



The Executive's Guide to
THE NEW ENTERPRISE APP WORLD

10

Important Rules that **Make or Break** the Successful
Development and Deployment of Enterprise Applications

CONTENTS

The App Paradigm Reaches the Enterprise – – – – – 3

Consumer Demands for Enterprise Applications – – – – – 4

The Pace of Change is Unrelenting – – – – – 5

TODAY’S MANDATE – – – – – 6

The 10 Important Rules – – – – – 7

1 Differentiate Your Business Through Apps – – – – – 8

2 Adapt or Die – – – – – 9

3 Empower the Business – – – – – 10

4 App Development is a Team Sport – – – – – 11

5 Let Users Take the Starring Role – – – – – 12

6 Add Apps – & Breathe New Life Into Legacy Systems – – – – – 13

7 Remember: Speed is Everything – – – – – 14

8 Leverage Mobile to Accelerate Innovation – – – – – 15
But Don’t Forget the Back-End

9 It’s Not About the Size of Your Development Team Anymore – – – – – 16

10 Don’t Complicate Business App Development with – – – – – 17
Technology Decisions

CONCLUSION: The New Enterprise App World – – – – – 18



THE APP PARADIGM REACHES THE ENTERPRISE

From numerous perspectives, the environment for corporate IT is undergoing fundamental changes. Nowhere is that more true than in software applications. Only a decade ago, the momentum, focus, and expert attention revolved around multiyear, multi-million-dollar monolithic systems, like ERP and human resources automation. Today, however, the economics are inversed and the emphasis is on showing business value quickly, building on what you have, and supporting users' immediate needs in agile ways.

In an era of financial caution and risk management, the time, cost, and risk profile of applications is radically different than just a few years ago. The appetite for multiyear/

multi-million-dollar application development projects is long gone. Who wants to bring even a \$3 million, three-year proposal to their board? The fact is, today, companies want lean, fast, low-risk app development – with minimal upfront capital investments. Development needs to be fast, agile, and continuous – without lengthy, discrete versioning cycles, and cumbersome upgrades. Instead of predicting the future, savvy IT strategies are, instead, creating infrastructures and processes that let them respond quickly when the future arrives.

“Don’t try to predict the future - be ready to respond when the future arrives.”



