

10 Essential Elements of Great Enterprise Mobile Apps



A Guide to Building Incredible Mobile Experiences

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“The mobile revolution has arrived!” You hear it all the time. Usually followed by stats on how many phones there are on the planet.

However, while the sheer number of devices is growing in a staggering way, what’s truly important to understand isn’t how many people have phones. It’s what the devices can do that’s really game changing.

With computational power greater than NASA used to put a human on the moon, developers and app builders have found new and amazing ways to help people connect — and act — on data, updates, and real-time information from almost anywhere, at anytime.

The unprecedented technological power to connect to nearly everything has created a hyper-connected world – a world of opportunity for businesses to build apps that connect employees, partners, data, and even products, in entirely new ways.

This book shows you 10 essential elements to think through as you begin to create for this new world. So that you not only develop the kind of apps you need, but you can run your business from your phone, from anywhere, and succeed like never before.

There is more computational power in a smartphone than NASA used to put a man on the moon. Are you making the most of it?

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Introduction

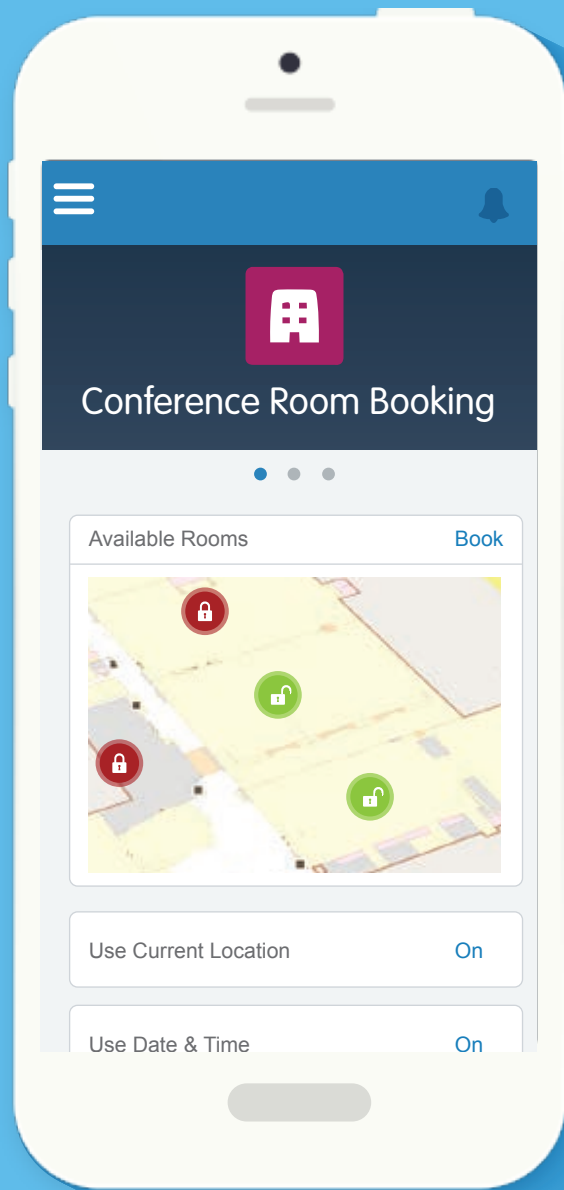
To Design Mobile-First, Think Mobile-First

Mobile devices — whether you're talking about smart phones, tablets, or other form factors — present unique development and design challenges. The kind of information, the actions you can take, the way the interface looks and works, needs to be fundamentally different in a mobile environment.

Which is why we've identified what we believe are 10 essential elements that can help you create

more than just a good business app, but a great enterprise mobile app. An app that solves real business problems to help employees be more productive and more connected to anything, from anywhere.





1. Solve a Problem In a Mobile-First Way

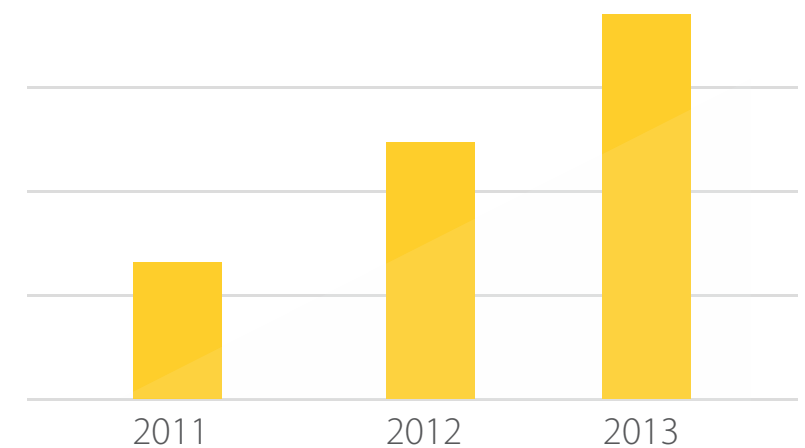
It might sound obvious, but if you are looking to build an enterprise mobile app, start by finding a problem in your workplace, and solve it in a mobile-first way. That's the fundamental difference between a good app (that solves a problem) and great app (that solves the problem in a mobile-first way). Too often, enterprise apps are focused simply on making data available, rather than making it available on a mobile device. The result all too often is a data-centric app, not a user-centric app.

