



Modernize Your Legacy Applications in the Cloud

3 Keys to Successful Application Modernization

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The Time to Modernize Is Now

There's never been a greater need for business agility

In the last year, enterprises and industries of all kinds faced rapidly changing business environments and widespread disruption. They either adapted, or found themselves leapfrogged by more agile competitors.

Some organizations have the agility to:

- Seize market opportunities
- Improve customer journeys
- Create or respond to competitive disruption
- Increase innovation

Others don't.¹ What is the difference? In many cases, it comes down to applications and business processes. For instance, during the pandemic, many industry leaders had only weeks or months to roll out innovations such as the integration of mobile applications and telemedicine in healthcare and the adoption of contactless payment in banking.

Free your processes, your data will follow

Many reasons exist for business failures. But part of the blame can be attributed to the large, monolithic, expensive, brittle, and inflexible applications most organizations still have in place.

These applications keep data—the lifeblood of your organization and the engine of your digital transformation—locked away in silos and disconnected processes. The answer is application modernization.

Application modernization has the end goal of freeing customer business processes from legacy applications such as SAP R/3, Siebel, PeopleSoft, and home-grown systems, so that data can be available to everyone in the organization who needs it. Not only do you need to free your locked-in business processes, but you also need to do so in a way that integrates and unifies every aspect of those processes—across on-premises and multi-cloud environments.

In this eBook, we show how application modernization is a journey—one that has its challenges, but is achievable and doesn't require rebuilding. Many organizations are just now starting on that journey. But at the end of it, you will have a foundation for deploying hundreds or even thousands of modern applications: real-time, on-demand, scalable, modular, lightweight, easy-to-use, and easy-to-develop applications that will drive your digital transformation initiative to success.

What is application modernization?

The process of taking existing legacy applications—typically monolithic, on-premises systems—and strategically modernizing their infrastructures, architectures, and features. In many cases, this means evolving to a modern, cloud-native, microservices-based architecture. But note that rebuilding and rewriting all your applications isn't required—and may not always be desirable.

¹ "Coronavirus Bankruptcy Tracker: These Major Companies Are Failing Amid the Shutdown," Forbes, May 2020



Paths to Application Modernization

Application modernization is an increasingly urgent initiative. Currently an \$11 billion market, it is expected to grow to \$25 billion by 2025.²

Data has become the most strategic weapon organizations have in their arsenals. To unleash that data, they need a foundation of tools that are cloud-native, provide the breadth and depth of platform scale, are powered by intelligent automation, and deliver trust and security.

They also need seamless integration and orchestration among applications—cloud and on-premises. Otherwise, data is siloed and disconnected.

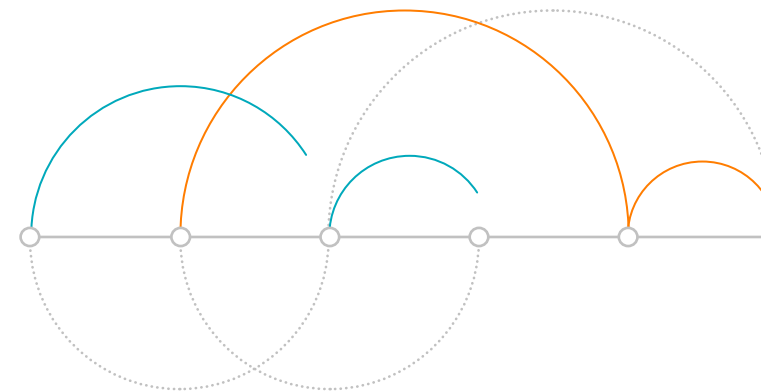
To free their processes and democratize the valuable data within them, organizations generally look to one or more of these paths.

Add APIs to extend legacy systems. Adding APIs to on-premises systems can connect them to other modern applications and preserve your investments. No application updates or customizations required. This may be the easiest route to take, but not necessarily the best.

Purchase new cloud software-as-a-service (SaaS) applications to replace legacy systems. Investing in new best-of-breed applications can be the means to unlock data and processes and interact with them via APIs. The challenge is to integrate these new applications with your existing business processes and applications.

Build new applications using microservices.

Developing these truly modern applications is the goal of many leading organizations. Because of their modularity and scalability, they easily integrate with existing applications, data sources, and business processes to help drive digital transformation.



² "Application Modernization Services Market," MarketsandMarkets, July 2020



Challenges to Application Modernization

The good news is that modernizing your applications will help you succeed at your digital transformation efforts. The bad news: the journey is fraught with pitfalls.