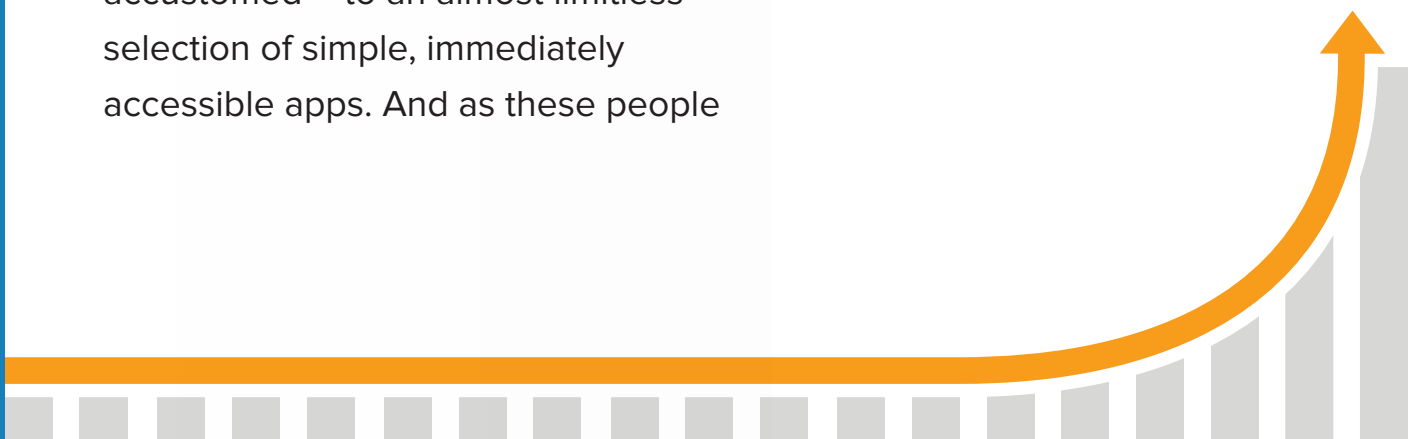
CONSUMER DEMANDS FOR ENTERPRISE APPLICATIONS

At the same time, we're seeing a greater "consumerization" of corporate IT. In important and meaningful ways, the lifecycle and flow of technology have reversed. From the first computers to ubiquitous Internet access to early generations of cell phones, technical innovations have traditionally been first adopted within corporate environments before they moved down the cost/performance curve and into mainstream computer markets.

Driven by relentless waves of smartphones, consumers around the world are using billions of apps that are inexpensive or, in many cases, free. They've been attracted – and accustomed – to an almost limitless selection of simple, immediately accessible apps. And as these people

enter your offices, stores, conference rooms, and warehouses, they're wondering why they can't have those same levels of functionality and value in the corporate applications they use. That's placing enormous pressure on CIOs to fundamentally transform the way they design, create, deploy, and maintain the corporate software portfolio. Outdated tools, methodologies, and paradigms will no longer suffice.

"Demand for mobile enterprise apps is transforming the way corporate IT develops business software."



THE PACE OF CHANGE IS UNRELENTING

Similarly, organizations and enterprises across most industries are struggling to respond to disruptive changes in their business models. Competitive pressures, open markets, shifting channel dynamics, changing customer preferences, increasingly challenging regulatory frameworks, and other factors are forcing companies to fundamentally transform their business models and structures – and the automated systems that are their foundation. And as the pace of business change picks up, so, too, must the pace of application development and implementation.

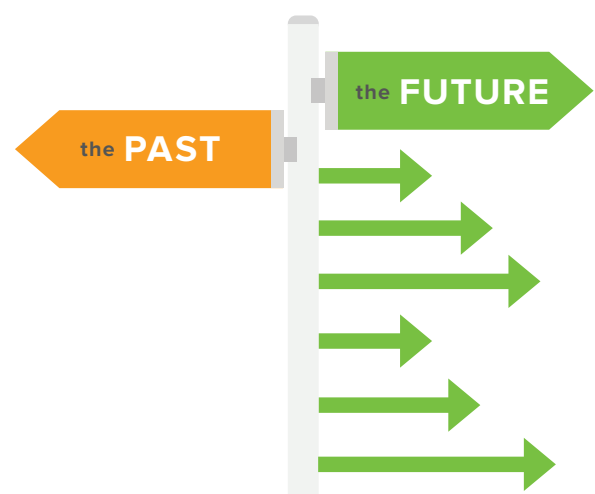
Unfortunately, the demand for new applications has outstripped most organizations' IT capacity. Tight budgets are preventing new hires, meaning many incoming requests from business units and users are left unaddressed. And when business conditions enable new hiring, it's often difficult to recruit candidates with the new skills required to create contemporary applications that conform to new technologies, standards, and user expectations.

When the team is ready to develop, new hurdles emerge: the inability of business users to crisply articulate their requirements (which adds unnecessary risk and delays to the

development cycle), the complexity of new technologies – and the unwavering requirement to bring forward the legacy technologies and functionality that have supported the business to date.

Collectively, it's no surprise, application development has become a major IT headache. Today, CIOs need to adopt new ways of creating applications by embracing pragmatic agility, speed, simplicity. The key: a willingness to foster better environments that let you anticipate business change (and not merely react) and that elevate user experience as the prime design consideration.

“Users have a hard time articulating requirements upfront.”