Take a simple conference room-booking app. A data-centric approach would result in the user being presented with a search screen where they input all of their criteria — date, location, duration, number of attendees, etc. — before clicking search,

scrolling through a list of results, and finally solving the problem: booking a room.

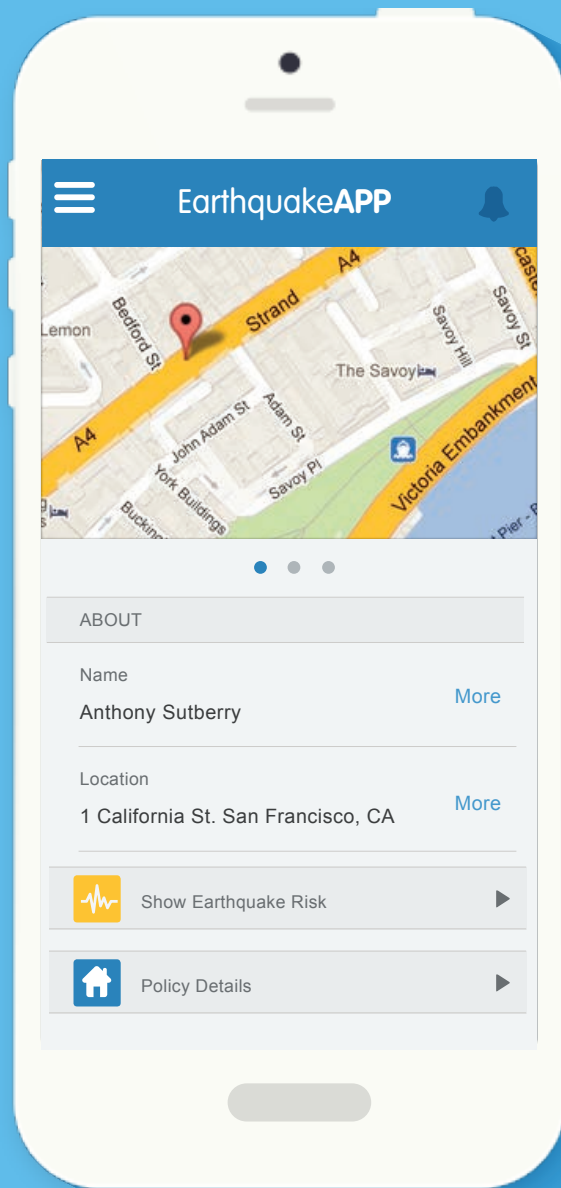
On the other hand, a user-centric approach to solving the problem in a mobile-first way may require a number of different integrations. For instance, you might integrate Google Indoor Maps and geolocation to present a list of the closest available rooms with capacity, and booking times filtered by availability, so a user could quickly cycle through times/rooms and book. Or they could book a room immediately by simply clicking directly on the map.

- Your app should be user-centric, not data-centric.
- Use available mobile data, such as location, when available.
- Minimize the number of inputs required to complete an action.



Average smartphone usage has grown 50% in the past year. (Cisco, Feb. 2014)

2. Easy Access to Relevant and Related Information



- Create a hierarchy of the most relevant information.
- Make it easy to access additional information.

The typical use case of an enterprise mobile application is to perform some sort of action: book a conference room, pay an invoice, schedule a customer visit, and so on. In order for an action to be most effective, it must be performed based on timely and accurate information.

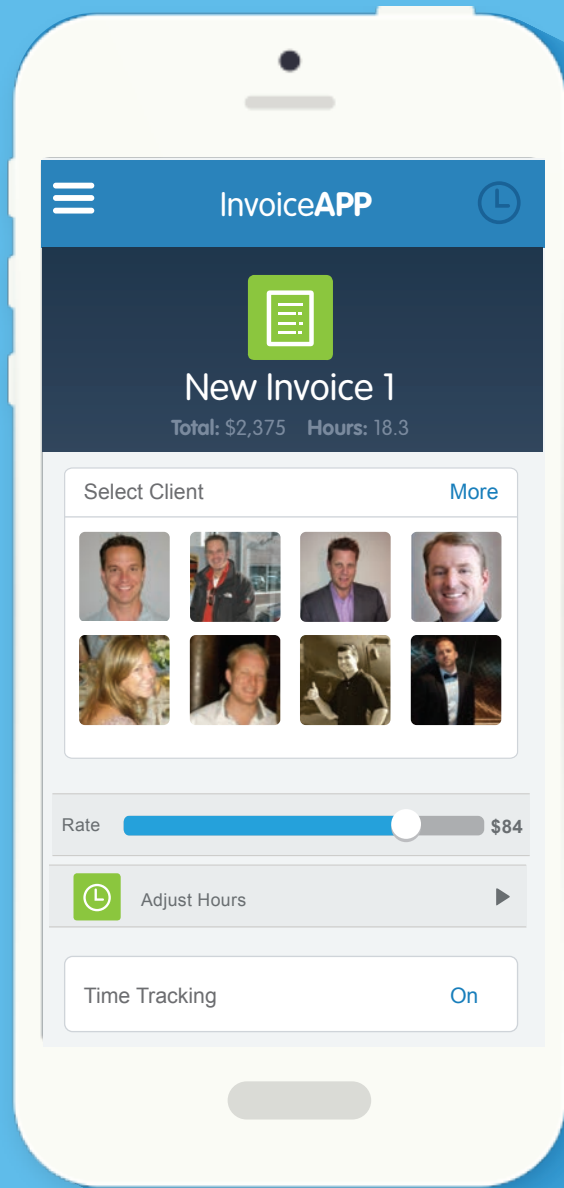
Great enterprise mobile apps are designed to give the user immediate access to the primary record on which the action will be performed, as well as the ability to see related records and relevant information — all within a swipe or tap of the finger.