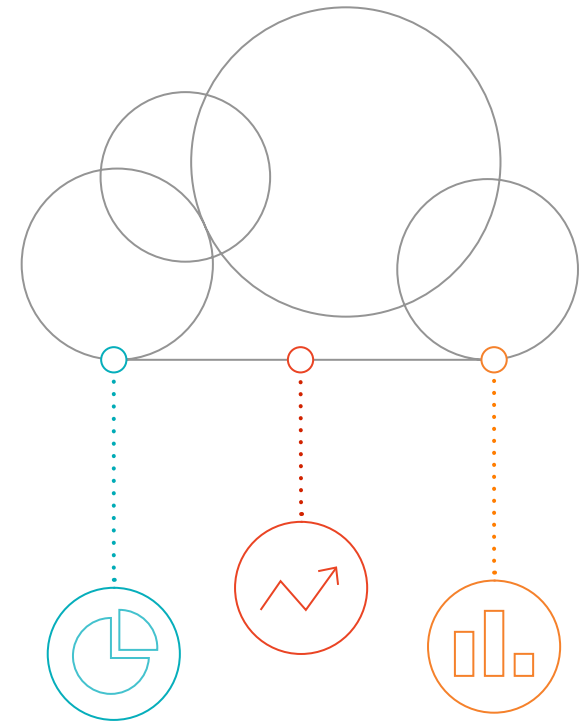
According to one estimate, 74% of organizations have failed at application modernization.³ We believe that there are four chief reasons why.

The technology tools are complex

Existing tools to help with application modernization are difficult to learn and use, and require special expertise by trained professionals. Also, until recently, there were gaps in the marketplace for necessary functionality that existing tools didn't cover. A full 78% of users want simpler, more reliable, and easier-to-use tools.⁴

Business and technology teams are widely misaligned

In many organizations, business groups have run amok, buying or developing applications on their own with little consideration of how these applications integrate with others. This has resulted in a massive number of applications, many redundant or lacking alignment to a common goal. Cloud use in particular is out of control in some organizations, since anyone with a credit card can procure cloud services or SaaS applications for a department or division. IT has trouble reigning in these "shadow IT" activities, which leads to runaway costs and inefficient—because not integrated—business processes.



³ Advanced Global Research, May 28, 2020

⁴ Harvard Business Review Services Survey, 2019

Challenges to Application Modernization

(continued)

Applications aren't integrated with other organizational applications and processes

Adopting a new application is not just a question of installing the technology correctly. Business processes often need to be adjusted—especially when it comes to cloud applications. But many organizations aren't taking this into account. They aren't integrating the new processes introduced by the cloud applications with those of legacy applications. Modernization cannot happen if new cloud applications exist in silos. This will fragment data across the enterprise. Modernization thus fails if a new modern application brought in for sales automation, human resources, or marketing, for example, cannot communicate with a mission-critical legacy ERP application or integrate with its established business processes.

Too many organizations take an API-only approach to application modernization

Many organizations simply make existing applications cloud-compatible by slapping APIs on legacy applications and calling it a day. Although this is the easiest route for getting applications in production use, these “cloud-washed” applications are difficult to scale. APIs are necessary but not the whole answer. Application modernization generally means refactoring and breaking down big, heavy monolithic applications into a collection of small, loosely coupled microservices developed expressly for the cloud. Organizations are beginning to realize this, which is why experts predict that 500 million cloud-native applications will be developed by 2023.⁵



Three Keys to Application Modernization Success

Although the application modernization journey is challenging, there are three success factors that can help you on your way: radical simplicity; enhanced productivity for all; and an elastic scale capability.

1. Radical simplicity. In previous eras, application developers built the applications that made use of the all-important enterprise data. But today it's possible for citizen developers to create the applications that fuel data-driven digital transformation. You empower business users in your organization by choosing a solution that has a no-code, no-build user experience (UX). This means that everyone—from integration architects, to data stewards, to non-technical business users—can help modernize applications by building them, assembling them, and monitoring integrations of them. Such a solution also makes it easy to create and manage APIs. Radical simplicity should not come at the expense of changing every aspect of how you build and operationalize

your applications. You shouldn't have to adapt your processes to a tool, rather the tool should adapt to your approach.

