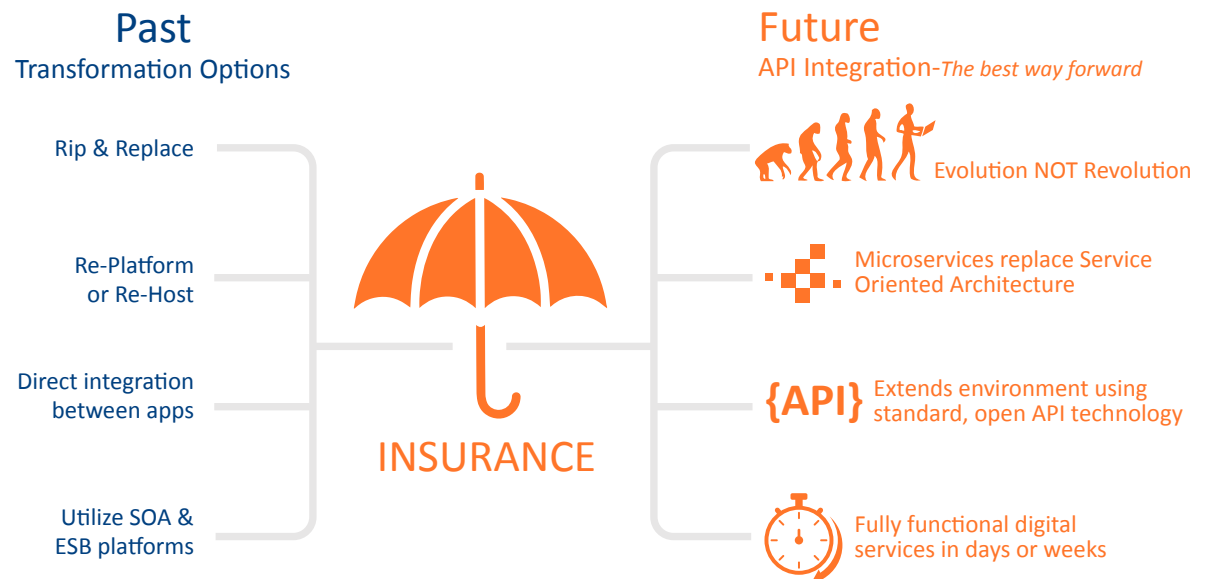
Systems of Engagement

How Have Organizations Tried to Transform in the Past?

Transformation is not a new IT activity. In the past, companies have tried several different ways to make their applications more responsive to changes driven by business.

- **Rip & replace:** They have written applications and business flows from scratch with the newest technology stack, replacing existing legacy hardware and software. In theory, the organization gets up to speed with the latest technology and practices. In reality, most of these projects are costly, risky, and prohibitively time-consuming.

- **Re-platform or re-host:** They have deployed the same software on new hardware. This may reduce costs by migrating from expensive legacy hardware to an environment that's easier to manage and maintain. However, all the downsides of closed, inflexible legacy applications remain.

- **Direct integration between applications:** They have written custom integration code in every application that needs to be connected. This opens up previously locked applications but requires custom coding that's costly and not scalable.

- **SOA and ESB platforms:** They have deployed new middleware. Popular in the past decade, these modernization projects involve custom middleware, connectors, and ESBs to connect disparate systems and applications. Integration was accomplished, but complexity increased, while creating vendor lock-in and spiraling costs.

Services such as SOA and ESB came closest in terms of providing the services that customers demand, but in the end they aren't easy or cheap to implement. By contrast, APIs (and microservices, a method of implementing and deploying APIs) can be built cheaply, tested quickly, and integrated without much change to the underlying framework of a pre-existing legacy application. Once built, these services are essentially modular – the previous dilemmas of whether to integrate or rip-and-replace an obsolete service no longer exist.

Past
Transformation Options

- Rip & Replace
- Re-Platform or Re-Host
- Direct integration between apps
- Utilize SOA & ESB platforms

INSURANCE

Future
API Integration-*The best way forward*

- Evolution NOT Revolution
- Microservices replace Service Oriented Architecture
- {API} Extends environment using standard, open API technology
- Fully functional digital services in days or weeks

TODAY, API INTEGRATION IS THE BEST WAY FORWARD

APIs let businesses embrace evolution rather than revolution. Organizations can extend their tried and true environments using standard Open API technology. These fully functional digital services are created within days or weeks instead of months. Not every API solution can help companies achieve these benefits, but speed of implementation, low cost, and software quality and security are proof points for OpenLegacy's API based open standards platform.