This relevant information may include both organizational (private) and social (public) data. Well-designed apps visually indicate the differences between types of information for immediate user feedback, often using mobile cards, and drilldowns to avoid cluttering the user interface and distracting from the primary record.

For example, let's say your company sold and managed earthquake insurance policies. Sales reps are often on the go, meeting with clients at their homes. The most important piece of information to the rep is likely going to be the property address and details. This information may include home address, type of construction, year built, etc.

In this example, the policy is on the property. It's a safe bet that the property is the primary record. A great enterprise mobile app will provide immediate access to the primary record, but always allow the user to quickly access homeowner information (private), current policy details (private), earthquake zone data (public), property valuations (public), and more.

3. Eliminate Typing without Limiting Functionality



- Use sliders, toggles, spinners, and buttons in place of text inputs.
- Automate inputs whenever data is available.

No one enjoys typing on a small screen, especially on the go. Great enterprise mobile apps eliminate typing wherever possible, without reducing functionality. In fact, really great apps improve the user experience by eliminating excessive field input.

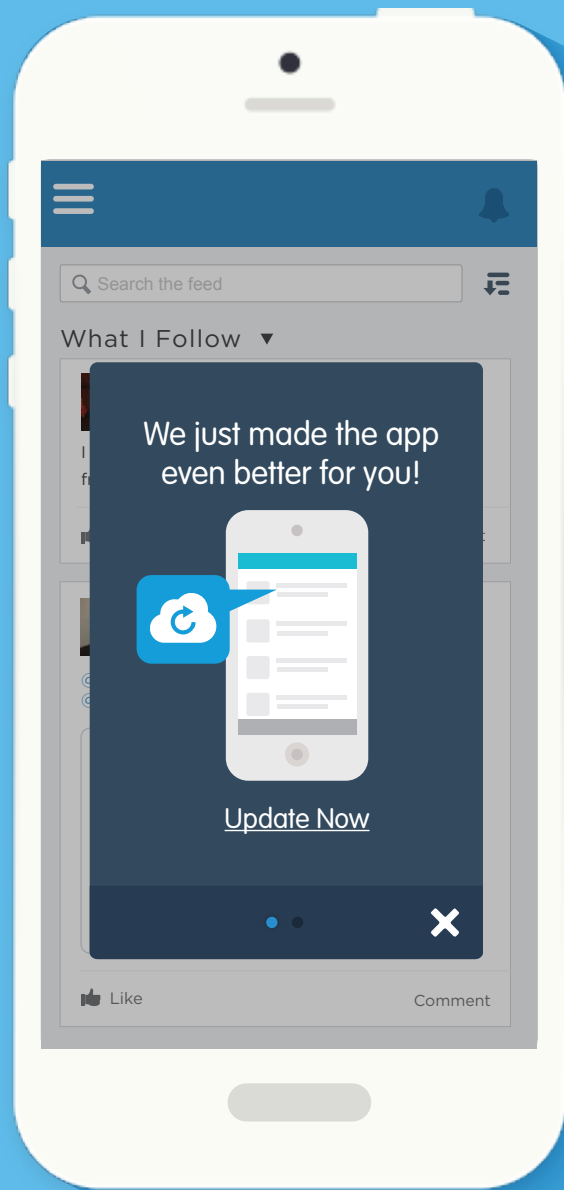
How do you do that? The natural first step is to take advantage of mobile-friendly controls such as the slider, toggle buttons, and spinners. These controls can often turn a poor enterprise mobile app into a good app, but to create a great user experience,

developers and designers need to go beyond eliminating typing as a user input paradigm.

Great enterprise mobile apps are designed with set specific default values based on the current context of possible actions. They use formulas to calculate values that adhere to corporate policies, and rely on modern field types to perform, or enable, an action on the user's behalf.

The following table offers some suggestions for moving beyond user input paradigms:

Phone Number	Use action URLs and rich field types to allow user to click a number in the app and dial.
Enter Address	Toggle switch to select "Use Current Location" geolocation ability of device.
Hotspots on Pictures	Rather than drilling through lists of data, consider using pictures with clickable hotspots to navigate faster.
Contextual Defaults	Consider creating outcome-specific actions that perform a complete operation with a single click.
Set Follow Up Date	Use formula fields to perform calculations per business policy, rather than having the user enter them manually.