TODAY'S MANDATE:

Create Apps Quickly That Support Your Business & Truly Serve Your Users

Amid an environment of change and complexity, corporate IT strategy can benefit from a fundamental “re-think.” The following are four key attributes and benefits of a contemporary app strategy:

Speed/Simplicity

Companies need apps in days, not months. Development solutions must offer an easy, fast way to build apps that give business users rapid results and giving IT the agility to keep up with the pace of changing business needs.

Enterprise Scale

No corporate app exists in a vacuum. New apps must integrate with – and enhance and extend – the current app portfolio. They must also conform to tightly defined and highly regulated security and administration frameworks.

Social Productivity

Today's app-development paradigm should embrace new abilities for developers, business experts, and users to all collaborate easily and globally in the creation of new apps.

Cloud-Centricity

Consider a complete environment in one integrated platform for speed, flexibility and scalability: component re-use in an “app store” model, social computing components, multi-platform deployment, mobile and cloud support, and more.

However, as the app development challenge has gained a certain urgency within the IT community (and the broader business environment as well), it becomes critical for evaluators to sift through competing claims, myths, and facts to gain the clearest possible picture of the potential role of various solutions within their organization. The following pages describe 10 important considerations that can make or break the successful development and deployment of enterprise apps in today's business environment characterized by competitive pressures and unrelenting change.



10

Important Rules that **Make or Break** the Successful Development and Deployment of Enterprise Applications

1

DIFFERENTIATE YOUR BUSINESS THROUGH APPS

The conventional wisdom is true: off-the-shelf commercial apps give you off-the shelf functionality – the same functionality that every other company (including your competitor) has. But that won't help you differentiate your business. Only custom apps that reflect the complexities and nuances of your business can put distance between you and a crowded market of me-too wannabes. That's why it's essential to develop apps that are true to your business and have the tailored features and differentiating functionality that support your

company's unique proposition and competitive position.

The ability to build apps quickly and nimbly - but also in a repeatable, manageable environment - is critical to achieve differentiation and uniqueness without the costs and risks of outdated methodologies, tools, and paradigms. This strategy helps you increase time-to-market, cost effectively react to business needs, support the business without IT resource roadblocks, and focus on business processes – not the size of your development team.



2

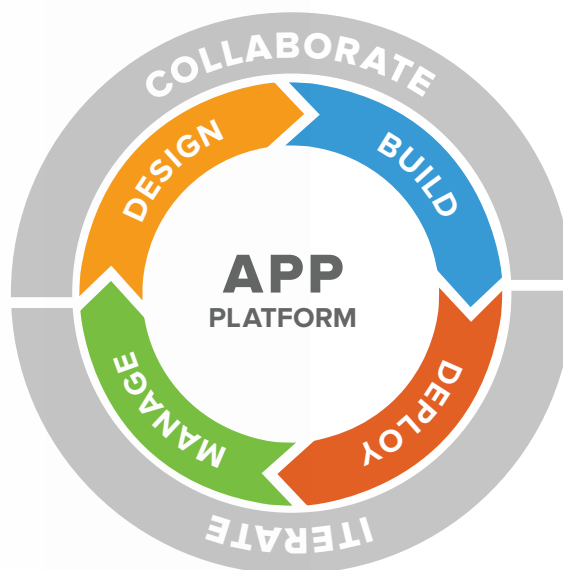
ADAPT OR DIE

Contemporary app development places a premium on agility. In many ways, the app is not unlike a living organism: it either grows and adapts – or it dies. Applications must be designed for today – not a hypothetical future – using design techniques that enable the app to adapt to rapidly changing business needs.

In today's landscape of fast, lightweight apps, "maintaining" an app isn't just processing and deploying change requests on a quarterly release schedule. It means

creating a continuous feedback loop between end users (those truly responsible for driving value from an app) and the project team responsible for enabling that value.

Business needs constantly change and "no app is an island." Each is part of a larger ecosystem. Development methodologies must inherently be able to support changing needs, shifting competitive environments, and evolving user requirements with easier integration to the broader corporate IT portfolio.



