

# **RAPID MOBILE INNOVATION BEGINS AT THE BUSINESS LEVEL**

A DIRECT PATH TO SIMPLIFIED  
MOBILE APP DEVELOPMENT

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# 1. DEBUNKING MOBILE MYTHS

With the demand for mobile applications outstripping the availability of developer and IT resources, business leaders often find their mobile app requirements failing from lack of support. Despite the opportunities for business innovation that mobile can bring, misconceptions about mobile app development can hamper decision-makers.

Here are seven myths that can stall mobile innovation:

**1. Great mobile apps are complex.** Some of the best apps are simple, with a few straightforward, powerful features or functions. A well-conceived app like this shortens development time and resource and can generate fast return on investment (ROI).

**2. Mobile apps need a compelling user interface/user experience (UI/UX).** While mobile user experience is important, the degree of slickness is highly dependent on the use case. While business-to-consumer (B2C) apps often require superior UI/UX, a field service business-to-enterprise (B2E) app with effective functionality may not.

**3. Mobile apps must be created by skilled software developers.** Mobile development skills are expensive. But new tools and technologies—including modular approaches, intuitive drag-and-drop building blocks, templates, and semi-customizable apps—can make app development almost codeless. This is perfect for business managers and other citizen developers<sup>1</sup>.

<sup>1</sup><http://www.gartner.com/it-glossary/citizen-developer/>

**4. Mobile apps must be IT-led.** When compared to large, complex traditional enterprise apps, mobile apps are simpler development projects. Lines of business can hold greater influence over their goals and requirements, since these apps are best suited to a specific use case or business process.

**5. Business-led mobile apps will not be supported by IT.** Ideally, mobile initiatives are a collaborative, cross-organizational effort. Even though shadow IT practices are common, newer technologies and platforms can give IT centralized control over app security, user management, and back-office data systems integration, while supporting business agility and front-end innovation.

**6. Mobile apps created by the business cannot connect to internal business systems.** Most mobile business apps contain data from back-office systems or specific business applications. Connecting a mobile app securely to these often-legacy systems requires access and integration logic. IT can provide access to these systems via cloud technologies in a secure, reusable, and reliable way.

**7. Legacy apps will need to be replaced.** These apps can be migrated and managed alongside your new apps.

## 2. MOBILE BUSINESS QUICK WINS

The beauty of mobile app quick wins lies in their simplicity—low development effort and cost, high user buy-in and acceptance, and fast speed to market. Get mobile with some of these quick wins.

### OPTION 1:

#### **Mobile forms-based apps**

Despite increased awareness of the environmental and commercial impact of paper, many businesses retain a significant amount of paper-based processes and forms. Switching to mobile-based forms is not only more efficient, it's surprisingly simple—these apps can be created by the business without coding skills or heavy IT involvement.

Thanks to codeless or rapid mobile application development (RMAD) tools that allow the rapid creation of mobile apps, non-developers can now produce a form-based mobile app quickly and easily. Whether businesses use it for prototyping an app idea or for live release, codeless app building provides an alternative way to conceive and launch apps for certain use cases.

## OPTION 2: Semi-custom mobile apps

Another approach for a company looking to tackle mobility is to look at semi-custom, modular apps. These come in various industry-specific forms—healthcare patient intake apps, finance management apps—and provide solutions such as asset tracking, workforce management, expense management, and scheduling that can be applied across multiple industries.

“We’re seeing demand for mobile apps outstrip available development capacity, making quick creation of apps even more challenging. Mobile strategists must use tools and techniques that match the increase in mobile app needs within their organizations.”

*Adrian Loew, Principal research analyst in the Mobile and Client Computing group, Gartner<sup>2</sup>*

Mobile forms apps and semi-custom apps require almost no coding, making them highly attractive to business leaders looking to launch apps that quickly satisfy customer demand. While both these options are attractive, their success is highly dependent on use cases, as these options are not appropriate for complex or highly-customized workflows that require bespoke apps.

<sup>2</sup><http://www.gartner.com/newsroom/id/3076817>



## 3. MAKING THE CASE FOR MOBILE FORMS

### Flexible and productive

Mobile device portability leads to a broad range of use. For example, a field engineer performing an equipment inspection can be more productive using mobile capabilities than he would be writing hard-copy forms that are later keyed into a database. Additionally, with caching and bi-directional data sync features, information is available to mobile users even when they are offline.

