Build a foundation for flexibility

Modernize your core insurance systems with Red Hat

While challenging, core modernization can deliver many advantages for insurance organizations. A survey of core modernization decision makers at insurance companies showed the following benefits:

66%
of organizations increased IT speed.[1]

61%
of organizations improved IT agility.[1]

59%
of organizations improved their customer experience.[1]

66%
of organizations accelerated development.[1]

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Core modernization improves speed, agility, and customer experience

The insurance landscape is changing. Customers expect rapid, high-quality digital services in all aspects of their lives—including insurance—and are quick to consider competitors' services if their needs are not met.

However, legacy insurance infrastructure cannot keep up with these demands. Most environments consist of a variety of systems purpose-built for specific insurance products. The combination of disparate legacy systems, rigid code, and inconsistent processes is too inflexible and complicated to support the digital business strategies needed to remain competitive.

Insurers must modernize and integrate their core systems to increase flexibility, save costs, and address the growing digital needs of their policyholders. In fact, 62% of decision makers at insurance companies believe their core system modernization initiatives are the most critical component of their digital business strategies.[1] Additionally, 79% say the performance of their core systems differentiates their firms in the broad insurance marketplace.[1] A modernized core can help you deliver innovative online services like virtual inspections, digital claims reporting for first notice of loss (FNOL), and artificial intelligence (AI)-based damage assessment. With modernized core applications, you can also boost productivity, speed development, and improve cost efficiency while enhancing your customer experience. And these benefits increase as modernization efforts spread throughout processes and become better integrated with each other.

Considerations for modernizing your core insurance systems

Core modernization is an incremental process. Using targeted migration and enhancement, you can solve business challenges, get more value from existing investments, and lay a foundation for digital operations. There are three main areas—infrastructure, applications, and approaches—to consider when modernizing your core systems. Each area supports different business outcomes (Figure 1).

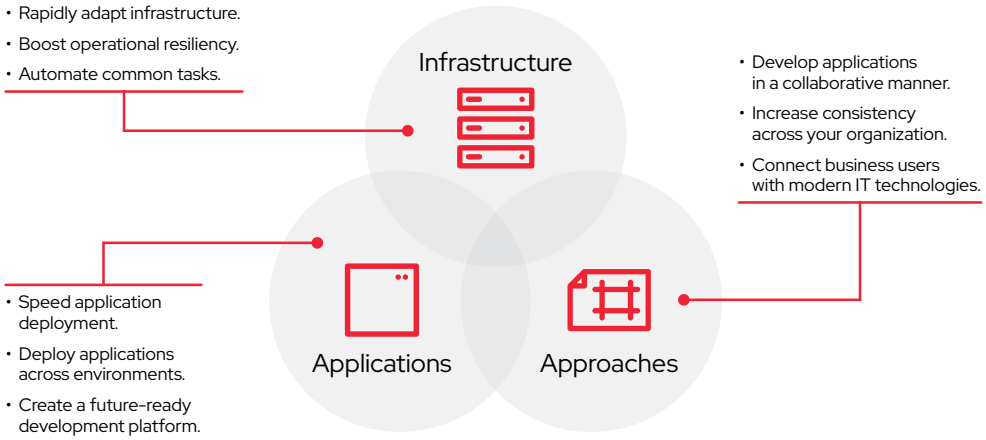

Figure 1. Each core modernization area provides different business outcomes.

1 *Forrester, commissioned by Red Hat. "Core System Modernization: Time For A New Roadmap," May 2020.*

Red Hat

>50%

of core modernization decision makers at insurance companies think their lack of a cloud strategy will undermine the impact of their core systems modernization efforts.[1]

Read the 5 strategic benefits of hybrid cloud infrastructure for insurance brief to learn more.

Infrastructure

Most insurers start their modernization journey by deploying flexible, future-ready infrastructure. Modern cloud- and container-based infrastructure allows you to connect and integrate your core systems into a single, unified hybrid environment. This environment provides a consistent foundation for building and deploying applications across on-site and cloud infrastructure as needed.

Hybrid cloud infrastructure provides flexible, programmable IT resources with easier access to new tools and capabilities. Connected data streams permit deeper, more sophisticated insights and analytics. Fast, cost-effective replication and failover increases operational resiliency. And dynamic cloud resource pricing and scaling convert capital expenses to more predictable operational costs.