2. Unprecedented productivity and collaboration. With the right solution, you can drive productivity by intelligently automating business processes and offering data APIs across and within teams, allowing them to work together more efficiently and effectively. And by leveraging cloud-native data-quality tools, resilient data hubs, and integrated governance with end-to-end API lineage, you can build trust across the entire enterprise.

You can also improve organizational agility and reduce enterprise risk by taking advantage of automated governance and quality controls. Productivity comes from fostering reuse and self-service with tools that developers and citizen integrators alike can use. In addition, intelligent recommendations can help novice users take the next best step.

3. Enterprise-class scalability. To take advantage of new opportunities, you want your applications and services to scale as needed. Select a solution that offers one platform from which you can connect hundreds of applications at enterprise scale at the speed your business requires. Your users should also have access to self-service, discovery-centric marketplaces, and business interoperability portals—all within a single platform that unifies API creation and management, data-set processing, event processing, and more.

As the volumes of data, processes, and API calls increase, so will the need for your environment to scale to meet these needs. Whether you are planning to use compute environments across multiple clouds, on-premises or a single cloud, the connectivity and approach to integration must be consistent and scalable.



The Benefits of Simplicity, Productivity, and Scale

When you prioritize simplicity, productivity, and scale in your approach to application modernization, the benefits are plentiful.

Promote business and technical agility

Empower your entire organization with democratized access to trusted data, fueling strategic business initiatives with it and extracting value from it. With modernized applications, you can do this quickly. And time is of the essence in today's volatile and shifting markets. Everything depends on how fast you can respond to changes and challenges. Most organizations that still depend on legacy systems simply cannot do it. They are not suited for quickly analyzing and using data to identify and seize opportunities. It takes too long to get the right insight-providing data into the hands of the business decision-makers who need it.

With the right application modernization solution, technical and business users work hand in hand to create the cloud applications required to transform the organization into a true data-driven enterprise. Technical users can harness Agile methodologies that speed up development and deployment of applications using continuous delivery processes. Business users can leverage their domain knowledge to build and manage integrations and APIs with interfaces purpose-built for their needs.

Accelerate time to value and lower TCO

Instead of continuing to dedicate—and pay—IT staff to maintain legacy software, you free them and budgets up for innovation. Rather than being limited by business processes and models tied to legacy applications, you can seize new opportunities that would otherwise go unnoticed. You get projects to production much more quickly due to applications that are

precisely tailored to business requirements. You move ahead of the competition. The total cost of ownership (TCO) is reduced because of infrastructure savings – with cloud, you only pay for what you use, rather than building capacity that anticipates highest points of demand. You also save operational costs.

Reduce costs and gain efficiencies

On the infrastructure side, you might be able to eliminate or scale down usage of on-premises data centers that were needed to host legacy applications. By moving to the cloud, this replaces the capital expense involved in purchasing infrastructure hardware and software with more cash-flow friendly—and flexible—operating expense. You'll also save by getting rid of technical debt, as maintaining legacy software is quite costly, mostly due to time spent updating and patching archaic code, and answering the growing number of support tickets.



The Benefits of Simplicity, Productivity, and Scale (continued)

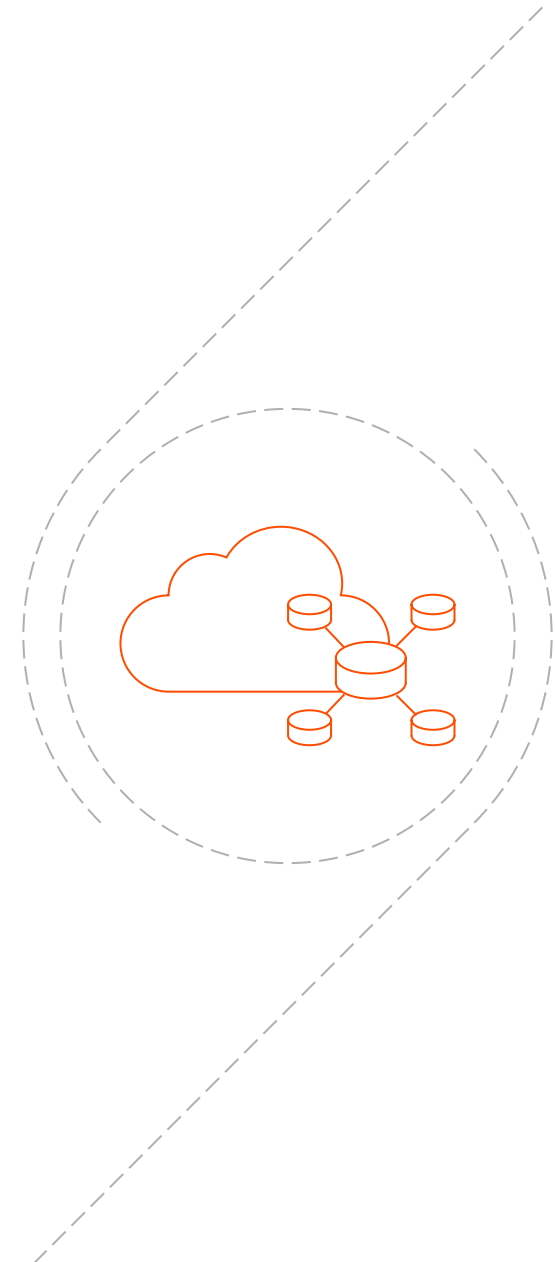
By automating critical tasks that you formerly had to perform manually you gain significant organizational efficiencies and eliminate “swivel chair integrations” where employees take reports from one system and email it (or walk it over) to another department for reconciliation.