3

EMPOWER THE BUSINESS

Previously, the complexity of IT meant that only specialists with years of training could work in complicated programming languages – even if that meant they didn’t always have the business acumen or perspectives. At times, that created an awkward fit with business analysts and process experts.

Although it can be a jarring thought at first, in the forward-thinking business, IT is – successfully and happily – enabling the business to create the apps they need, when they need them. With their emphasis on speed and simplicity, companies are looking to their domain experts to take a leadership role in building the

apps that best support the business. They’re shifting the responsibility to the business and process experts because creating apps on a business unit level create flexibility on a business level.

Instead, IT focuses its talents and expertise on areas suited to its unique responsibilities: orchestrating an innovative application environment, fostering best practices for application development, providing technical expertise where needed, operating world-class infrastructures for users, enabling enterprise-class data integration, and managing the risk profile of the operation.



4

APP DEVELOPMENT IS A TEAM SPORT

Success in building business apps is predicated on a unique ability to support collaborative development that supports and incorporates the perspectives of developers, business experts, analysts, and users throughout your organization. What's more, that team collaboration can easily extend beyond your walls to integrate the contributions of key customers, partners, and other open-source communities of development teams at peer organizations.

That's because contemporary apps are rooted in reusability. Developers take advantage of what others have done – without reinventing the wheel. Frameworks and components are shareable in an app-store model. For instance, if your app needs a shopping cart, you don't have to reinvent it. Instead, you customize an existing one from one of your previous apps or from a component that's available to you from peers and colleagues in the development community.



5

LET USERS TAKE THE STARRING ROLE

For decades, companies and experts in the IT industry have paid lip service to the notion that the user experience is important to the development process. But the results seldom reflected that philosophy. Instead, users found monolithic complexities, significant functionality compromises, unmet requirements, interface shortcomings, and other frustrations.

Today, it's essential to activate your user community. They know what they want. Enable them to provide real-time feedback and listen to them. Business app developers need to involve users in continuous, real-time development cycles. Gone

are the days of annual user groups and feedback that ends up in a black hole. With social-media principles and components, users can provide immediate feedback and contribute to the design and development as they happen.

Today, there's a new generation of information worker – call him “the Facebooker.” He is tech-savvy, app-driven – and not terribly patient. Like a true member of Generation Y, he's been raised on and attuned to constant feedback. In today's paradigm, this user isn't a “customer,” he's a part of the development team.

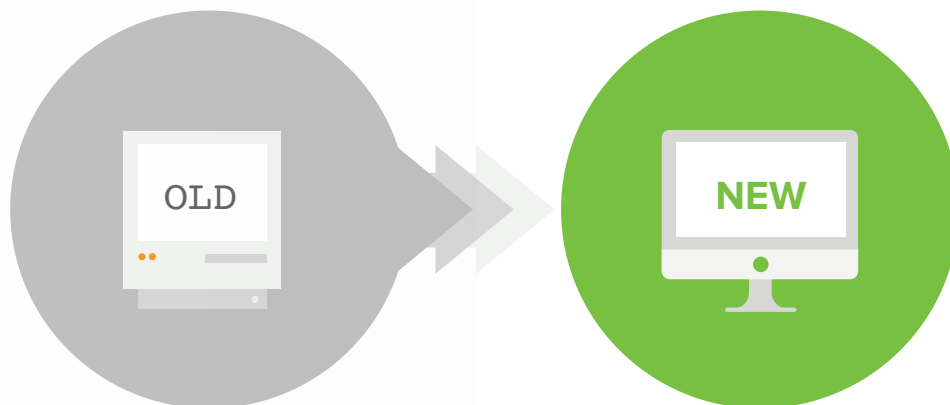


6

ADD APPS & BREATHE NEW LIFE INTO LEGACY SYSTEMS

Companies struggle with a challenging reality: So many of their business-critical functions are automated and supported by legacy applications that are old, fragile, and difficult to maintain. They need smarter ways to bring the functional value forward into a new environment that emphasizes greater usability, easier integration, support for mobile users, and simplified maintenance.