Kubernetes-based containers help you maximize the value and flexibility of this environment by allowing you to write code once and deploy it anywhere—bare metal, virtualized, or cloud infrastructure. Effective container platforms provide self-service capabilities that let users provision preapproved resources on demand, eliminating wait times and speeding development and operations. They also offer a broad, consistent set of tools, libraries, and runtimes so developers can work with their preferred tools.

Finally, using an application programming interface (API) centric approach to infrastructure design can ease integration with other cloud-based, container-based, and traditional systems, as well as third-party applications.

Applications

49%

of insurance companies cite using container-based application platforms as a critical or high priority for cloud-native development initiatives over the next 12 months.[2]

Read The Critical Value of Cloud-Native Development for Insurance Firms analyst report to learn more.

Core insurance applications designed for legacy hardware must be modified to run on cloud- and container-based infrastructure. Moving your applications into containers can simplify development, deployment, and portability across modern infrastructure. You can modernize and containerize applications in several ways:

- **Lift and shift.** Lifting and shifting packages your application with an optimized operating system and dependencies into a container that can be deployed anywhere your container platform runs. This does not modernize your application architecture—it helps you get started with a flexible foundation and gives you more time to rewrite your application.
- **Augment with new layers.** Augmenting with new layers adds a new interface layer to existing applications, making them easily accessible to other applications through APIs. As with lifting and shifting, the architecture of the existing application is unchanged.
- **Rewrite.** Rewriting an application is different from creating new applications from scratch; it is the process of creating new functionality to replace and retire existing applications. As part of an overall modernization strategy, rewriting can follow lifting and shifting and augmenting with new layers, and it is the only way to update the application architecture for a fully modern stack.

Approaches

Cloud-native approaches focus on iterative workflows, collaboration, automation, and microservices to speed application development and business agility. Continuous integration and continuous deployment (CI/CD) pipelines provide lean, collaborative, and fully automated software delivery life cycles. Microservices architectures take advantage of loosely coupled, modular applications that

2 *Forrester, commissioned by Red Hat. "The Critical Value Of Cloud-Native Development For Insurance Firms," August 2020.*

95%

of insurance organizations have realized benefits from cloud-native development initiatives.[2]

Read the 5 strategic benefits of cloud-native development for insurers brief to learn more.

are easier to build, test, deploy, update, and change. And DevOps methodologies incorporate culture, automation, and platform design to deliver increased business value and responsiveness through rapid, high-quality service delivery. Accordingly, 95% of insurance organizations have realized benefits—including enhanced partner experiences, more productive use of technology, and improved application quality—from cloud-native development initiatives.[2]

Modernize your core with Red Hat

Less than half of decision makers at insurance companies believe they can support their organization's modernization execution efforts with their own internal resources.[1] Red Hat can help you modernize more efficiently and effectively. Red Hat® hybrid cloud solutions provide advanced DevOps and cloud-native tools, cross-infrastructure portability and scalability, and the ability to run both existing and new cloud-native applications. These modular solutions let you deploy the components you need now, integrate with existing systems, and expand as needs change. You can also customize your installation with access to a large certified partner ecosystem and open source interoperability.

Each component provides key capabilities within the solution.

- Red Hat Enterprise Linux® is an open source operating system that creates a consistent foundation for deploying applications across bare-metal, virtual, container, and all types of cloud environments.
- Red Hat OpenShift® is an enterprise-ready Kubernetes container platform with full-stack automated operations to manage hybrid cloud and multicloud deployments. Red Hat OpenShift is optimized to improve developer productivity and promote innovation.
- Red Hat OpenShift Application Runtimes is a set of products, tools, and components for developing and maintaining cloud-native applications. It offers lightweight runtimes and frameworks for highly-distributed cloud architectures like microservices.
- Red Hat Process Automation Manager is a platform for developing containerized microservices and applications that automate business decisions and processes. Process Automation Manager includes business process management (BPM), business rules management (BRM), and business resource optimization and complex event processing (CEP) technologies. It also contains a user experience platform to create engaging user interfaces for process and decision services with minimal coding.
- Red Hat Integration is a comprehensive set of integration and messaging technologies that connect applications and data across hybrid infrastructures. It is an agile, distributed, containerized, and API-centric solution. Red Hat Integration provides service composition and orchestration, application connectivity and data transformation, real-time message streaming, change data capture, and API management – all combined with a cloud-native platform and toolchain to support the full spectrum of modern application development. Key technologies within Red Hat Integration include Red Hat Fuse, Red Hat 3scale API Management, and Red Hat AMQ.

