

WebSphere's Advanced Technology Improves Business

Drive Customer Interest

Use Mobile Applications To Create New Service Opportunities

- Use location data to provide cultural information at sites of interest
- Allow people to view tax information and pay bills
- Supply visa information for travelers
- Offer convenient access to government regulations
- Locate government offices



Make Your Citizens More Productive

Service Oriented Finance Ministry Wants To Use Mobile Access To Drive Citizen Interaction

We want to extend our services to mobile devices to help drive more interest and convenience for our citizens...



**Service Oriented Finance
Chief Technologist**

IBM Mobile Foundation makes it easy to accomplish this. Let's take a look ...



IBM

Build, Connect, Manage And Secure Your Mobile Applications With IBM Mobile Foundation

- Develop, integrate, and manage rich, cross-platform mobile applications with IBM Worklight
- Connect mobile apps with cloud and on-premise applications with IBM WebSphere Cast Iron
- Provide management of smartphones and tablets with IBM Endpoint Manager for Mobile Devices

IBM Mobile Foundation Solves The Challenges With Mobile Applications



How do you make rich, yet cost-effective mobile apps in a fragmented technological landscape?



How do you connect the mobile devices to the enterprise back-end services in a secure and scalable manner?



How do you manage the growing portfolio of applications and devices?

Dilemma – What Is The Best Way To Create Mobile Applications?

Native applications

Written for specific device type, using device's architecture and language

- ✓ Best possible user experience for device
- ✗ Application must be rewritten for each platform

Mobile web applications





Written for portability, using HTML, CSS, and JavaScript

- ✓ One copy of application can be run on a wide range of platforms
- ✗ Some device capabilities aren't accessible, preventing creation of a rich mobile experience

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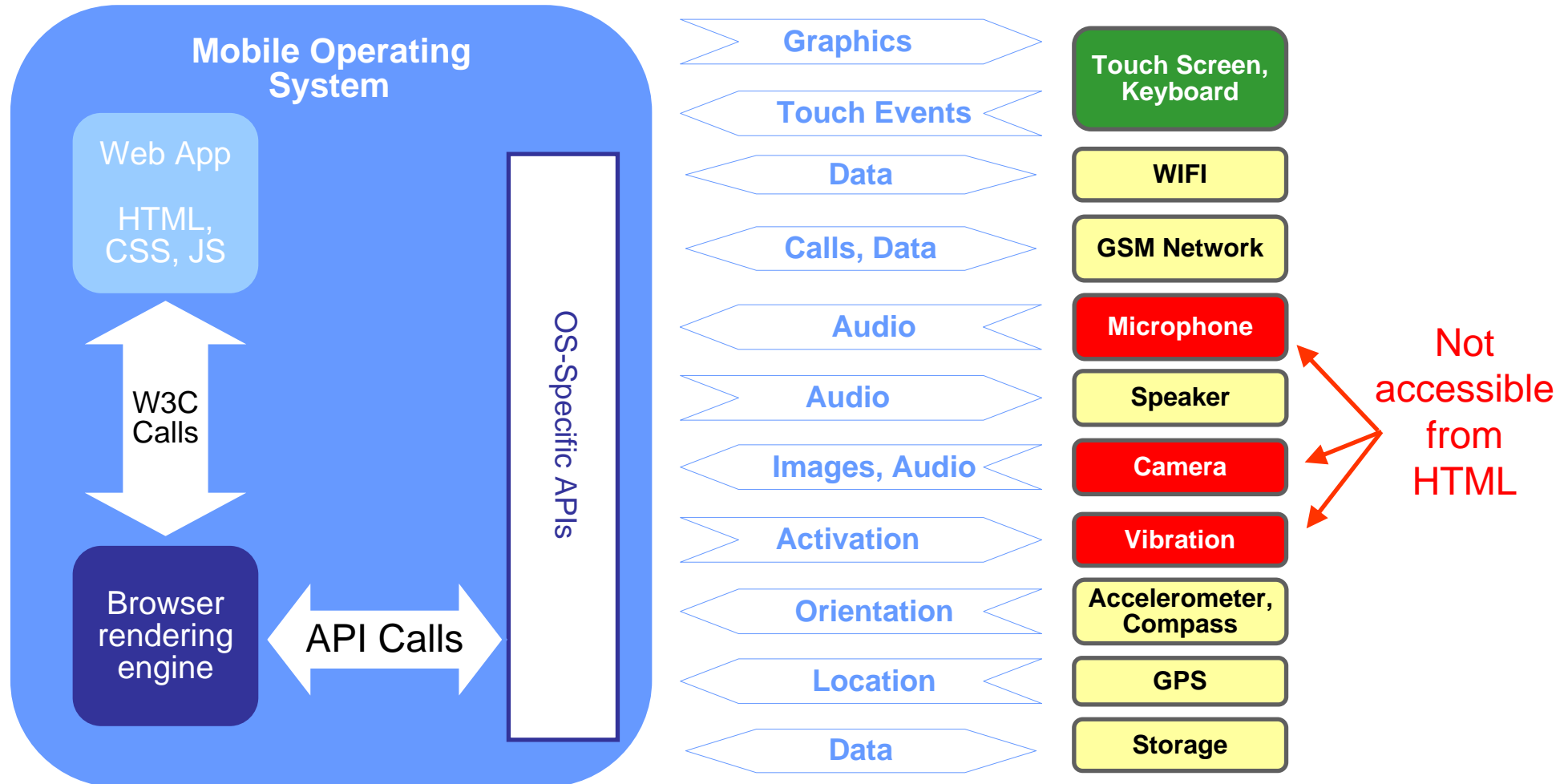