Simplify administration and reduce overhead by democratizing application integration

If you choose a solution that is designed and optimized for all types of employees, business users can act autonomously to create APIs, adapt processes to meet new needs, and integrate applications without depending on IT. This reduces costs related to both application development and support operations and personnel overhead.

Scale to quickly meet business demands and global deployment objectives

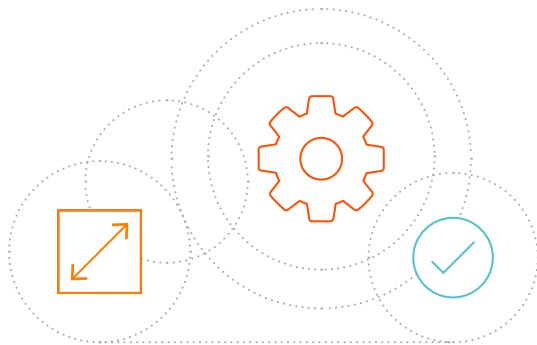
APIs, although critical, don’t scale to meet all your needs. Moreover, custom code does not scale—it leaves you with a mess of integrations, with multiple ways to integrate a single system. But when you empower all users to connect hundreds of applications via self-service, discovery-centric marketplaces and business interoperability portals within a single platform, you can unify API creation and management, data set processing, event processing, and more, allowing you to respond to changes in your business immediately.



7 Capabilities to Look For

Here are some of the capabilities you should look for in an application modernization solution.

1. A single, integrated platform. To take the fastest path to modernization, look for a solution built on a single, integrated platform for API creation and management, data set processing, event processing, reliable data distribution in different forms and latencies—a data hub, and process integration and automation.



2. No-code, no-build application, process, and data integration. To empower the entire organization in building, monitoring, and maintaining integrations and APIs, look for a solution that enables codeless integration. An easy drag-and-drop design experience supports a broad range of skills sets from non-technical business users to developers. At the same time, your solution should also provide governance and oversight (see consideration #6) so that citizen integrators and IT can work in harmony.

3. Intelligent automation. Your application modernization solution should enable the intelligent automation of business and data APIs to provide unprecedented productivity for those you intend to implement them. Does the solution provide capabilities such as automatic mappings, to improve efficiency in developing integrations? Look for capabilities in business and data API monitoring and policy enforcement that leverage intelligence at runtime.

4. Multi-cloud and cloud-native support. Look for a solution built from the ground up for the cloud. It should provide multi-cloud support for the full range of cloud ecosystems. In addition, consider whether it provides usage-based pricing allowing you to mix and match integration tooling as you need, an option for serverless deployment, commercial-grade trust certification, high availability and business continuity, and advanced security (platform, network, infrastructure). And most importantly, it should not require you to lift a finger to update transparently.

7 Capabilities to Look For (continued)

5. Intelligent governance and data quality. Any application modernization strategy must include governance and policy control—for example, API access, data privacy and determining single sources of truth. Enterprise-class governance allows these controls to be distributed through the organization—even providing non-technical business users the ability to make certain policy decisions. Features such as AI-driven discovery, search, and profiling ensure organization-wide trust in the data, which is critical to any application modernization effort.