Reinvigorate the corporate app portfolio by enabling developers to revamp legacy systems, build apps on top of other past-their-prime systems or simply those systems that are too large and cumbersome to touch. Best of all, there's no need to go in and revise that legacy code. You surround it "as-is" without any modification or customization.



7

REMEMBER: SPEED IS EVERYTHING

Perhaps the greatest hidden danger of traditional app development is the uncounted opportunity cost. While companies are rightly seeking to create high-quality, enduring, on-target apps for their businesses, there's also the unacceptable possibility that, while you're spending months and months creating that application, the market has shifted and your app requirements are suddenly off-target. Your strategy needs to change – and you've sunk millions into an app that's outdated before it ever launches.

Don't let the perfect be the enemy of the good. Successful apps that make a difference for the organization are the result of a rapid development cycle and speedy execution. And in a model where users provide continuous feedback and business developers can constantly adjust and refine their applications, the best strategy is to address your immediate needs quickly and learn, improve, and expand. Launch now – then steer and adapt as needed.



8

LEVERAGE MOBILE TO ACCELERATE INNOVATION – BUT DON'T FORGET THE BACK-END

It's no secret that the smartphone has become the most-rapidly adopted technology in human history. Literally billions of consumers around the world carry raw computing power and storage that would have been unthinkable even 10 years ago. And those consumers – and employees – simply assume that you can respond to their devices with functionality and optimized user experiences that provide the simplicity and power they expect.

Unfortunately, it's all too easy to become distracted by “one-off” mobile projects that respond to pressing short-term needs. Yes,

you need quick and smart answers to respond to the mobile challenge. But just as important, you need a strategy to develop apps that are integrated with your overall business processes. That means mobile users can't be an afterthought in the app design and development process. They must be built into your strategy without awkward, ill-fitting mobile-only adjuncts. The right platform ensures that the enterprise app portfolio is mobile-savvy, mobile-centric, and mobile-optimized through a transparent, multi-platform, write-once-run-anywhere strategy.