Here are a few real-world examples where insurance companies and their partners were able to add microservices and APIs and leap ahead of their competitors.
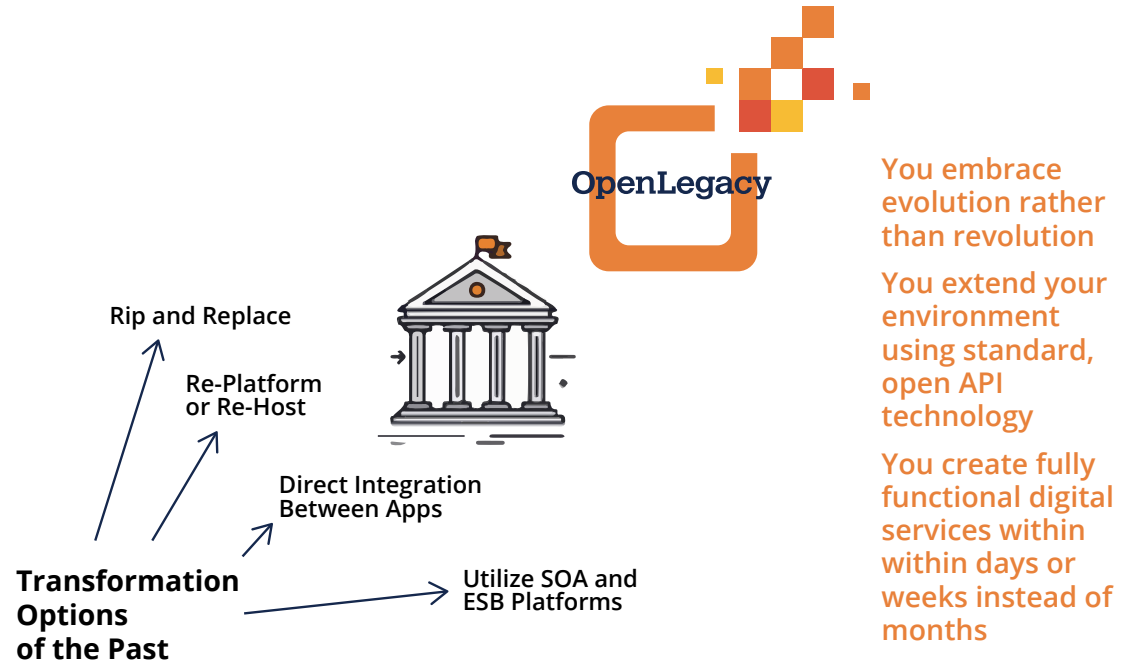
Metlife:
With over 400 systems of record running code from as far back as 1982, Metlife had a real challenge on its hands when it came time to modernize. Their first step in modernization was to wrap microservices around their legacy apps, and then gradually phase in modern technologies. By using microservices as a stepping stone, they were able to soft-launch new applications while gradually consolidating their legacy tech, eventually leading to an almost 70% consolidation of its VM infrastructure.[6]

CompareTheMarket:
In the UK, comparthemarket.com is one of the nation's most popular insurance aggregators. In 2016, they moved from a monolithic application into microservices. They found that microservices embodied "the Unix design philosophy of building small things that work well." As a result, their microservices implementation dramatically reduced the cost of failure, creating a more resilient and fault-tolerant application overall.[7]

Insurance Claims Management
An OpenLegacy client needed to modernize an auto insurance application that was still relying on an AS/400 backend. They initially attempted to modernize this application by rewriting the 20-year-old COBOL transactions to enable them for SOA. This proved to be unfeasible. An OpenLegacy API was able to expose data from the AS/400 claim application to a modern interface in just ten days of development time – and required no revision of the underlying legacy code.[8]

OpenLegacy

Rip and Replace

Re-Platform or Re-Host

Direct Integration Between Apps

Transformation Options of the Past

Utilize SOA and ESB Platforms

You embrace evolution rather than revolution

You extend your environment using standard, open API technology

You create fully functional digital services within within days or weeks instead of months

The Art of API

Automate. Simplify. Improve: Bridging the Legacy Gap

Exposing existing systems as services and then integrating those services as needed is the ideal way for firms to enable the flexibility they need to meet this imperative. According to KPMG, legacy systems will be overhauled, and technology will play a crucial role as insurers promote digital channels and self-service options.