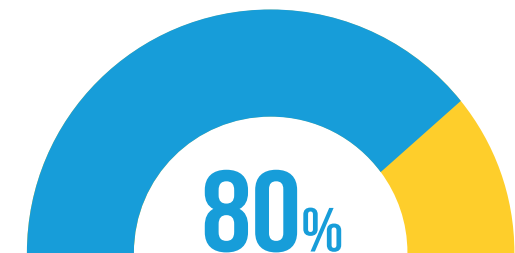
4. Ship the Minimal Viable Product (MVP)

Too often, development practices in enterprise environments are stuck in the 1990s. Software had to be perfect — or at least complete — according to a detailed specification document, because there were significant logistics involved. These included provisioning servers, burning CDs, mailing them to users, creating installation docs, and so on. The problem with this model is that the first version of an app almost always misses the mark. Why? Because eliciting user input and putting it in a document doesn't work.

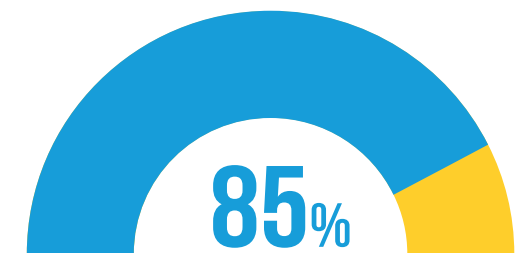
Great enterprise mobile apps ship a minimal viable product (MVP), meaning a product that meets the minimum requirements of the customer (in other words, it solves a problem) that users can get their

hands on and offer immediate feedback to the developer team to iterate on. This feedback should be reviewed and, if appropriate, included into the next build of the product. Shipping the MVP frequently and often puts the end user in the middle of the design and development process. This way, the user feels as if they have had input into the app's design.

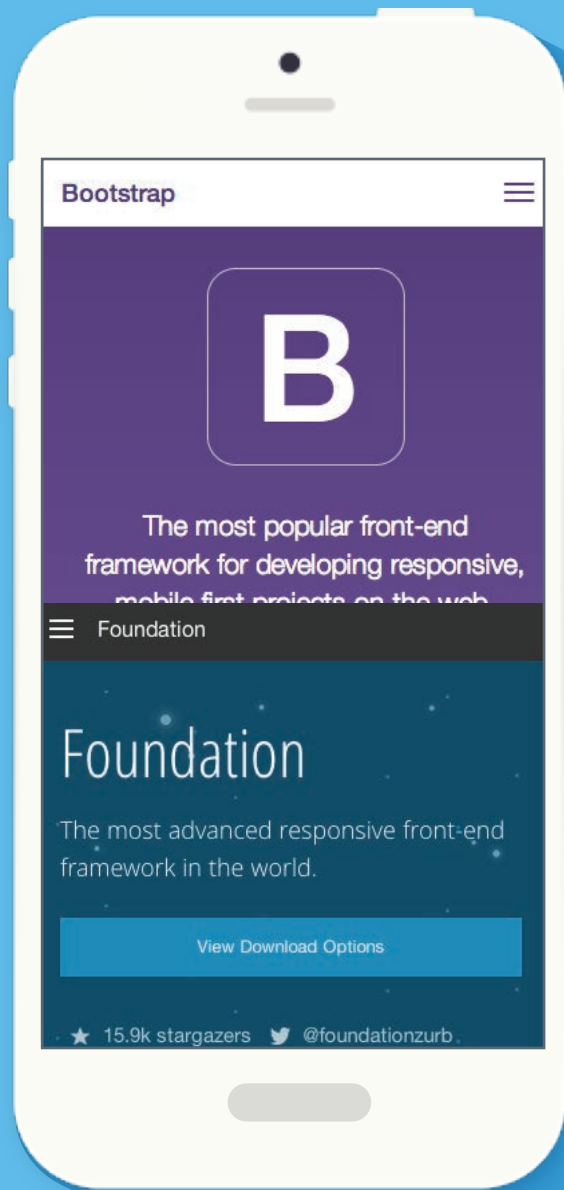
- Your app does not have to be perfect to launch.
- Update early and often.
- Solicit feedback from your users to help you improve the app.



80% of all time spent on a mobile device is spent using apps. (*Flurry Analytics, April 2013*)



85% of mobile users prefer accessing data via apps over using mobile websites. (*Compuware, March 2013*)



- Use responsive frameworks like Bootstrap or Foundation.
- Find inspiration on sites like Ads of the World and Behance.

