



Forecast: Cloudy, With A Mobile Front Moving In

Weathering Application Challenges



Legacy applications do not have to hold you back; modernization is possible. Learn how you can continue to mine value from your aging code by bringing it into the 21st century with the new capabilities available.

Many companies have invested IT resources on exploiting new technologies to support new services while their legacy code languished. For a lot of businesses, this code-base supports the most mission-critical functions—managing stock trades, authorizing credit card charges, processing international funds transfers and more. These applications function well for the challenges of yesterday, but IT departments are discovering that they are held back from getting these capabilities to work on the web, in the cloud or on mobile devices.

Weather Today

No company wants to stay mired in the past, but as many discovered during the Y2K challenges, a lot of their critical business services are delivered by legacy applications, some written more than twenty years ago. Efforts have been considered—and mostly discarded—to migrate these applications to more current hardware and operating systems. The cost, time and risk were simply too daunting. And yet, as the speed of change continues to accelerate, the cost of doing nothing has risen. Nimbler, newer companies have been able to attract your customers and your revenue.

While the mobile revolution continues to sweep the globe, companies also struggle with people challenges. The aging workforce, bedrock support for legacy applications, hasn't been backstopped by new experts. Tight economic times have forced many companies to shrink their human capital, leaving fewer people to support increasing complexity and transaction volume and no one has capacity to mentor new hires.



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Additional roadblocks come from the lack of information about their code portfolio. In too many cases, documentation is non-existent and years of changes by hundreds of developers have led to new dependencies, interconnections between applications and database interactions. It's hard to modernize what you don't understand.

The Forecast

A storm threatens to devastate your company and it involves the collision of two fronts: the increasing costs of doing business and the need to upgrade your services to remain competitive. When two powerful forces collide, the destructive power is greater and damage is likely to the unprepared. There is no place to hide. You have to stay ahead of the front.

How can you protect your company? Each force must be considered on its own, though you have to deal with both to obtain the resiliency your company needs.

Cost-cutting is about survival. It has been estimated by a number of sources that the cost of simply keeping existing systems running is 80% or more of the IT budget, leaving little to invest in new capabilities. Without the ability to invest in new technology, new business services and a modernization strategy, your competition will bury you. But where can you cut? Most IT departments have cut their costs every year while demand and complexity have increased.

Most no longer look to their infrastructure for cost savings and yet, this may be one of the richest places to find the savings you require. Though hardware costs have come down, unless you can project relatively even demand across hours, days of the week and months, spikes in demand require provisioning of resources for that peak, resources that remain idle the rest of the time. Many IT departments haven't been able to fully exploit the capacity they own though virtualization and mainframe advances have helped in this regard. Increasing complexity usually means an increased need for support personnel.

For many organizations, cloud computing offers a solution to the cost challenge. For companies experiencing wide variances in demand, numbers as high as 80% cost savings have been experienced with a move to a public cloud like Amazon EC2. Aside from the savings produced by paying only for what you need, additional benefits include reduced operational staffing and enhanced automation. Such innovations as edge-caching, elastic in-memory caching and load balancing can result in performance improvements with the right cloud choice. Even a move of just a portion of your critical business applications can result in significant infrastructure savings which frees up money to invest in new technology.

This investment will be needed to confront the other edge of the storm—the increased utilization of mobile devices both by your customers and by your own employees. Ryan Kim, of Gigaom, predicts that by 2020, as many as 24 billion mobile-connected devices will be in use. The difficulty is that many native programs, even some of those that work well on the web, don't port to these devices.

In addition, mobile users have extremely high expectations for usability and performance. The evolving landscape, lack of a standard and the variety of configurations and operating systems makes supporting these devices even more difficult. And yet, companies really have no choice. Customers, and even employees, will opt to deal only with mobile-connected companies.

Storm Impact

Surviving the technological storm will require investment in modernizing legacy applications. Offering enhanced user interfaces and presentation services will attract both web and mobile users. If you can get this right, you have the ability to increase customer satisfaction, enhance customer loyalty and improve your brand perception. These capabilities can also drive sales, enhance engagement with your customers and provide insight into buying behavior from improved analytics.

Legacy applications hold your intellectual property but their design and platform limitations make it difficult to get to where you want to go. For many years, companies could get away with not changing the “stuff that works,” but now, that is no longer an option. At a time when money is tight, development resources are vanishing and time is your enemy, you still need to face the reality. Mobile is only going to get bigger and more important to your business.

But none of this is going to be easy. Mobile development means faster lifecycles and more frequent, iterative changes. The multiple interfaces and frequent changes to iOS, Android, Surface and others is a game-changer. For IT departments and the businesses that finance their efforts, mobile enablement will need to become a top investment priority. To help fund it, you will need to look at the cost benefits of moving to the cloud. Given the criticality of this to your core business, you'll probably have to address both at the same time.

Weathering the Storm

The answer to this challenge is developing a single code base that can support client-server, web and mobile without requiring custom versions for each area. At first glance, this may seem impossible, but there are development frameworks that offer this capability. With the right choice, cloud-ready applications can also be generated from the code base. “Development frameworks - one umbrella to shelter you from both storms.” At the same time, public cloud savings may be able to provide the cost savings to fund the modernization effort.

The best development frameworks are the Architected Rapid Application Development platforms (ARAD) that produce all the desired capabilities from your existing code base with minimal changes required. Select an option that will generate both presentation layer and back-end services while still being open-standards-based to increase your flexibility. Enabling offerings from vendors can help you shift your code to ARAD easily and with less risk.

Ideally, part of the solution is to be able to generate a web page from existing screen images without recoding to service both web and mobile users. You want rich web components including grids, windowed dialogs, calendar functions, bread-crumbling and disappearing hint text. Look for the ability to support advanced grid functions, business charting and even portlet generation support.

When you can create JavaScript, HTML5 or CSS3 web applications, they will be portable and cloud-ready. This option is the lowest TCO mobile-enablement strategy. Then, you can port some applications (or parts of applications) to public clouds to take advantage of cloud's benefits: lower TCO, dynamic scaling, dynamic load balancing, enhanced performance and reduced management efforts. For those applications requiring more services or a better presentation, you can use wrappers around your web applications as part of a hybrid offering.

The hint of sunshine glinting behind the storm clouds is that you don't have to rewrite, re-engineer or move to a completely new code set. You can achieve your mobile and cloud goals in a more efficient manner than ever before.

Conclusion

For many years, companies have ignored their legacy code, content that the old code simply worked. While it still functions, the disruptive technologies including mobile and cloud offerings make it impossible to continue with the status quo. Businesses simply must adapt to compete and survive.

Take the solid, legacy code that has enabled your business to survive all these years and help it evolve by looking at ARAD platforms and enabling software that can transform your existing code based into one that works for client-server, web, cloud and mobile.

About CM First Offerings

CM First's powerful automation tools, augmented by professional services staff with many decades of software engineering and DevOps experience, ensure successful outcomes for even the most demanding modernization projects. Our products and expertise have helped over 400 customers in the public and private sectors reach their desired future state faster and more cost effectively than by using conventional approaches.

CM First software quickly analyzes, documents and re-platforms legacy code bases with minimal errors and rework, including those that are too large and complex for humans to tackle in any reasonable timeframe. The output is immediately usable by all team members, regardless of experience and knowledge of legacy software languages, accelerating application maintenance and modernization projects.

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