

# MOBILE HEALTHCARE IN THE PUBLIC SECTOR

BROCHURE

*“According to industry estimates, 500 million smartphone users worldwide will be using a health care application by 2015, and by 2018, 50 percent of the more than 3.4 billion smartphone and tablet users will have downloaded mobile health applications.”*

U.S. FOOD AND DRUG  
ADMINISTRATION  
“MOBILE MEDICAL APPLICATIONS,”  
SEPTEMBER 2015<sup>1</sup>

As the federal government pushes to improve health outcomes and reduce the cost of healthcare, emerging technology has important potential. Technological advances such as mobility, cloud, and analytics can help governments and hospitals increase patient engagement and reduce costs.

Unfortunately, many health organizations are using legacy architectures that are aged and disconnected—and ripe for modernization. To keep pace, agencies and hospitals need to accelerate application delivery, streamline business processes, and address security and compliance concerns.

## FOCUS ON MOBILITY

According to IDC, 70% of healthcare organizations worldwide will invest in consumer-facing mobile applications, wearables, remote health monitoring, and virtual care by 2018.<sup>2</sup> Mobile devices offer immediate communication, which helps stakeholders intervene more quickly, improve outcomes, and enhance care coordination and management.

## WORKFLOWS AND PRODUCTIVITY IMPROVEMENTS

Many health organizations are tied down by cumbersome, error-prone, paper-based workflows. Mobile apps simplify many of these underlying processes. Integrating mobile forms with drop-down menus, location-based information, and photos can create more powerful, data-driven health systems.

## CARE TEAM ENABLEMENT AND COLLABORATION

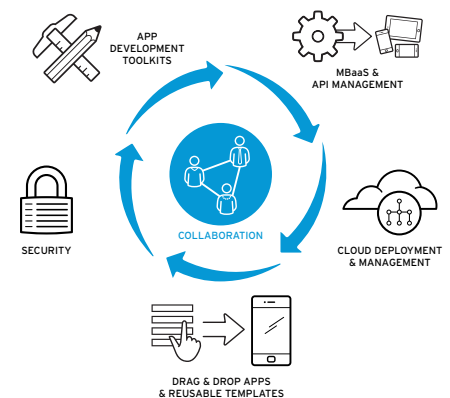
Many mobile solutions are device-independent, allowing caregivers to use any device of their choosing regardless of situation or setting. With mobile apps that exchange health records and images, search for patient data, or even scan ID barcodes, medical professionals and care managers can be more agile and efficient in their day-to-day practice.

## PATIENT AND MEMBER ENGAGEMENT

Mobile apps encourage patients and members to take greater responsibility for their own health and wellness. Apps improve outcomes by delivering user-specific alerts, reminders, and notifications.

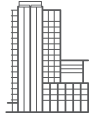
## CONSIDERATIONS FOR MOBILE APP DEVELOPMENT

Mobile strategy should align with the organization’s overall vision and include all stakeholders to span the complete app life cycle—from design, development, back-end integration, testing, deployment, management, and ultimately to retirement.



<sup>1</sup> <http://www.fda.gov/MedicalDevices/DigitalHealth/MobileMedicalApplications/default.htm>

<sup>2</sup> IDC Health Insights, “IDC FutureScape: Worldwide Healthcare 2015 Predictions,” 2014.



## ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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Developing mobile healthcare apps involves many considerations beyond a simple user interface. Organizations must consider how to:

- Deploy to multiple mobile device operating systems and different form factors.
- Securely integrate with critical healthcare systems and applications that often are legacy.
- Host back-end code in secure and compliant environments.
- Centralize control and management of growing app development projects.
- Take advantage of business rules and process orchestration to fill functional gaps across legacy applications, systems, and silos.

## RED HAT MOBILE APPLICATION PLATFORM

Red Hat® Mobile Application Platform is designed to meet the rigors of the complex requirements sought by many public sector and commercial healthcare organizations.

### RAPID MOBILE DEVELOPMENT

Mobile developers can choose their preferred development environment and use familiar front-end toolkits and software development kits (SDKs) to build native, web, or hybrid apps. Templates and rapid mobile application development (RMAD) tools provide additional support by using intuitive drag and drop techniques.

### MOBILE BACKEND-AS-A-SERVICE

Developers can integrate the apps with back-end systems using the Mobile Backend-as-a-Service (MBaaS) functionality. Key MBaaS features include: NoSQL database for cloud persistence; flexible data browser for developers and administrators; and mobile-specific features exposed via RESTful application programming interfaces (APIs). Back-end integration services built on the platform can be used and reused across multiple mobile projects to efficiently deploy new apps without having to reinvent the wheel each time.

### INCREASED COLLABORATION

Mobile developer teams can collaborate on app development projects in a controlled and effective manner. MBaaS offers a separate environment for each development life-cycle stage, letting developers easily promote code between development, testing, and production environments. DevOps teams can increase the speed of develop/deploy cycles and get the apps to users faster.

### SECURITY AND RELIABILITY

Red Hat Mobile Application Platform offers a suite of security features to ensure that data remains within the organization's domain and is only accessed by authorized individuals. On the device, apps can be secured with Advanced Encryption Standard/Rivest, Shamir, and Adelman (AES/RSA) encryption APIs, followed by HTTPS from the app to the MBaaS. Access to back-end systems can be secured through virtual private networks (VPNs), firewalls, and demilitarized zones (DMZs). User security and authentication can be managed using platform credentials or the organization's Lightweight Directory Access Protocol (LDAP)/Active Directory system.

As with all Red Hat offerings, Red Hat Mobile Application Platform makes the innovative research and development happening in the global open source community ready for enterprises, adding the support necessary for healthcare organizations.