### Dynamic

Drop-down menus, pre-population, and look-ups reduce the level of effort required to manually complete fields. Built-in device capabilities such as voice memos, camera, GPS, and barcode scanning allow intelligent information capture and can enhance accuracy.

### Engaging

By prompting two-way engagement, a mobile app experience can elevate the value of a form-based workflow. Being able to verify information with time and date stamps and geolocation demonstrates that inspections are being done in accordance with industry regulations.

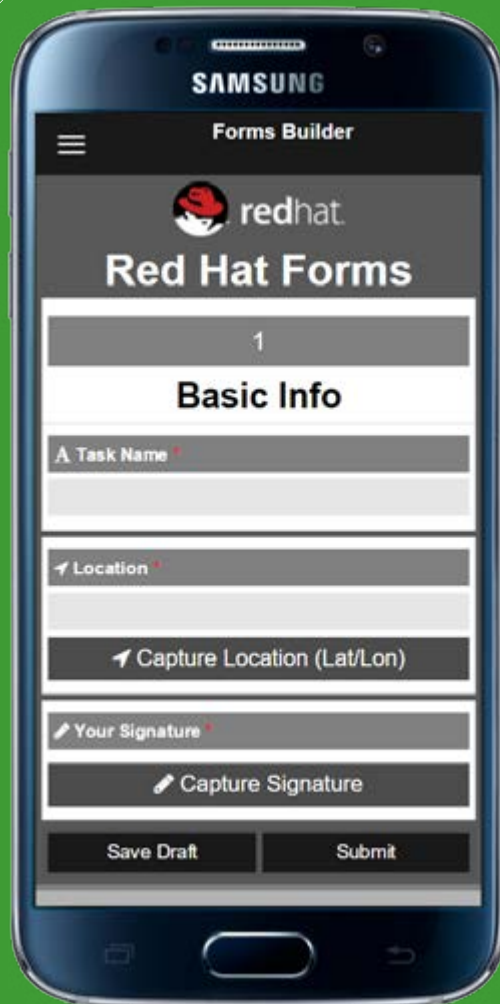
### Intuitive

Today's interfaces include touch, gestures, voice recognition, and even biometrics that offer consumers user-friendliness. Because functionality tends to be targeted towards a specific activity, apps generally don't require skills training, which has a positive impact on user acceptance.

#### MOBILIZATION OPPORTUNITIES FOR PAPER-BASED WORKFLOW

- ▶ Inspections
- ▶ Work orders
- ▶ Surveys
- ▶ Invoices
- ▶ Checklists
- ▶ Inventories
- ▶ Timesheets
- ▶ Approvals
- ▶ Account sign-ups
- ▶ Customer receipts
- ▶ Insurance claims

## PRODUCT SPOTLIGHT

**RED HAT MOBILE FORMS BUILDER**

The Red Hat Mobile Forms Builder lets you create form-based apps for iOS, Android, or Windows phone devices based on intuitive drag-and-drop components. Whether you're prototyping ideas or transforming paper-based workflows, you can build fields and workflows without coding.

## BACK-END CONNECTIVITY

The form builder connects with back-end systems or services, fetching data to automatically populate specific fields. This two-way connectivity makes mobile forms a powerful tool for on-the-go employees or customers.

## DEVICE-SPECIFIC CAPABILITIES

These capabilities can be used to enrich, validate, or improve the detail or accuracy of information gathered. With them, you can incorporate device features into your forms such as location awareness, camera, and accelerometer. You can also add built-in or peripheral sensors like barcode and QR scanners, motion detection, and biometrics.

## SECURE INTEGRATION

The form builder is integrated into Red Hat Mobile Application Platform, providing you a secure connection to enterprise back-end systems, data storage and caching, and automatic scaling.



## USE CASES: MOBILE FORMS

### 1. TAKING THE PAPER OUT OF RAILROAD INSPECTIONS

Delivering rail passengers to their destinations requires a complex infrastructure and a distributed network, which undergo regular inspections. Engineers assess bridges, track, signals, and other structures on-premise, and formerly needed to complete detailed paper forms containing numerous fields and proprietary codes.