Each Platform Is Different – With Different Tools, APIs, And Executable Formats

	iOS (Apple)	Android (Google)	Blackberry (RIM)	Windows Phone (Microsoft)
				
Languages	Obj-C, C, C++	Java (Some C, C++)	Java	C#, VB.NET, etc
Tools	Xcode	Android SDK	BB Java Eclipse Plug-In	Visual Studio, Windows Phone Dev Tools
Executable Files	.app	.apk	.cod	.xap
Application Stores	Apple iTunes	Android Market	BlackBerry App World	Windows Phone Market

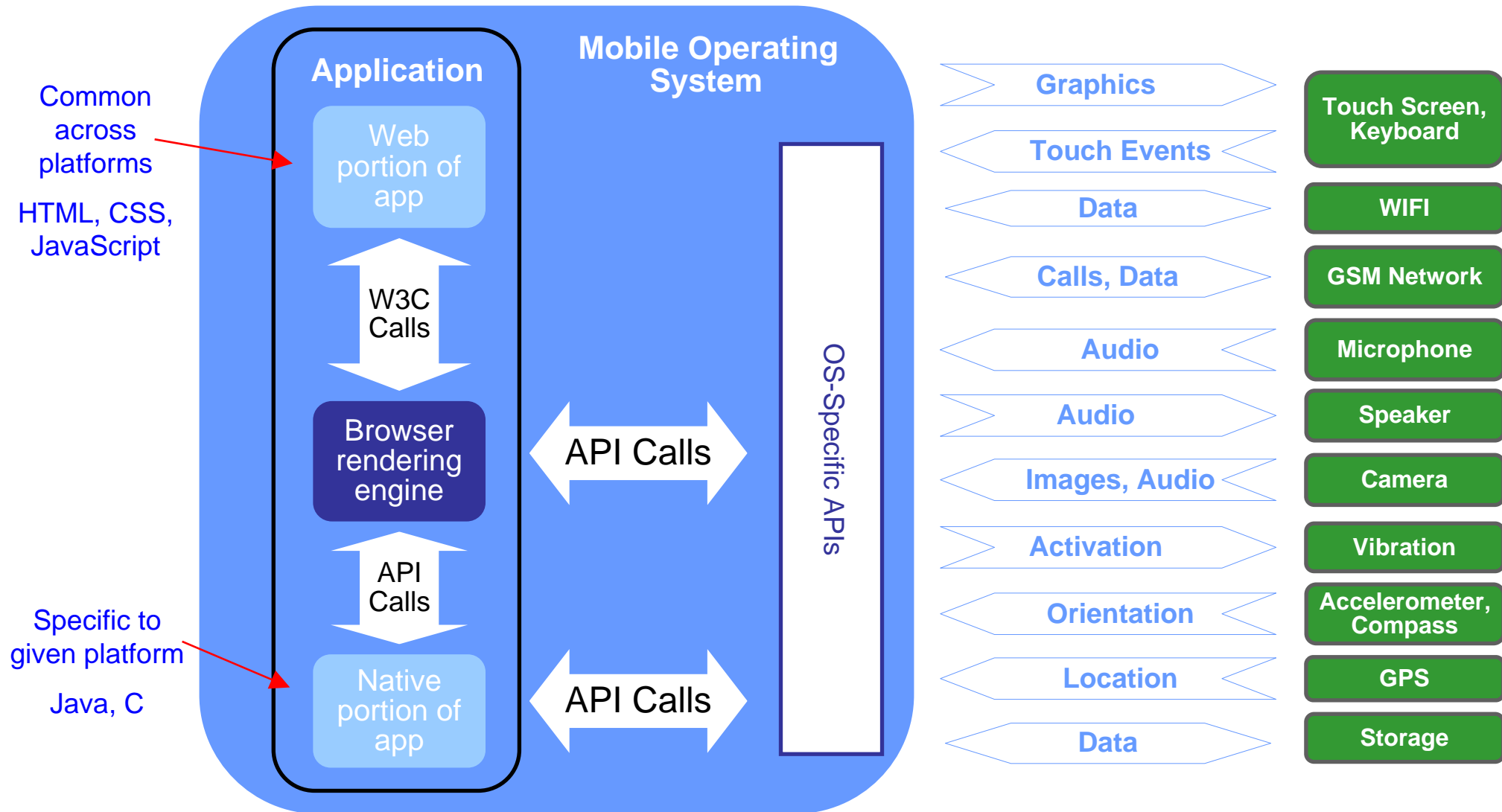
A native application for one platform cannot run on another, so you have to develop unique applications for each platform