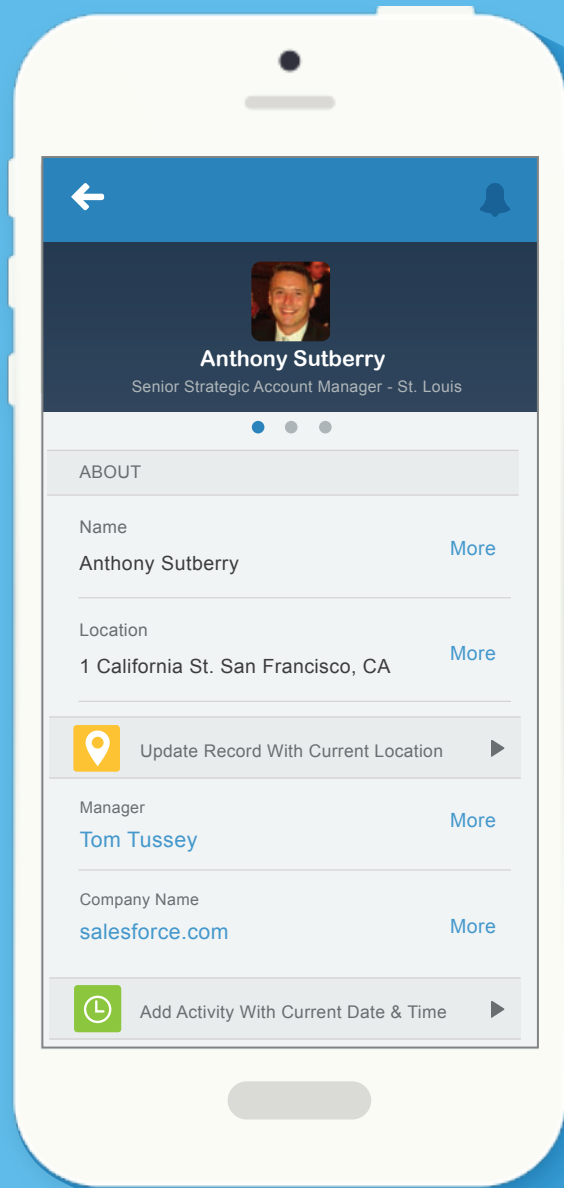
5. Get Inspiration for Mobile App Design

Mobile app users have come to expect good design. The leading consumer mobile apps make killer interface design and user experience a priority. However, enterprise development teams often lack the same focus on beautiful design and usability that their consumer counterparts have. One way to avoid building dull enterprise mobile apps is to use frameworks and design sites for inspiration.

Popular responsive design UI frameworks such as [Bootstrap](#) or [Foundation](#) take a lot of the heavy lifting out of building HTML5 mobile front ends, and require little more than general web

development skills. These frameworks, plus design inspiration from sites such as [Ads of the World](#) and [Behance](#), and even design bidding community sites like [99 Designs](#), make good design more accessible than ever.

6. Consider the Enterprise User Experience



- Present corporate information, but only display the most relevant.
- Sync mobile data to your existing corporate systems.

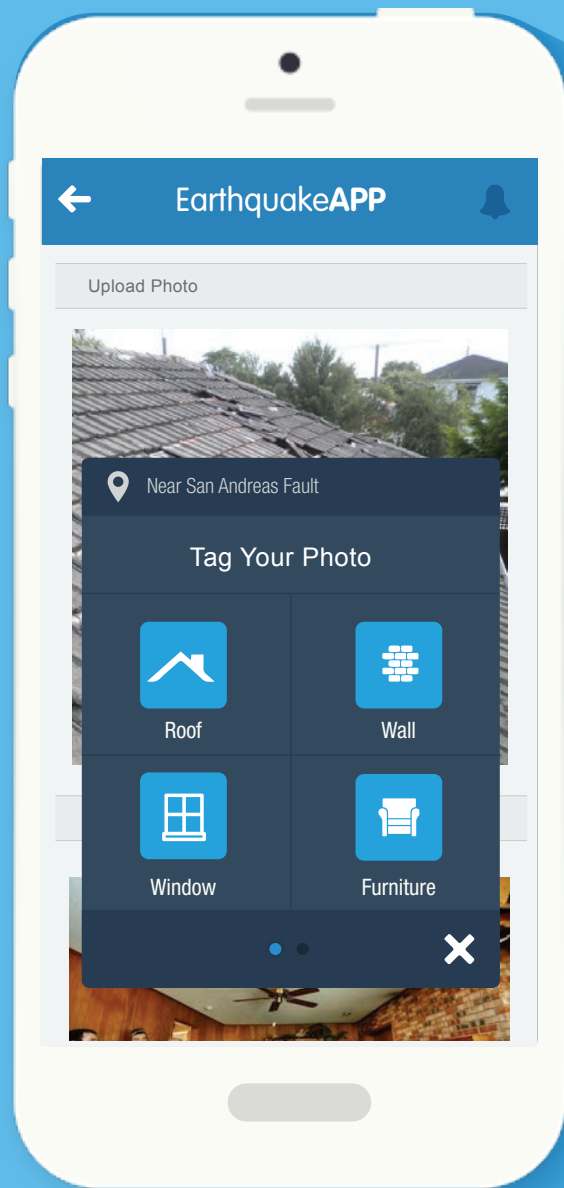
Unlike many consumer apps where the mobile app is often the primary interface customers use, enterprise users typically use mobile apps as an extension to existing systems or practices. The result is that data and workflow are created, edited, deleted by potentially dozens of other systems and people. This notion of enterprise UX can fundamentally influence how a mobile app is adopted within the organization.

Great enterprise mobile apps can consume and present existing corporate information in a mobile-friendly way by distilling the most pertinent and relevant content, and enriching it with new input options such as geolocation, photos, barcode scanning, and more. Data created

within enterprise mobile apps must be immediately available in existing corporate systems, and support concurrent updates — whether the app is online or offline — with the ability to synchronize data and address conflicts in innovative ways.

When creating an enterprise mobile app, consider the user experience beyond the mobile app - what happens to the data users interact with on the mobile device? Does it (or can it) start a workflow, feed a report, or feed a new process that may be served by another mobile app?