  Red Hat Fuse is a distributed, cloud-native integration platform that uses an API-centric, container-based architecture to decouple services, allowing them to be created, extended, and deployed independently.

  Red Hat 3scale API Management allows you to share, secure, distribute, control, and monetize your APIs on an infrastructure platform built for performance, customer control, and future growth.

  Red Hat AMQ is a flexible messaging platform that delivers information reliably, permitting real-time integration and connecting the Internet of Things (IoT).

"We had looked at Red Hat OpenShift before and we were confident it could help us address issues around development speed and efficiency."

Silvère Lallemant
Network and Middleware Infrastructure Manager, Cloud Offer and Devops, Groupama

Read the customer success story to learn how Groupama used Red Hat OpenShift to speed application development.

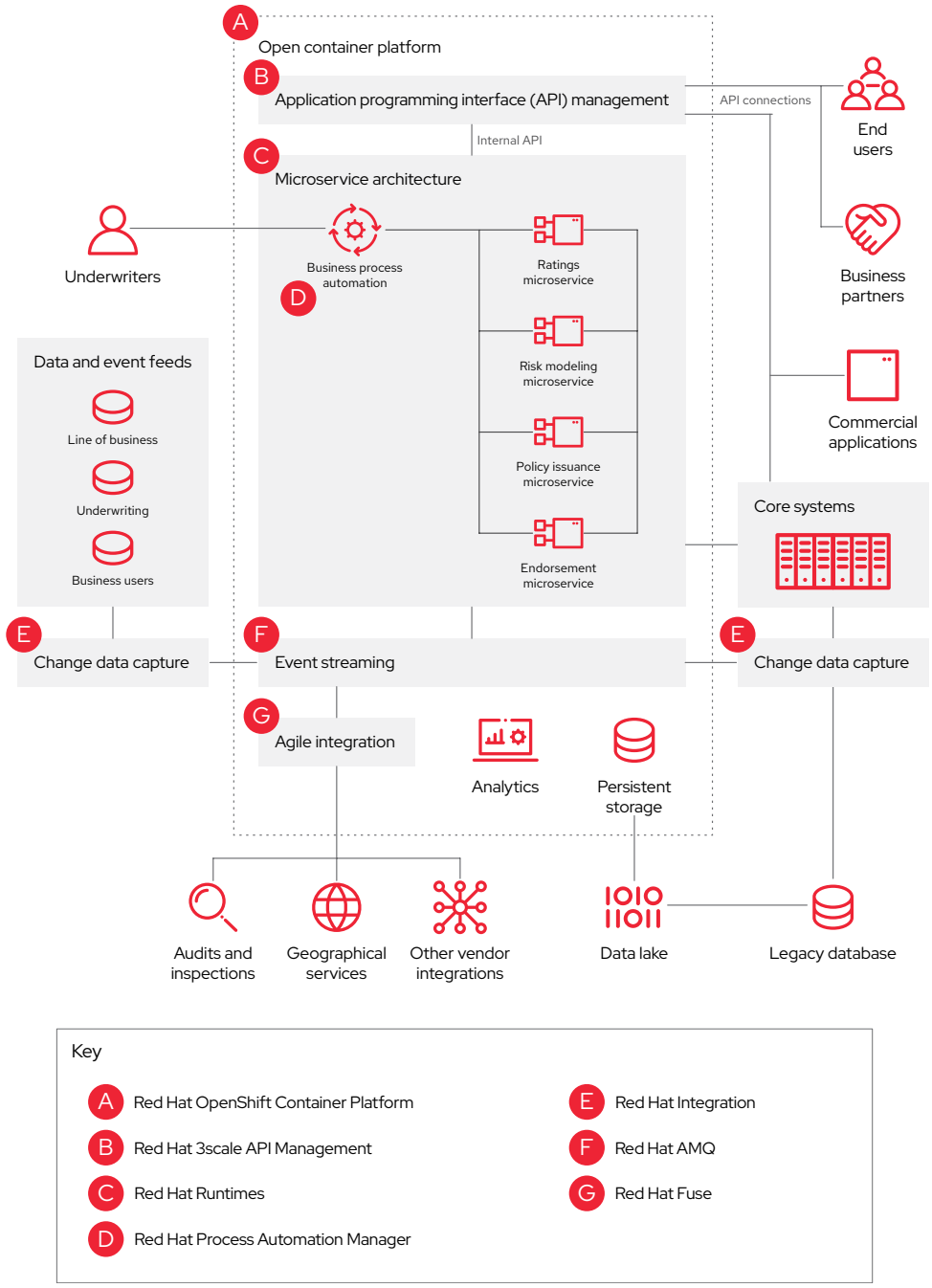

Figure 2. High-level architecture of the Red Hat core modernization solution, based on an actual underwriting deployment at a North American insurer.

78%

of insurance companies cite underwriting core systems as a top priority for modernization.[2]

Read the Core system modernization: Time for a new roadmap analyst report to learn more.

Figure 2 shows an overview of a modernized core underwriting service based on an actual deployment at a North American insurer. Key functional areas of the solution include:

- **Open container platform.** The modern architecture is deployed within Red Hat OpenShift Container Platform, with connections to data and event feeds, authorized business partners and users, traditional core systems, databases, and storage.
- **Data and event pipeline.** Data and event feeds—along with incremental changes—are integrated into a unified pipeline using Red Hat Integration and Red Hat AMQ.
- **Microservices architecture.** The event pipeline feeds into the modernized underwriting architecture, which contains microservices for common core underwriting functions like ratings, policy issuance, risk modeling, endorsement, and more. These services can be created internally or purchased from a third-party vendor and integrated into the new architecture.
- **Agile integration.** Other supporting systems and functions—including audits, inspections, geographical services, and third-party services—are connected to the underwriting core system through Red Hat Fuse.
- **Flexible access.** Underwriters access microservices-based functions through Red Hat Process Automation Manager, allowing them to quickly and easily update business rules and models.
- **API connections.** Finally, APIs for connecting business partners and other authorized users to the new architecture, as well as other core systems and microservices, are managed through Red Hat 3scale API Management.