Mobile Web Applications Only Have Limited Access To Device Features



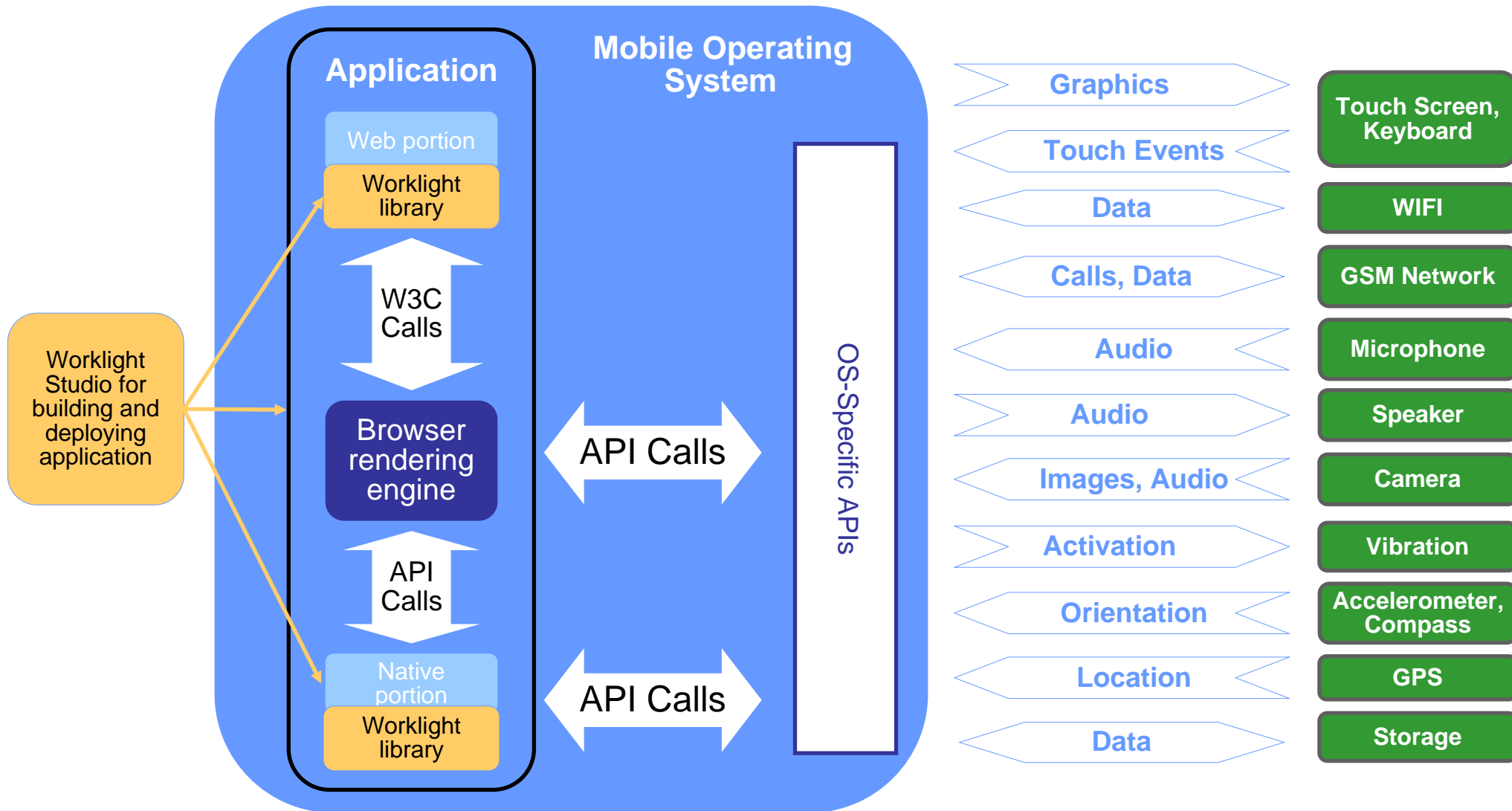
Applications written in HTML run on all platforms, but can't use important device features