Now, engineers use an app that captures inspection data intuitively across a series of sliding screens. The app automatically geolocates the asset and populates relevant fields with information, while drop-down menus offer codes and descriptors to expedite selection.



#### BUSINESS BENEFITS INCLUDE:

- ▶ Real-time upload of critical information on asset condition, allowing back-office personnel to prioritize repairs.
- ▶ More consistent data capture across different inspection engineers.
- ▶ More accurate data capture and reduction in the need for rework.
- ▶ Elimination of time-consuming and low-value data entry to back-office systems.
- ▶ Timely information so inspection workflows can be adapted dynamically.

## 2. MAINTAINING STANDARDS IN DAA RETAIL CHAIN

To ensure standards are consistently maintained across its global chain of duty-free stores, daa (formerly Dublin Airport Authority) operates a system of “mystery shoppers.” These staff visit stores incognito to inspect factors including cleanliness, lighting, ease of access, staff demeanor, customer service, and more. Given the low-key nature of these inspections, notes, results, and comments used to be captured after the visit using a paper-based survey. Now, using a mobile form-based app, the process has been transformed. Inspectors can discreetly capture evidence during the visit with the ability to snap pictures on their smartphone.

### BUSINESS BENEFITS INCLUDE:

- ▶ More detailed and accurate information can be captured at the time of inspection.
- ▶ Images eliminate lengthy, text-based descriptions.
- ▶ Feedback can be relayed to the back office immediately, so any remedial action can be taken sooner.

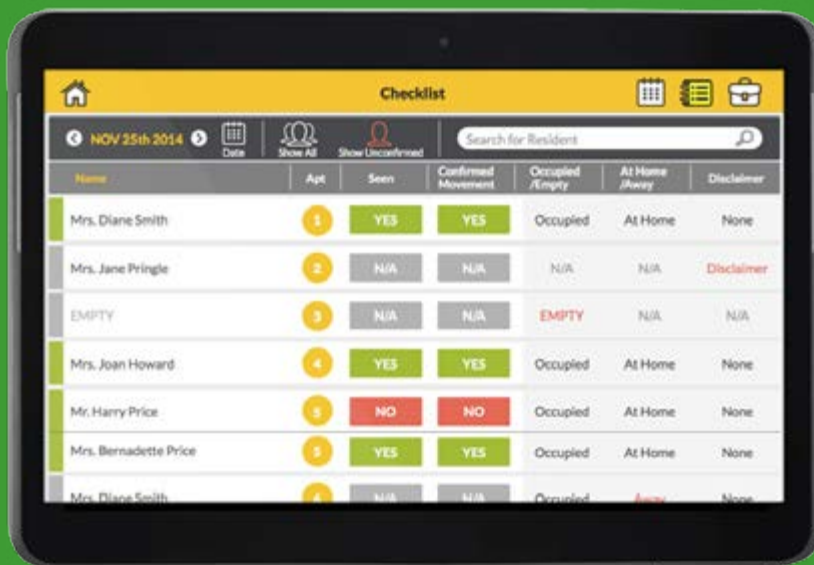


### 3. GOING MOBILE ELIMINATES PAPER FORMS TO GIVE BETTER SERVICE AT LOWER COST

A property management client oversees more than 1,500 private retirement developments in the UK, providing maintenance services to owners and tenants and, in some cases, offering emergency call and assisted-living services such as 24-hour on-site staff, restaurant, and housekeeping.

Before mobile apps, more than 120 paper-based forms—recording personal customer information, equipment servicing information, health and safety incident reporting, visitor event reporting, and more—were being handled and completed by the managers,

Managers were subsequently equipped with tablets and a mobile app designed to replace almost 100 paper forms.



#### BUSINESS BENEFITS INCLUDE:

- ▶ A reduction in the number of forms needing handling—from 120 paper forms to 23 mobile forms.
- ▶ Support for online and offline data sync—imperative when managers operate off site and don't necessarily have a network connection.
- ▶ Elimination of data entry duplication.
- ▶ A dramatic reduction in paper and postage costs per annum. Before the app, the company spent £1M+.