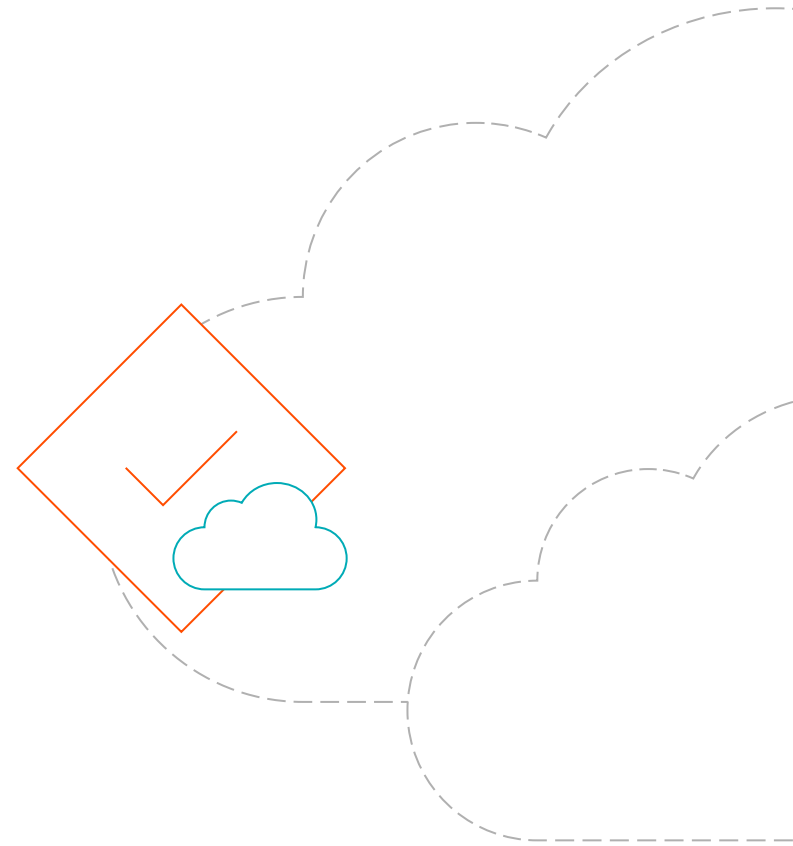
6. User-defined business and data APIs. Making it possible to enable lines of business to share data with each other in real time is the goal of APIs. Not only do APIs free you from point-to-point integrations, but they also free you from having to get involved with data consumers. Look for a solution that provides no-code activation of business and data APIs using single-click activation of processes and data sources as APIs.

7. Event-driven business. Businesses constantly need to react to business events. For instance, when a sales order is greater than a certain amount, it needs to be flagged for a manager. Events arrive in multiple ways—over APIs, maybe in the form of a file's content, EDI, a messaging system, or your data hub. However they arrive, you need to fulfill these requests on demand. You can't wait hours for the next batch job for the event to trigger a response.

Conclusion: Start Your Modernization Journey Today

No industry is exempt from disruption. Today, every industry is striving toward digital transformation to remain competitive. This requires agility. Agility to deal with uncertainty in both consumer and business spending. Agility to shift IT investments to initiatives that reduce both cost and risk. And agility to anticipate changes in customer expectations and behaviors.

Trusted data and insights derived from intelligent data management remain the critical foundation required to steer a business through the disruption. And to achieve intelligent data management it is necessary to modernize your applications. To move from the large, monolithic, and inflexible on-premises legacy systems to modern, containerized, microservices-based applications. To do that you need the right solution. A cloud-native, intelligence-driven solution that provides a single, integrated platform to meet all your application modernization needs. By deploying this solution, you will have taken steps to achieve what so many have not: success in digital transformation.



Further Reading

Learn about the Informatica solution for application modernization in these resources

Application Modernization Solution Brief

Learn how Informatica's cloud-based solutions help enterprises accelerate their digital transformation.

[READ MORE](#)

Free 30-Day Trial for Application Modernization

Rapidly connect lines of business, customers, and partners with any app, any process, any data, anywhere.

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About Informatica

Digital transformation changes expectations: better service, faster delivery, with less cost. Businesses must transform to stay relevant and data holds the answers.

As the world's leader in enterprise cloud data management, we're prepared to help you intelligently lead—in any sector, category, or niche. Informatica provides you with the foresight to become more agile, realize new growth opportunities or create new inventions. With 100% focus on everything data, we offer the versatility needed to succeed.

We invite you to explore all that Informatica has to offer—and unleash the power of data to drive your next intelligent disruption.

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IN19-0221-4071

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