7. Allow for Customization Through Tagging



- Include tagging for added ease of use and organization.
- Suggest tags to users based on context.

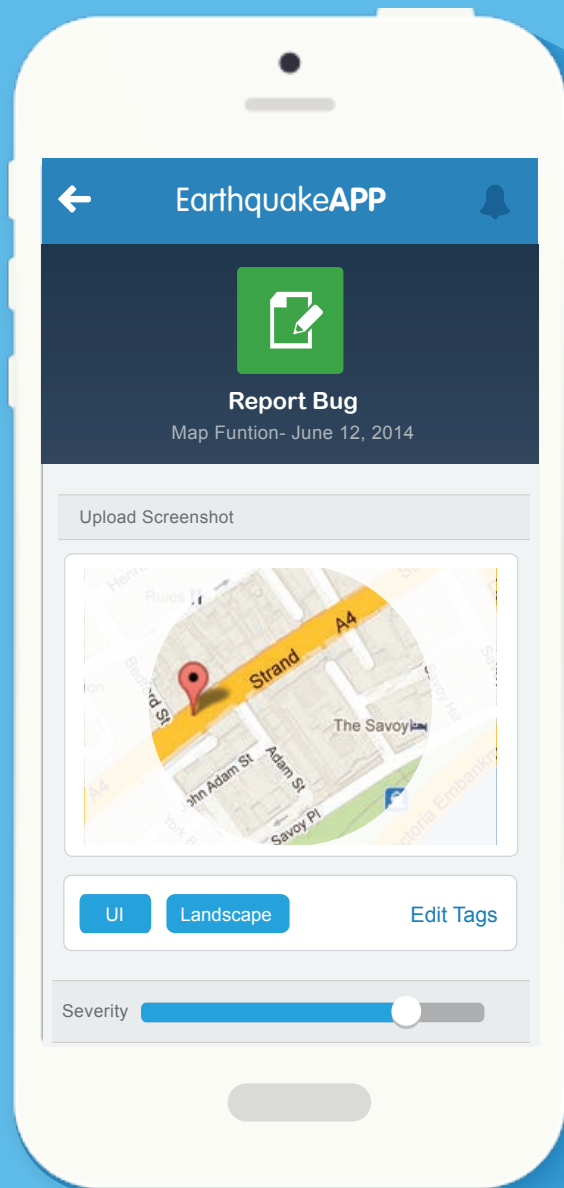
Tagging, the ability to add generic labels to a record, can be a way for users to customize their own app development experience and increase adoption and overall enterprise user experience.

When done correctly, tagging can address many of the essentials presented in this e-book. It can enable the serving of relevant and related information. It can minimize typing by allowing the user to select search terms. It can work with keywords within other existing enterprise systems. Great enterprise mobile apps can be built solely using tagged data.

So how do you make tags more effective? Start by designing the app to suggest tags based on context – who the user is, where they are, and what they are doing – and be as minimally invasive

as possible. Look at examples of well-designed mobile interfaces for options to support flyovers, swipes, and other gestures that only display tags when the user wants to see them.

Let's take our earthquake insurance policy app. The assessor for a damaged property may be able to take a picture of the damage and with a tap on the picture, be presented with relevant tags — roof, door, window, etc. Once tagged, the record is saved with an automated tag indicating the closest fault line (based on geolocation retrieved from the mobile device). Future apps could then be created to show all claims close to the San Andreas Fault that caused roof damage. All without the user having to enter anything.



- Make feedback easy to submit.
- Minimize the number of manual inputs required to submit feedback.
- Suggest relevant tags based on user context.