Hybrid Applications Make It Possible To Build Rich Cross Platform Applications



All device features can be accessed

Worklight Makes It Easier To Build Hybrid Applications Across Platforms

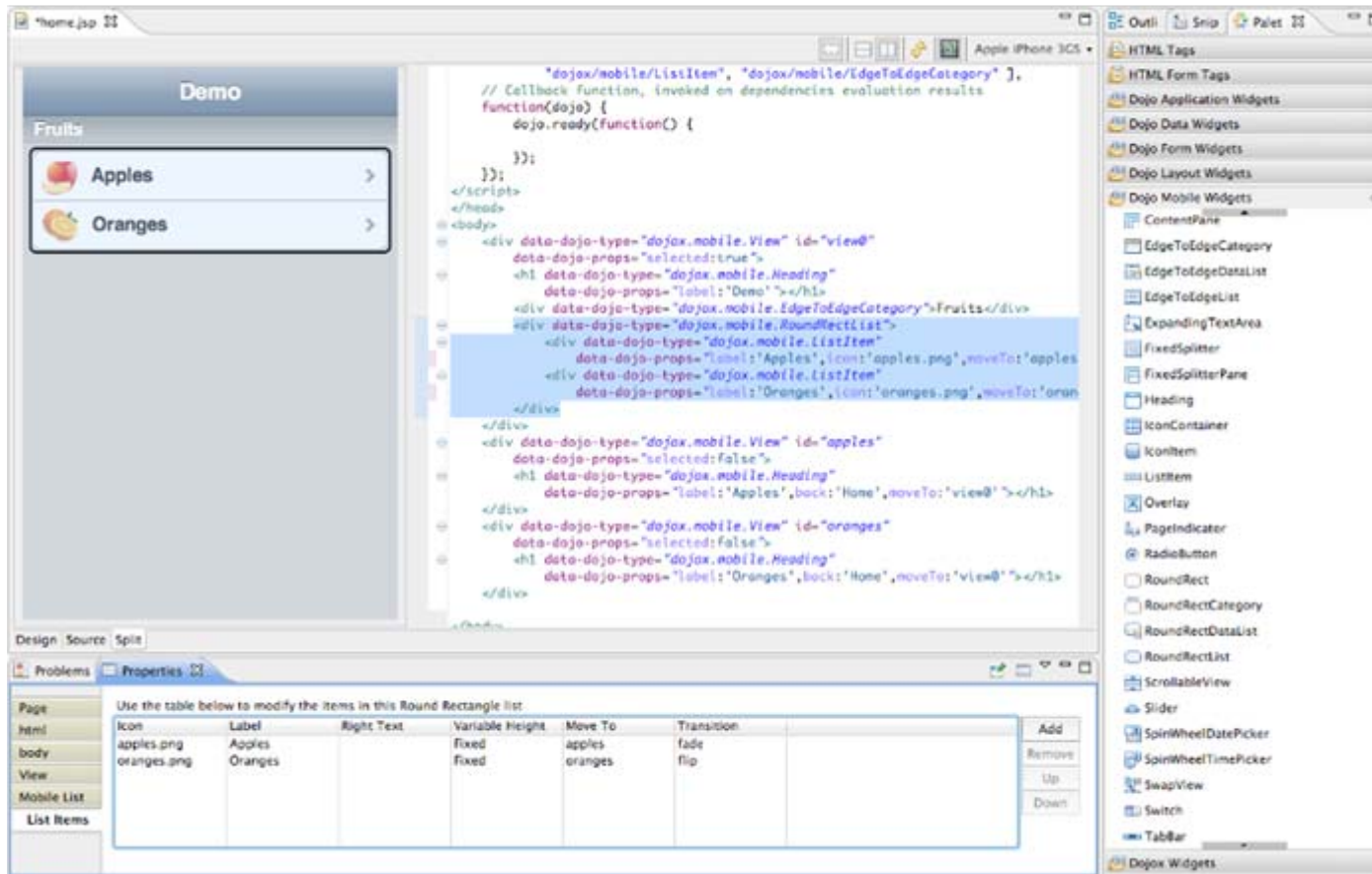


All device features can be accessed

What Worklight Does To Help You Build Hybrid Applications

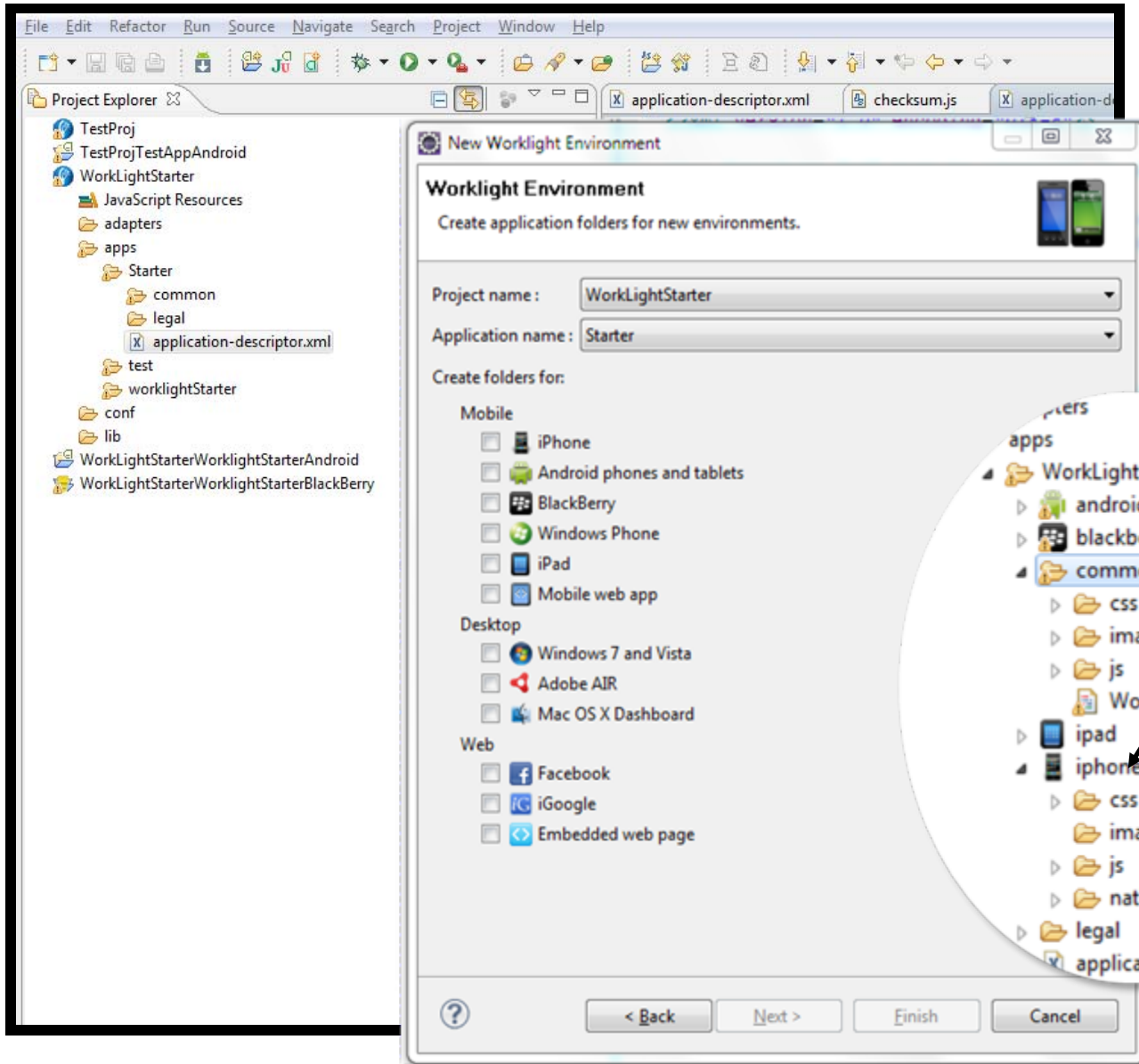
	Without Worklight	With Worklight
Development of hybrid applications	<p>One project per platform, with duplicated code that must be kept synchronized.</p> <p>Some capabilities must be programmed uniquely per platform</p> <p>Integration of HTML and native code can require extensive manually written Java and/or C</p>	<p>Single project for all platforms, single copy of common code</p> <p>Worklight API provides some cross-platform capabilities</p> <p>Integration of HTML and native code can be done easily with Worklight API</p>
Secure access to host systems and data	No framework. Must manually design and code	Worklight Server and Worklight Adapters
Application control – pushing out releases and notices, disabling old versions, etc.	No framework. Must manually design and code	Worklight Server and console application

Worklight Studio For Developing Native And Web Code



- Eclipse-based Integrated Development Environment (IDE)
- Application development using native and/or web technologies of HTML5, CSS3, and JavaScript
- WYSIWYG user interface construction

