

## Executive Brief

# App Factories Slow to Emerge Large Organizations Still Struggling With Application Development Costs

ideas&  
insights 



Part of the Strategic Insights 2017 Enterprise Mobility Solutions  
Research Program: Track 3, Topic 3  
By Eric Klein, Director, with David Krebs, Executive Vice President

## INSIDE THIS REPORT

---

While the term digital transformation is overused, digitization trends are forcing businesses to invest in new technologies. The cloud is just one of a several inter-related trends that have forever changed the IT landscape—mobile applications and social networks are contributing to the explosive growth of data, and big data trends are contributing to and exacerbating the move into the cloud as companies seek more agile ways to scale up quickly and to experiment with new apps and analytical approaches.

Satisfying corporate demand for mobile apps has become a challenge for many organizations—experienced mobile developers are not only hard to find, but are also costly. In addition, outsourcing the development of mobile apps to digital agencies and/or to offshore providers makes delivering quality software at scale a challenge. It is well established that mobile enabling a workforce with the right apps can bring productivity gains, but augmenting and modernizing long-relied upon workflows with mobile applications remains a complex and challenging endeavor. The stakes are high, as the costs associated with developing and deploying mobile applications are significant (nearly half of the organizations we surveyed [48%], spent in excess of \$100K to develop a single mobile app); determining which solution is the most appropriate is increasingly difficult, due to the wide variety of options available and the wide array of use cases for mobile apps. Unfortunately, these obstacles make implementing and maintaining mobile applications a significant undertaking because many complexities persist long after the initial development and launch of an application and—if not mitigated—risk substantially reducing ROI.

This report integrates selected findings from VDC's recent survey of mobile application developers in both mid-market and enterprise organizations. It contains a comprehensive competitive assessment of leading vendors' strategies, products, and capabilities within the mobile application development market. (Full survey data is provided as a separate Excel spreadsheet.)

## WHAT QUESTIONS ARE ADDRESSED?

---

- > How will the shift to business-led mobile application development impact the enterprise?
- > How is the mobile development platform and tools ecosystem evolving?
- > Is it cost-effective to modernize legacy mobile applications?
- > Why are most organizations working with several mobile development vendors?
- > How are web apps impacting mobile enablement?
- > Which vendors are best positioned for success?

## WHO SHOULD READ THIS REPORT?

---

Anyone participating directly or indirectly in the development, marketing, or distribution of solutions to manage mobile deployment environments is a suitable audience. This report summarizes key market trends and important solutions we have identified through our research. Ultimately, this report is intended to educate the reader about the key participants involved in the mobile ecosystem and critically analyze prominent vendors and solutions providers.

# TABLE OF CONTENTS

- Inside This Report ..... 2
- Executive Summary ..... 4
- Macro Trends Impacting Mobile Development ..... 5
- VDC’s Mobile Development Taxonomy ..... 9
- Competitive Landscape ..... 11
- Insights From Mobile Developers ..... 15
- Recommendations For End Users ..... 22
- Vendor Profiles ..... 25
  - > Alpha Software
  - > Appivo
  - > Appery.io
  - > Capriza
  - > Catavolt
  - > IBM
  - > Kinvey
  - > Kony
  - > Microsoft
  - > Oracle
  - > Outsystems
  - > PowWow Mobile
  - > Red Hat
  - > Sapho
  - > ViziApps
- About VDC Research ..... 33

# LIST OF EXHIBITS

- Exhibit 1: Key Macro Trends Impacting Software Development
- Exhibit 2: Primary Hardware Platform of Mobile Developers
- Exhibit 3: Primary Audience Organizations Target With Mobile Apps
- Exhibit 4: Average Cost to Develop and Deploy a Mobile Application
- Exhibit 5: DevOps Organizational Impact on Software Development
- Exhibit 6: Top Challenges Encountered While Developing Mobile Applications
- Exhibit 7: Tools Developers Use to Speed Application Delivery
- Exhibit 8: Software Developer Time Allocation

# EXECUTIVE SUMMARY

Even though only one in three organizations claim to have sufficient funding for all of their mobility initiatives, our research shows that organizations are making meaningful investments in mobile applications to enhance their relationship with customers and to increase employee productivity. The appetite for mobile applications is fueling high growth for mobile application development platforms and tool vendors and is largely being driven by the expansion of mobile applications across business units. While mobile applications become impossible to ignore and require new investments in application development platforms and tools, most organizations are challenged to improve the speed and agility of their application development processes.