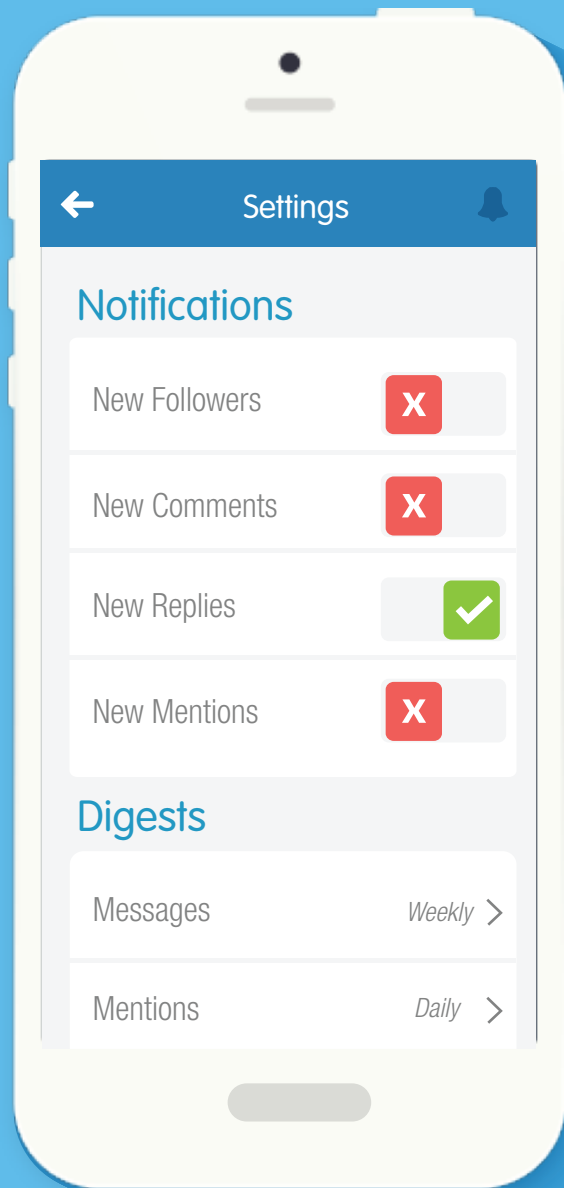
8. Create a Feedback Function

You've just rolled out your MVP (minimal viable product) and are planning to elicit feedback from your users, but how do you collect that feedback? A sure-fire way of missing valuable feedback is to require that users stop what they are working on, switch apps — or worse still, send an email - and write down their feedback. Great enterprise mobile apps include a feedback function right within the mobile app itself.

Creating a feedback function within the app is one of those areas where it is difficult to eliminate typing altogether. Without the user entering some free-form information right when they experience the issue, feedback can be lost. But there are intuitive opportunities where mobile device features can make leaving feedback incredibly easy.

Continuing with our earthquake insurance policy app, the sales rep has found a bug on the screen that lets her toggle on geolocation to identify the current address. When in landscape mode, the app partially covers the map displayed. Rather than type in this feedback and attempt to explain the UI behavior, the developers have added a “leave feedback via screensnap” feature. Now, the sales rep simply taps the feedback button, a screen snap is taken, attached to the record, and default tags for “UI” and “landscape” are added. Lastly, the rep drags a slider to indicate severity, and clicks submit.

9. Allow Users to Manage Their Own Notification Preferences



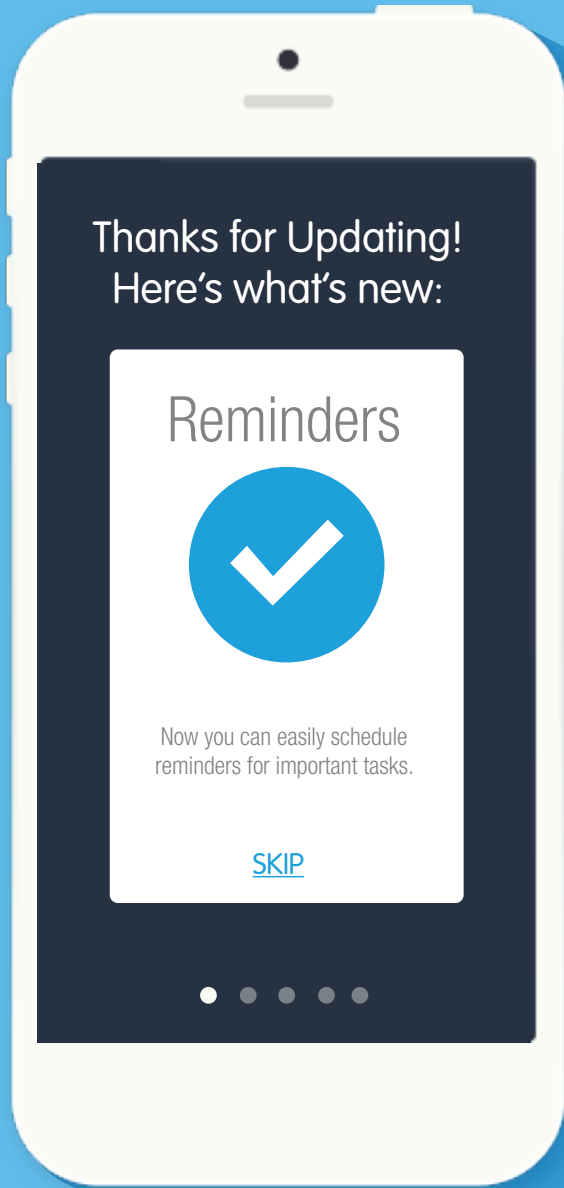
- Tiered notification strategies allow users to personalize their information consumption.

Today, work moves at such a fast pace that many of us struggle to keep up with the stream of emails, instant messages, tweets, and texts. The last thing enterprise mobile app users need is another app that demands their attention. An essential element of a well-designed enterprise mobile app is a tiered notification strategy.

A tiered notification strategy allows organizations to define how a user will be notified through “in app” notifications. Notification tier examples may include @mentions via corporate social networks. Or contextual updates based on location or record relevancy may trigger message indicators similar to unread message counts on email apps.

Direct messages may be another tier that sends push notifications and are integrated in mobile app operating systems. Non-immediate messages may be sent as digest emails.

Good enterprise mobile apps have tiered notification strategies. *Great* enterprise mobile apps allow the user to set their own preferences. When creating your strategy, use the tiers as defaults, and then allow the user to personalize them. Not only will such a strategy eliminate user frustration, it also gives the user a sense of personalization and ownership.



10. Keep Your App Fresh

With app distribution no longer an issue, enterprise mobile apps should aim to keep their content and experience fresh with regular updates, fixes, and new features. Enterprise mobile apps can highlight “what’s new” upon first-app launch with a subtle message indicator.