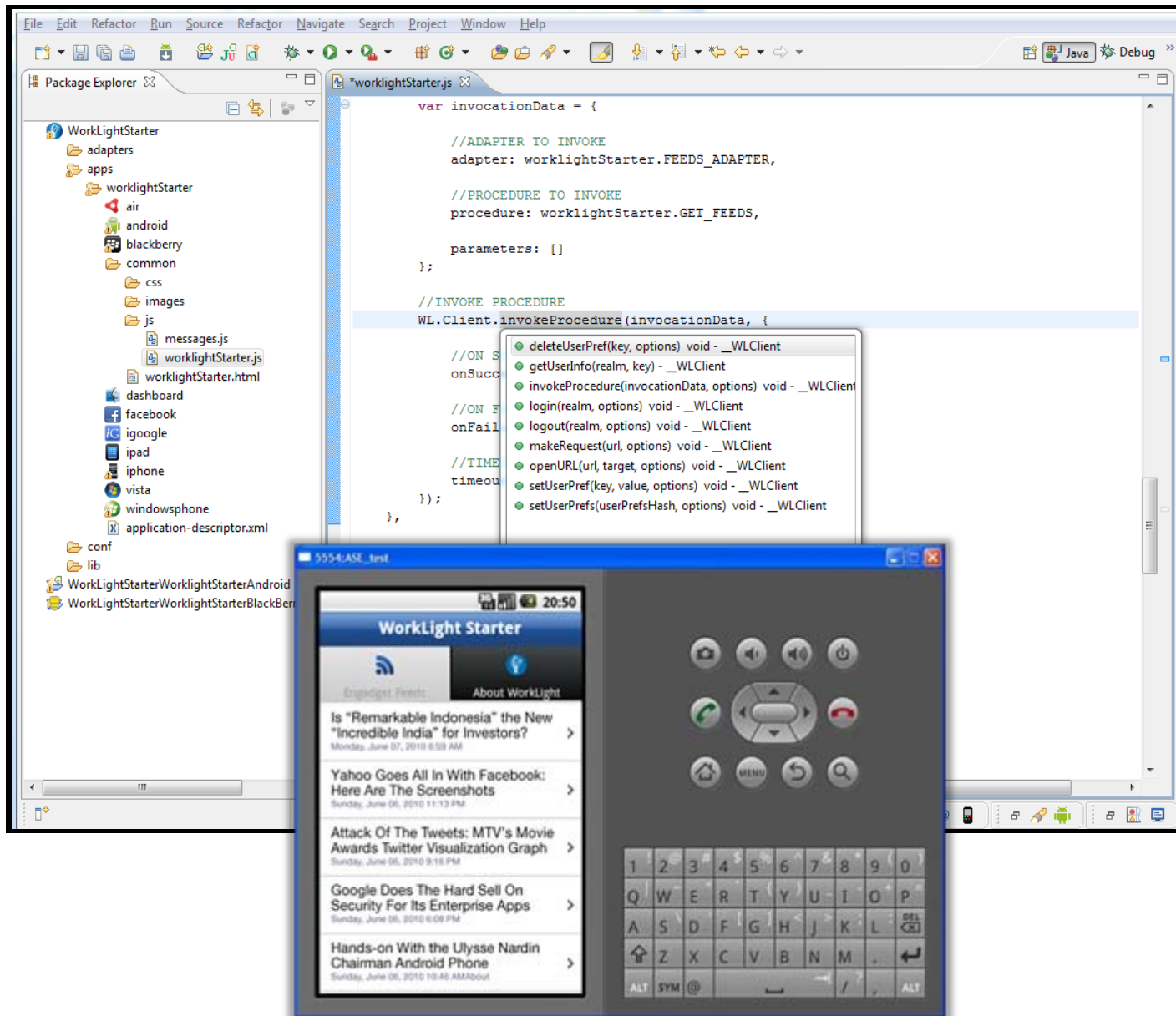
Worklight Creates A Single, Integrated Project For An Application