Several insurance companies have already deployed Red Hat core modernization solutions and are experiencing benefits.

Customer success highlight: Groupama

"We're now able to develop applications with much greater agility, and any change will be in production in a very short time."

Silvère Lallemant
Network and Middleware Infrastructure Manager, Cloud Offer and Devops, Groupama

Groupama, a leading French insurance provider, wanted to move to cloud-native application development to keep pace with shifting market demands and balance performance with costs. The company used Red Hat OpenShift Container Platform to create an agile, efficient development environment and processes that have improved service time to market and attracted top IT talent. Groupama has also established a stable foundation for future adoption of innovative hybrid cloud computing.

Reduced time to market with efficient development

Gained flexibility to support future hybrid cloud

Adopted modern technology to attract and retain top talent

Read the customer success story to learn more about Groupama's experience.

"When you adopt an agile development process and produce software—and results—fast, it can transform the business and provide a completely new way to do projects. Without Red Hat OpenShift, this shift would not be possible."

Dr. Nikolas Nehmer
Head of Helvetia Container Platform, Helvetia Group

Customer success highlight: Helvetia

Swiss insurance company Helvetia faced availability and performance challenges while running its customer-facing applications on legacy, on-site hardware. To gain the agility needed to stay competitive, the company expanded its Red Hat application environment to a new public cloud solution based on Red Hat OpenShift Container Platform running on Amazon Web Services (AWS). With this new environment, Helvetia has achieved over 99.9% uptime for its services, reduced time to market from months to weeks, and built a path to reduce costs.

Increased service uptime to over 99.9%

Reduced time to market for new applications

Improved issue resolution with support from Red Hat

Read the customer success story to learn more about Helvetia's experience.

Learn more and get started

Modernizing your core insurance systems can help you increase flexibility, save costs, and address digital demands. Red Hat can help you modernize more efficiently and effectively. With Red Hat's hybrid cloud solutions, you can adopt modern infrastructure, DevOps methodologies, and cloud-native tools at your own pace.

Email insurance@redhat.com or visit redhat.com/fsi to learn more.

About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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