While companies recognize the potential value mobile applications can bring, choosing a development approach entails many parameters: budget, project timeframe, target audience, and application functionality. Finding the approach that best addresses the unique needs of each project is becoming increasingly challenging. Mobilizing and integrating manual business processes and workflows with modern mobile platforms is complex and can also be costly, as many legacy applications are not being abandoned and new mobile applications require a high degree of specialized skills. Aging applications have not only become costly to maintain, they are also becoming barriers to innovation, data sharing, and agility—many legacy platforms are also being “sunsetting”, which will force customers to modernize their applications.

For these reasons, vendors must deliver well-integrated standards-based solutions to the market that address customers’ concerns of vendor lock-in and provide future-proofing of solutions and new hybrid techniques. VDC expects aggressive adoption of mobile application development platforms in organizations both large and small worldwide, as the appetite for mobile applications continues to grow in enterprise deployment environments.

## KEY FINDINGS

- > 53% of large organizations (organizations with >1,000 employees) stated that the most common development projects they worked on involved building net-new applications from the ground up; however, 43% stated they were modernizing existing legacy applications.
- > Developers in organizations with >1,000 employees spend 40% of their time developing for mobile platforms—43% develop platform agnostic apps.
- > 56% of organizations in our end-user survey indicated that they were not satisfied with the pace in which their organization was adopting mobile applications. 60% of organizations in our end-user survey indicated they had an “app gap”.
- > 38% of organizations with >1,000 employees have teams with 10 or more developers that focus exclusively on developing mobile applications.
- > 44% of organizations with >1,000 employees are actively developing business-to-employee (B2E) mobile applications; more than double that of small organizations, where 20% claimed they were developing B2E applications.
- > VDC’s data shows that on average, organizations require more than six months to develop and deploy a single mobile application; 48% spend more than \$100K on each mobile application they develop.
- > The development of mobile applications is no longer IT-led; VDC data showed that more organizations have business units taking the lead role in furthering their mobile application initiatives. 71% of organizations with >1,000 employees are aware of mobile applications that have been developed that are not part of the “developer team”.

## ABOUT THE AUTHORS



Eric Klein

**Eric Klein** is a market research and consulting professional who specializes in the design, analysis, and delivery of project-based research. Over the past 15 years, Eric has worked with a wide array of firms across a number of industries, leading quantitative and qualitative research in areas such as innovation in management, manufacturing operations/automation, and in a variety of market research and management roles, intelligence to Fortune 500 firms. His previous employers include: AMR Research, The Yankee Group, and Affiliated Computer Services (ACS). Eric holds a Bachelor of Science degree in finance from Boston University.

### Contact Eric:

[eklein@vdcresearch.com](mailto:eklein@vdcresearch.com)



David Krebs

**David Krebs** has more than 10 years of experience covering the markets for enterprise and government mobility solutions, wireless data communication technologies, and automatic data-capture research and consulting. David focuses on identifying the key drivers and enablers in the adoption of mobile and wireless solutions among mobile workers in the extended enterprise. David's consulting and strategic advisory experience is far reaching and includes technology and market opportunity assessments, technology penetration and adoption enablers, partner profiling and development, new product development, and M&A due diligence support. David has extensive primary market research management and execution experience to support market sizing and forecasting, total cost of ownership (TCO), comparative product performance evaluation, competitive benchmarking, and end-user requirements analysis. David is a graduate of Boston University (BSBA).

## ABOUT VDC RESEARCH

Founded in 1971, VDC Research provides in-depth insights to technology vendors, end users, and investors across the globe. As a market research and consulting firm, VDC's coverage of AutoID, enterprise mobility, industrial automation, and IoT and embedded technologies is among the most advanced in the industry, helping our clients make critical decisions with confidence.



Offering syndicated reports and custom consultation, our methodologies consistently provide accurate forecasts and unmatched thought leadership for deeply technical markets. Located in Natick, Massachusetts, VDC prides itself on its close personal relationships with clients, delivering an attention to detail and a unique perspective that is second to none.

© 2017 VDC Research Group, Inc.  
679 Worcester Road, Suite 2  
Natick, MA 01760  
P 508-653-9000  
[info@vdcresearch.com](mailto:info@vdcresearch.com)