Common code placed in primary file

Platform-specific code is maintained separately

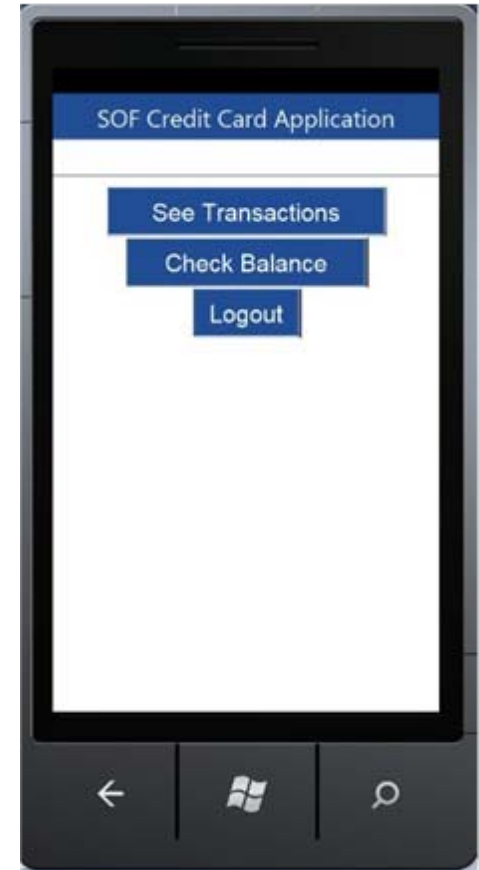
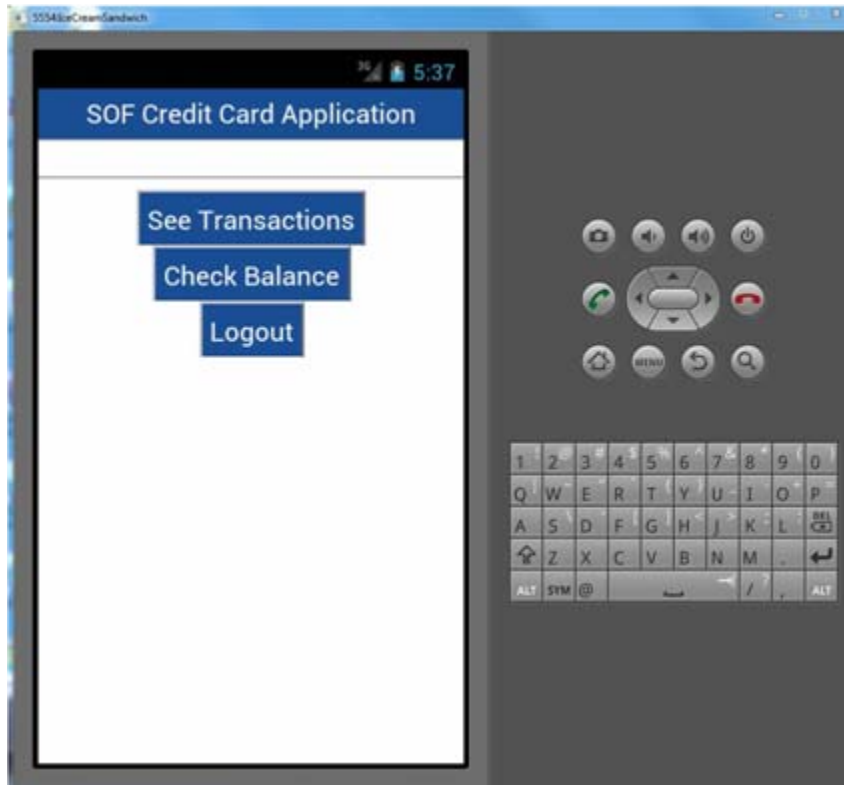
Worklight Uses Device System Development Kits (SDKs) For Device-Specific Tasks



Integrated device SDKs allow direct access to **emulators** and **debugging** utilities

Demo: Use Worklight To Build A Credit Card Application For Multiple Platforms

- Build application with visual designer
- Deploy to Android, Blackberry, and Windows device emulators for testing



IBM Mobile Foundation Solves The Mobile Challenges



How do you make rich, yet cost-effective mobile apps in a fragmented technological landscape?



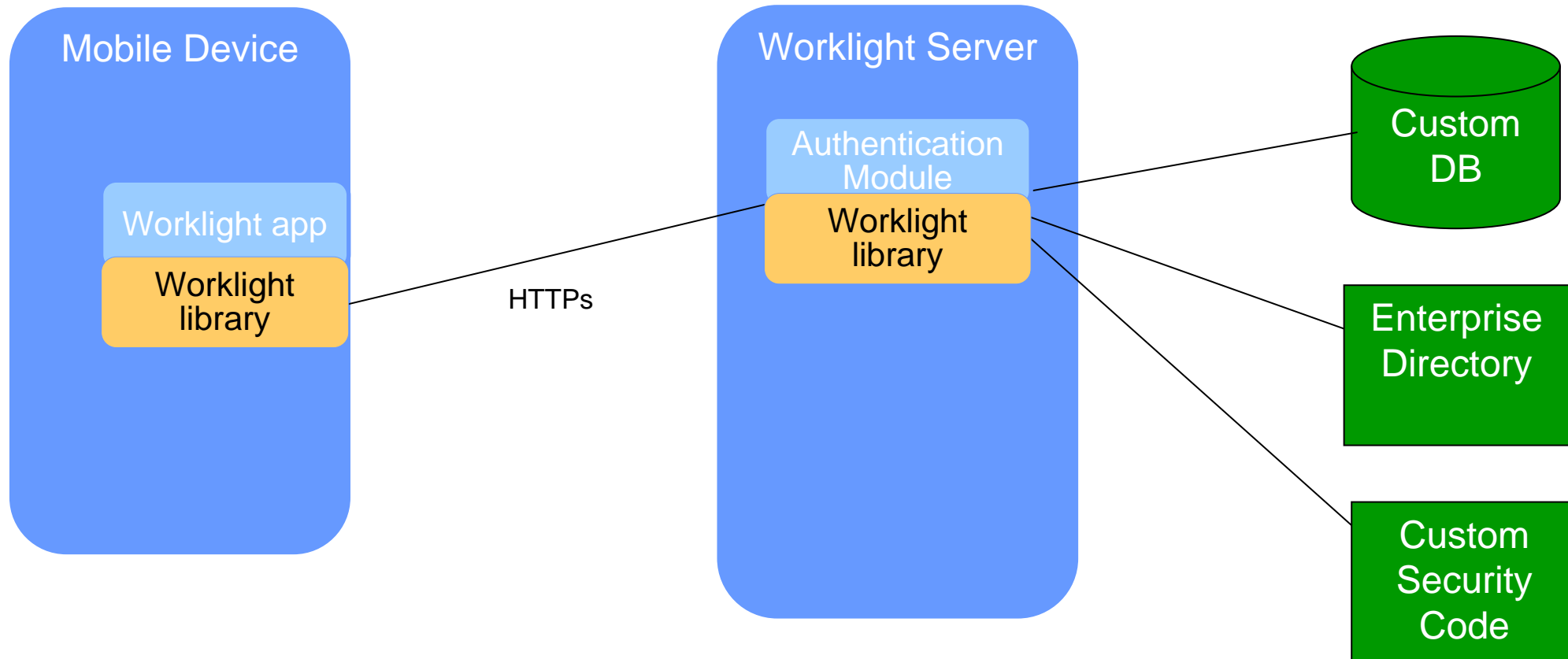
How do you connect the mobile devices to the enterprise back-end services in a secure and scalable manner?



