IBM **Services**

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IBM and CAST: Accelerate your digital modernization journey

Fact-based insights. On your platforms.
Complementary innovation.

Innovative technologies like cloud, AI and automation are becoming increasingly disruptive and traditional IT practices are struggling to keep up. Digital, cloud-native companies quickly set new standards for customer experience, time to value and business agility. There's no doubt that these technologies can help your organization drive greater speed, efficiency and resilience—but to harness their full power, you first need to modernize your workloads and applications.

Application modernization is one of the biggest challenges faced by enterprise IT departments, especially as organizations begin to modernize critical workloads and move them to the cloud. Core business applications still retain significant value, but they are aging. It can be difficult to find developers with the requisite skills to support the older technologies that underpin these applications. In many cases, custom-built, traditional applications are composed of millions of lines of code using multiple technologies. Many IT departments lack deep knowledge and visibility into these critical software systems, making it difficult to determine precisely what's inside an application and how best to modernize it.

Determining the right modernization approach for each application requires a clear picture of your application portfolio from both a business and technical standpoint. When you have an accurate understanding of your full application estate, you can design the best modernization roadmap for your organization's unique needs and accelerate its execution.

74% of CIOs intend to make substantial investments in cloud computing over the next two to three years to share data and access new sources of information and insights.[1]

Possible modernization approaches include:

Rehost.
Move the workload as is to a new platform.

Replatform.
Migrate the application, making necessary changes to maximize benefits when moving to the new platform.

Refactor.
Migrate the application to a new platform and rebuild it without changing the functionality.

Restructure.
Modernize the application by redesigning and building it on a new platform.

Replace.
Replace an unsupported or traditional application with a commercial, off-the-shelf or software-as-a-service (SaaS) alternative.

A modernization journey begins with a roadmap that examines your organization's application portfolio to determine the right modernization approach for each application. IBM professionals use CAST software intelligence to accurately understand the software condition, scope the effort and accelerate the cloud migration time to benefit. This assessment includes business insights for critical applications, with precise application architecture, database structures, code components and interdependencies throughout all application layers. Core applications are assessed for cloud readiness and modernized based on in-depth, fact-based analysis of each application's architecture and blueprint.

Effective modernization strategies are characterized by skilled execution and experience with modernization accelerators to achieve efficient digital transformation. That's why we're partnering with CAST to support your modernization journey. We combine IBM expertise and tools with CAST software intelligence to drive deep, accelerated insights into applications and provide a unique blend of application strategy and modernization execution capabilities. Together, IBM and CAST can accelerate digital transformation to help you determine the right modernization approach for each application and realize the financial benefits of modern application architectures and cloud adoption.

IBM-CAST partnership advantage

IBM brings industry expertise and agile methodologies to co-create tailored roadmaps using AI and advanced modernization accelerators and tools. Our acceleration toolkit helps reduce risk during implementation through disciplined execution, while AI insights into codebase and functionality can accelerate time to value. Our joint capabilities with CAST are flexible and designed to work with virtually any cloud platform to support your cloud preferences and avoid vendor lock-in. IBM experts use CAST products to accurately understand the software condition, precisely scope the effort and accelerate the cloud migration time to benefit.

Complementary innovation for exponential value
One of the most compelling aspects of our strategic partnership with CAST is the complementary innovation between our services and capabilities. For example, the software intelligence from CAST Highlight code scanning enriches the data that IBM collects when formulating a roadmap with clients. CAST Imaging architecture visualization enhances IBM's AI-enabled accelerators to help drive rapid discovery, reduce rework and speed modernization.

Combining the output from CAST analysis with innovation from IBM provides additional value during the execution of the modernization roadmap. Powered by software intelligence from CAST, our advisory tools underpin your modernization journey, analyzing source code, database scripts and transaction data. This complementary combination helps develop a detailed model of application structure and behavior. Through recommendations based on insights and machine learning algorithms, the power of automation across the advisory, migrate and build phases of the modernization journey helps strengthen execution. We use our experience across thousands of digital cloud transformation journeys to optimize your results.