## 4. BUILDING MATERIALS PROVIDER GAINS ROI BY MOVING SALES ORDER WORKFLOW TO MOBILE

A leading building supply company used the Red Hat Mobile Form Builder to create a mobile app that transformed sales order processing for their field team. The sales representatives had to reference a catalogue of 1,000 products to complete a customer order—a lengthy, unwieldy process prone to inaccurate information, considerable rework, long turnaround times, and poor customer experience.



### BUSINESS BENEFITS INCLUDE:

- ▶ A transformed sales ordering process that eliminates paper and creates real business efficiencies.
- ▶ Faster turnaround on customer orders, leading to a better customer experience.
- ▶ Reduced errors and rework, saving considerable cost and reducing delays.
- ▶ Improved accuracy through geolocation.
- ▶ Electronic signature capture to close deals and complete orders on the spot.



## 4. THE BUSINESS CASE FOR SEMI-CUSTOM APPS

While not every use case lends itself to a pre-built solution, there are a number of valuable benefits you can gain by using a semi-customizable app.

### #1 - Speed to market

Your business can't always depend on IT availability. Time is of the essence, and having the option to create and launch certain use-case mobile apps quickly can give your business a necessary competitive edge.

### #2 - Business empowerment

Pre-built apps allow the business units to play a role in mobile innovation. Good practices based on a collaborative approach should give IT control over critical aspects of security, integration, and deployment.

### #3 - Affordability

The cost of bespoke mobile app development needs to be weighed against the expected return on investment (ROI). In certain cases, this calculation may favor pre-built apps. Since they are low cost and low risk, they allow some freedom to experiment outside of custom app development.

### #4 - Integration

Semi-custom apps can be integrated with back-end business systems. When offered through an integrated mobile app platform, these connections become accessible in a modular and reusable way.

## SEMI-CUSTOM MOBILE APPS

Together, Samsung Business Services and Red Hat Mobile deliver a series of simple industry- or task-specific mobile apps developed using the Red Hat Mobile Application Platform that can be customized to fit business needs. The apps run on Android, iOS, and Windows mobile devices and integrate into common enterprise back-end systems. Some examples include:



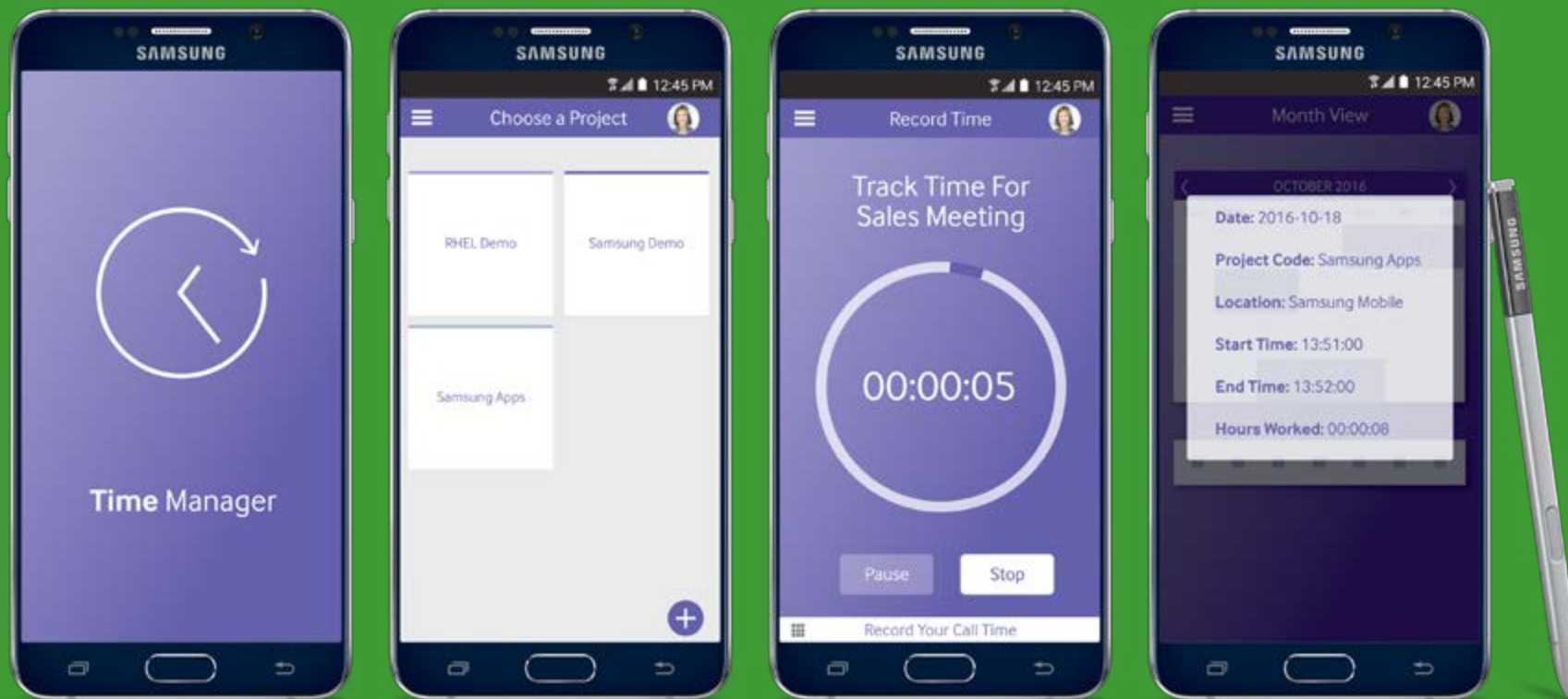
### ASSET TRACKING APP

This app helps a business that is dependent on assets—equipment, parts, hardware, software, and more—to capture barcodes and images on the device and connect to back-end asset management systems through the Red Hat Mobile Application Platform. Configure the app for auto-restocking when inventory levels fall below a certain level. You can also export inventory lists as PDFs and print them from the device.



## TIME MANAGER APP

Businesses that bill hours on projects can use this app's intelligent user interface to track employees' projects, time consumption, and calls. It can be integrated with back-office workflow systems using the Red Hat Mobile Application Platform, and is available for phones, tablets, and wearables.



## BUSINESS INTELLIGENCE PORTAL APP

Use this app to access internal business data sources—such as sales reports, workflow, and schedules—as well as public data. Its dashboards provide analytics updates that help you make well-formed and timely decisions.



## USE CASE:

**FIELD WORKFORCE MANAGEMENT**

Red Hat Mobile offers field workforce management modules that help you jump start your mobile app development and include common workflow and work scheduling functions. The modules offer a sample mobile app for field workers and a web portal app for back-office desktop administrators.

**FIELD WORKER APP**

- ▶ Configure and change workflows quickly and easily. Integrate digital forms into workflows using the mobile forms builder.
- ▶ Capture text, photos, signatures, barcodes, GPS location, and timestamps and attaches them to work-order data.
- ▶ Integrate push notifications, content management system (CMS), and other optional features of the Red Hat Mobile Application Platform to the solution.
- ▶ Use integrated messaging for communication between the field and the back office.
- ▶ Provide offline operation so you can sync field data collected offline with the app when your device is back online.
- ▶ Authenticate app users, and wipe data if device is lost or stolen.

**BACK-OFFICE WEB PORTAL**

- ▶ Dispatch pre-populated work orders to the field and manages new inbound information.
- ▶ Simplify creation, scheduling, and management of work orders using built-in templates .
- ▶ Provide real-time reporting and field user tracking, so back office can respond to changes faster.
- ▶ Allow visibility of all job content including photos, scanned barcodes, signatures, and other data entries.
- ▶ Provide maps of jobs and workers' location in the field.
- ▶ Allow user creation and authorization.

# CAN YOUR BUSINESS BENEFIT FROM MORE MOBILE APPS?

Learn more about how Red Hat mobile app development tools and pre-built apps can deliver quick business wins.

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## About Red Hat Mobile

Red Hat offers mobile solutions to help enterprises support their mobile app development strategy, from front-end app development to back-end integration, security, collaboration, and app management. Red Hat Mobile Application Platform gives developers the flexibility to choose the front-end tools and frameworks they prefer while giving IT more centralized control of security and back-end integration. Red Hat Mobile Forms Builder gives non-developers a tool to get apps created quickly and easily and is a powerful means to mobilizing paper-based workflows without leaning on scarce developer resources.