Mobile app updates do not have to be significant, but they must be valuable and solve a problem.

25%

By 2017, 25% of enterprises will have an enterprise app store. (Gartner, April 2013)

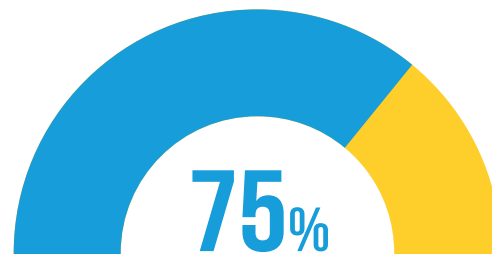
50%

By 2016, more than 50% of enterprise mobile apps deployed will be hybrid. (Gartner, Feb. 2013)

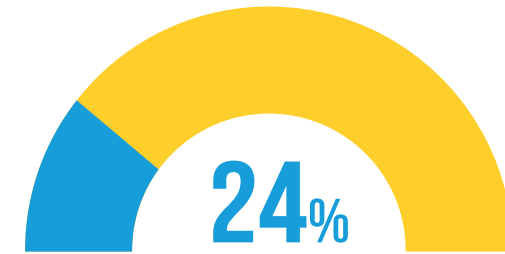
\$140_B

The global enterprise mobility market will bring in \$140 billion a year by 2020. (Visage Mobile, March 2013)

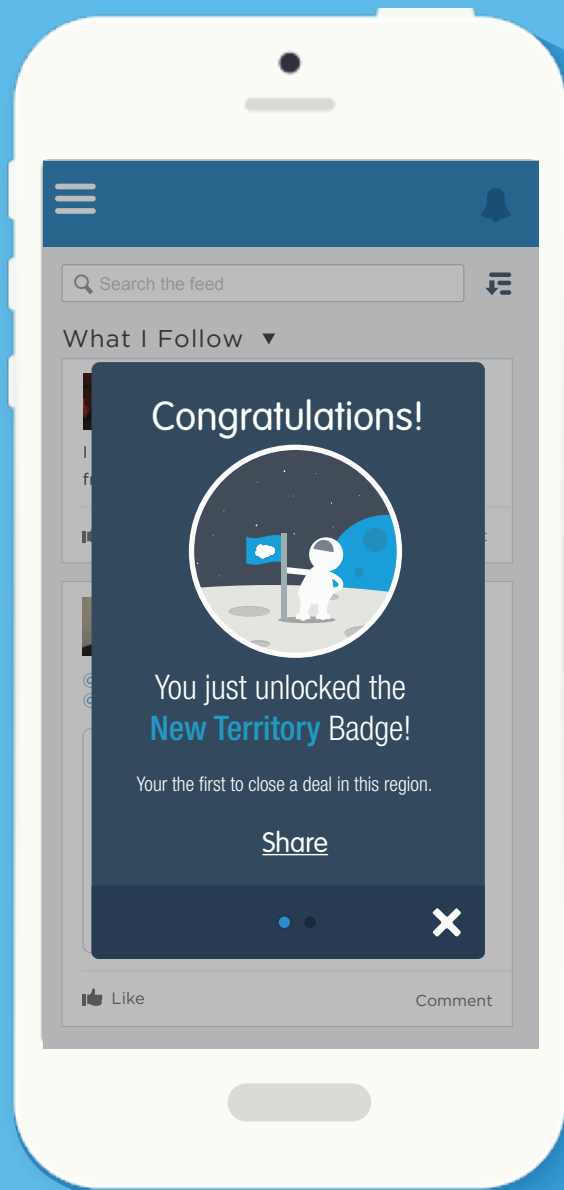
- Continually update and improve your app for a better user experience.



75% of Fortune 500 companies are taking steps to deploy HTML5 mobile apps. (IBM Worklight 2014)



24% of consumers surveyed currently use a mobile device as their primary, work-related computing device. (Samsung, January 2013)



- Provide notifications for holidays and birthdays.
- Include gamification elements.
- Use unlockable content as a reward.

11. Give Your Users a Little Extra

Okay, we said 10 essential elements, but great enterprise mobile apps always give the user a little extra. These extra features may not always be considered core requirements of a system; instead they focus on engagement. How do the app features and design drive adoption and engagement? The worst mobile apps are those that are designed well, yet no one uses them. Engagement is critical to success.

Some great examples of engagement extras may be something fun like a special notification on birthdays, the ability to reward a co-worker with a free coffee, or some ranking and trend board that promotes employee participation and app usage.

Perhaps it is even an additional non-critical part of the app that unlocks once you've closed 10 deals, or made 100 posts, that identifies you as a super-user.

Truly great mobile apps influence organizational culture to promote change. Enterprises that make the transition to mobile-first, customer centric companies support this change through off-sites, committees, and recognition for super-users. Enterprise mobile apps can help by reinforcing behavior and increase productivity, making the whole company more successful.



Build amazing mobile apps that help you run your business from your phone, anywhere. With mobile-ready APIs, back-end services like Identity, Visual Workflow, and Analytics, plus flexible UI templates, and more, you can do it all, faster, with the Salesforce1 Platform.

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