Accelerate transformation with the IBM Garage Method for cloud
The IBM Garage™ Method for cloud provides a streamlined approach to multicloud transformation using predefined pathways and practices. We integrate CAST capabilities with the IBM Garage Method for Cloud Toolkit, including IBM Cloud® Transformation Advisor and IBM Application Discovery and Delivery Intelligence. By integrating CAST software intelligence with IBM modernization tools, our approach helps accelerate discovery, improve code analysis accuracy, evaluate cloud readiness and identify cloud blockers for each application.

This technique can also uncover insights about application resiliency, complexity and open-source risks to help further refine the modernization roadmap. Coupled with our deep understanding of application business context and learnings from more than 600 clients across 12 industries, the IBM Garage Method for Cloud Toolkit can accelerate application disposition, increase productivity and reduce modernization costs.

Use cases

01

Build a foundation for modernization

Problem: A US-based semiconductor manufacturer needed to modernize more than a hundred core manufacturing applications across multiple fabrication sites. The applications were aging and developers with critical knowledge of the code had retired. There was no process in place for understanding the inner structure of the software, which prevented the company from modernizing its applications.

Solution: We used software intelligence from CAST to automatically analyze applications and provide visibility into the as-is state of the software. This approach enhanced visibility, including sizing, technology composition, resiliency, complexity, cloud readiness and open-source risk.

Business benefit: The manufacturer can now develop and execute a modernization plan with data insights to help accelerate decision-making and transformation.

02

Accelerate execution and time to value

Problem: A US-based global airliner needed to move 1,300 applications to the cloud and modernize 32 core systems to support an already award-winning client experience while reducing costs. The company's application portfolio was composed of complex, multi-technology software systems at varying levels of cloud readiness. It would take several months to manually analyze the application portfolio.

Solution: We performed automated analysis of the application code using fact-based insights from CAST software intelligence to better understand the complexity and cloud readiness of each application.

Business benefit: The resulting insights and recommendation drastically reduced time spent on the assessment process and enabled IBM to deliver a more accurate modernization plan to the client.

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CAST
Software Intelligence

Learn more about our partnership capabilities

Helping our clients modernize and realize the benefits of cloud is part of IBM's legacy. With more than 90,000 cloud professionals and decades of experience, our agile, expert-led and accelerator-rich methodology can help speed your journey to cloud. We approach modernization in a collaborative way, where we co-create, co-execute and work together to develop next-generation platforms and systems and migrate them to flexible cloud environments.

Our strategic partnership with CAST amplifies our hybrid multicloud expertise on virtually any cloud platform, using software intelligence to quickly inform a tailored application modernization roadmap. Whether you need to modernize your traditional apps or build cloud-native applications, our dedicated strategy and application transformation experts can help increase productivity and reduce costs across your entire modernization journey.

To learn more about how IBM and CAST can accelerate your modernization journey, visit:

ibm.com/services/cloud/strategy
ibm.com/services/cloud/modernize-applications
castsoftware.com/smarter-portfolio-rationalization
castsoftware.com/faster-system-refactoring

About CAST

CAST is the pioneer and category leader in software intelligence, providing insight into the structural condition of software assets. CAST technology is renowned as the most accurate "MRI for software," which delivers actionable insights into software composition, architectures, database structures, critical flaws, quality grades, cloud readiness levels and work effort metrics. It's used globally by thousands of forward-looking digital leaders to make objective decisions, accelerate modernization and raise the security and resiliency of mission-critical software.

CAST Highlight helps speed the creation of cloud roadmaps during the assessment phase of application modernization by automatically analyzing the source code of an entire application portfolio. IBM experts use the resulting insights to help clients rapidly prioritize and scope applications for modernization, based on the specific patterns found in the source code that could prevent or accelerate cloud migration. Additional insights, such as estimated migration efforts, application complexity, best candidates for cloud service and open-source risks, help further refine cloud roadmaps and scope.

CAST Imaging enables rapid software architecture discovery and refactoring of software applications by automatically reverse engineering software systems. IBM experts rely CAST Imaging for accurate visualization of dependencies between data and code components. This visualization is vital for crafting the target architecture and avoiding expensive or prolonged implementations.

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1 "Global C-Suite Study: CIO Insights," *IBM Institute for Business Value*, March 2020.