The API approach gives enterprises the ability to customize their strategy, opening up choices like which business processes and data elements to expose and which functions to keep internal. Features and functions from legacy applications can be pulled like single pegs and combined into processes that authorized users and other applications can access from anywhere.

OpenLegacy is Right for Insurance

OpenLegacy is the industry's first true microservice-enabled API integration and management platform designed to solve common challenges with legacy mainframes, midrange systems and applications. With OpenLegacy, your staff can deploy competitive new digital services in weeks. And your customers will at last have the more modern and advanced applications they have come to expect.

OpenLegacy Has an Edge

1. **Automate** the creation of APIs and microservices from legacy systems: Certainly many organizations are already using APIs to extend their legacy systems to digital services, however it is most likely a manual effort, requiring specialized legacy programming skills and many months of effort. OpenLegacy has automated much of this process, so APIs can be built with far fewer steps and in far less time, usually minutes or days by a programmer with Java skills. As a result, ideas become innovations in the market far faster than with other approaches.

2. **Simplify** by avoiding complex architectures: OpenLegacy simplifies the process by leaving your existing architecture in place, whatever it may be, and directly exposing your legacy system data and logic as a series of microservice enabled APIs which can be deployed in any number of ways and places, geared toward specific business processes. APIs then enable the microservice to be deployed in any number of ways and places, from mobile devices, the Web or cloud.

3. **Improve** speed and efficiency: With OpenLegacy, your developers can create new APIs at scale to meet the requirements of today's Agile and DevOps practices. As an added benefit, by avoiding complex architectures and layers, your new APIs perform extremely fast. We often exceed customers speed requirements with processing as fast as 70 milliseconds.

Our Success with Customers

A leading insurance company chose OpenLegacy as their strategic backend API platform. OpenLegacy's decoupled API approach allowed the UX team complete freedom to design any interface they could imagine, while the rapid automated API generation allowed for deployment of new services in two hours instead of one month - without any changes to the underlying mainframe code or infrastructure.

"OpenLegacy let us connect our IBM iSeries and AS/400 applications to our insurance agent portal without changing our COBOL applications, which would have been a huge, expensive headache. We couldn't believe OpenLegacy was able to conform to all of our security, performance, and design constraints - and do so within days."

Insurance Services IT Director

An established insurance company was losing thousands of opportunities to reach new customers every year, because their IBM iSeries application was not compatible with insurance rate comparison websites. OpenLegacy's unique connection pool technology enabled launching a fully functional, high-performing, and reliable web service that delivered insurance quotes in 300 milliseconds – 10 times faster than the previous web service – all in just three days.

Read more at OpenLegacy.com/case-studies

About OpenLegacy

OpenLegacy accelerates delivery of innovative digital services from legacy systems in days or weeks versus months. Our microservices-based API integration and management software reduces manual effort by automating API creation, simplifies the process by avoiding layers of complexity, and improves staff efficiency and API performance. Our software directly accesses and extends business logic to web, mobile our cloud innovations in the form of Java objects, REST APIs or SOAP. Most importantly, this process is not only fast, easy and secure, but also does not require special staff skills or changes to existing systems or architecture. Together, business and IT teams can quickly, easily and securely meet consumer, partner or employee demands for digital services without modernizing or replacing core systems. Learn why leading companies choose OpenLegacy at www.openlegacy.com.

Gartner Cool Vendor

TechTarget — Editor's Choice for Innovation Award

CIO — 20 Most Promising API Solution Providers

SR — 50 Best Companies to Watch list

[1] IBM, Capturing Hearts, Minds, and Marketshare: How connected insurers are improving customer returns

[2] NS Tech: No, mainframes aren't sci-fi – they're crippling the world's biggest companies

[3] PWC Insurance 2020: The Digital Prize – Taking customer connection to a new level

[4] Delivering large-scale IT projects on time, on budget, and on value By Michael Bloch, Sven Blumberg, and Jürgen Laartz of McKinsey & Company

[5] Hybrid Cloud Environments: The State of Security, by AlgoSec

[6] Techgenix, Containers Success Stories from Three Leading Organizations

[7] Computerworld UK, The pros and cons of microservices: Lessons learned as Comparethemarket.com moves away from a single, monolithic application

[8] OpenLegacy, OpenLegacy helps improve productivity through an integrated application for insurance agents

[9] KPMG, The Changing Insurance Landscape

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