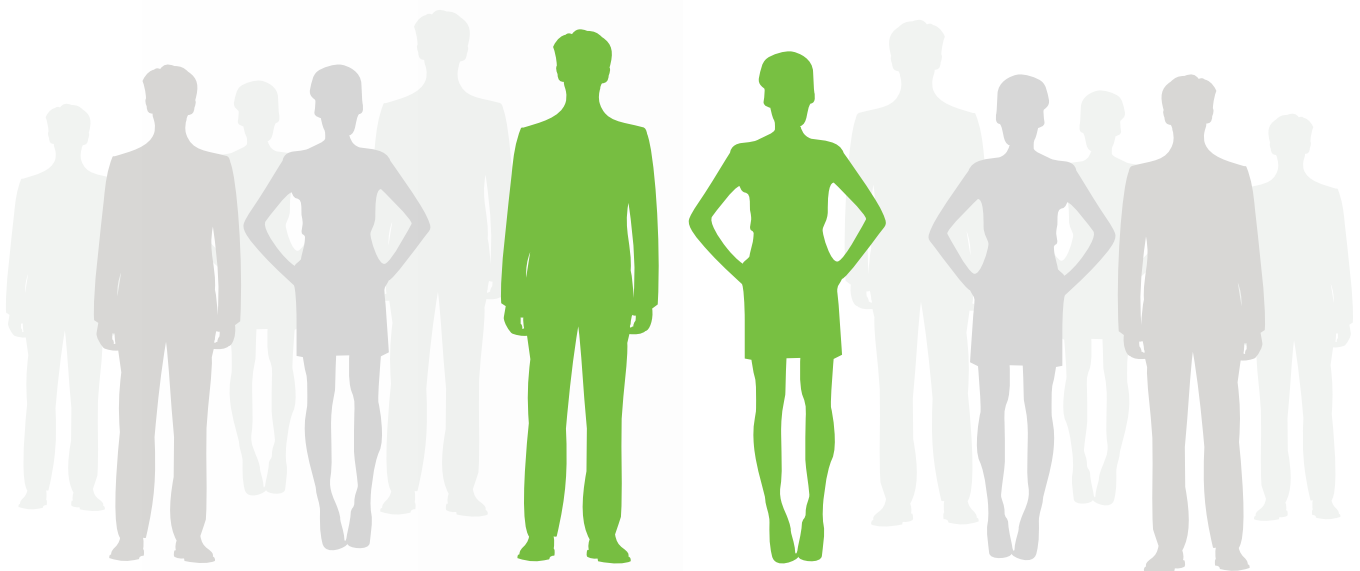


IT'S NOT ABOUT THE SIZE OF YOUR DEVELOPMENT TEAM ANYMORE

Yesterday's answer to the app backlog was simply to throw more bodies at the situation. And when that became cost-prohibitive, the answer was found in low-cost offshore talent. Seemingly overnight, vast armies of programmers in India, Eastern Europe, China and other low-cost locations arose to help enterprises build applications. That presented logistical, managerial, cultural, and linguistic challenges that often offset the favorable economics.

But today, experienced organizations understand that there's more to

the challenge than simply throwing more bodies at the problem. You don't need brute force – you need savvy innovation and agility. And to solve business problems, you need business-centric – not technology-centric – thinking. Leverage technology to empower your business and process experts. You'll be surprised by how much they accomplish without needing a huge development team.



10

DON'T COMPLICATE BUSINESS APP DEVELOPMENT WITH TECHNOLOGY DECISIONS

As they reach this inflection point – this imperative to quickly and closely align IT with business needs – many IT organizations are giving careful consideration to a new paradigm for corporate application development that has emerged as one of the fastest and most cost-effective technologies: Platform as a Service (PaaS). With PaaS, the developer can access a suite of cloud-based development tools and infrastructure to develop, test, deploy, and maintain new generations of cloud-based applications. PaaS offerings provide all of the underlying infrastructure, security, fail-over, and other services that, previously, IT was required to create and maintain themselves.

The most compelling and valuable PaaS strategy is the one that most effectively supports the needs of the business and focuses on the product the business needs: the application. To be effective, PaaS must abstract the underlying technologies of infrastructure and software development to provide a platform that frees developers to focus more of their time and talent on creating differentiated added-value for the organization and, for the first time, allows business experts to drive the creation of the business applications they need when they need it.



DON'T GET LOST IN THE NEW ENTERPRISE APP WORLD

It's critical to empower business owners, but you can't overlook the need to manage security, IT governance, efficiencies, and costs as well. Don't get lost in the new enterprise app world of user-generated apps on a myriad of tools and standalone technologies that are impossible to track and manage. In the long run, they can run up huge costs to maintain, control, manage and upgrade. The smarter approach is to create and deploy an environment/ platform that provide:

- ✓ **Speed/Simplicity**
- ✓ **Social Productivity**
- ✓ **Enterprise Scale**
- ✓ **Cloud-Centricity**

Don't forget, app development is not only about the infrastructure. It's also about embodying a user-centric, business-centric philosophy that leverages your business process strength. In this model you are working from the premise that all software should be easy to try, buy, use – and create. You don't need to do it all today. With the right tools and environment, you achieve a level of agile, incremental evolution that lowers the stakes but raises the speed – and puts innovation on the fast track.





mendix.com

Mendix is the app platform company for the enterprise. We enable companies to build, integrate and deploy web and mobile applications faster and with better results, effectively driving ROI in days not months. Learn more, join our user community and get started for free at now.mendix.com.

© Mendix Inc. 2014. All Rights Reserved