How do you manage the growing portfolio of applications and devices?

WebSphere Worklight Provides Secure Access To Enterprise Data And Systems

Part 1 – Authenticate user through Worklight Server

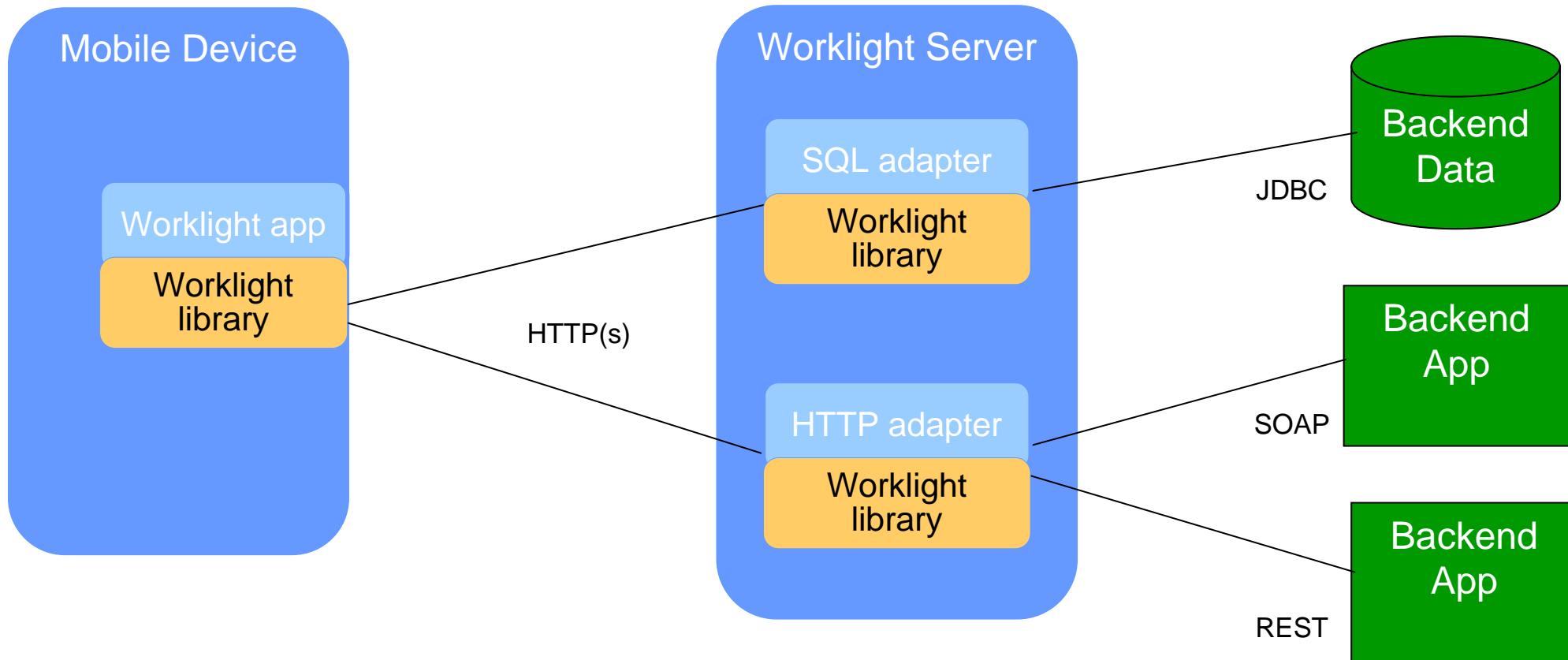


- Enterprise authentication can be extended to mobile devices to prevent unauthorized use
- Authorization can be at application startup, or when needed

Users can only access information and capabilities they are authorized for

WebSphere Worklight Provides Secure Access To Enterprise Data And Systems

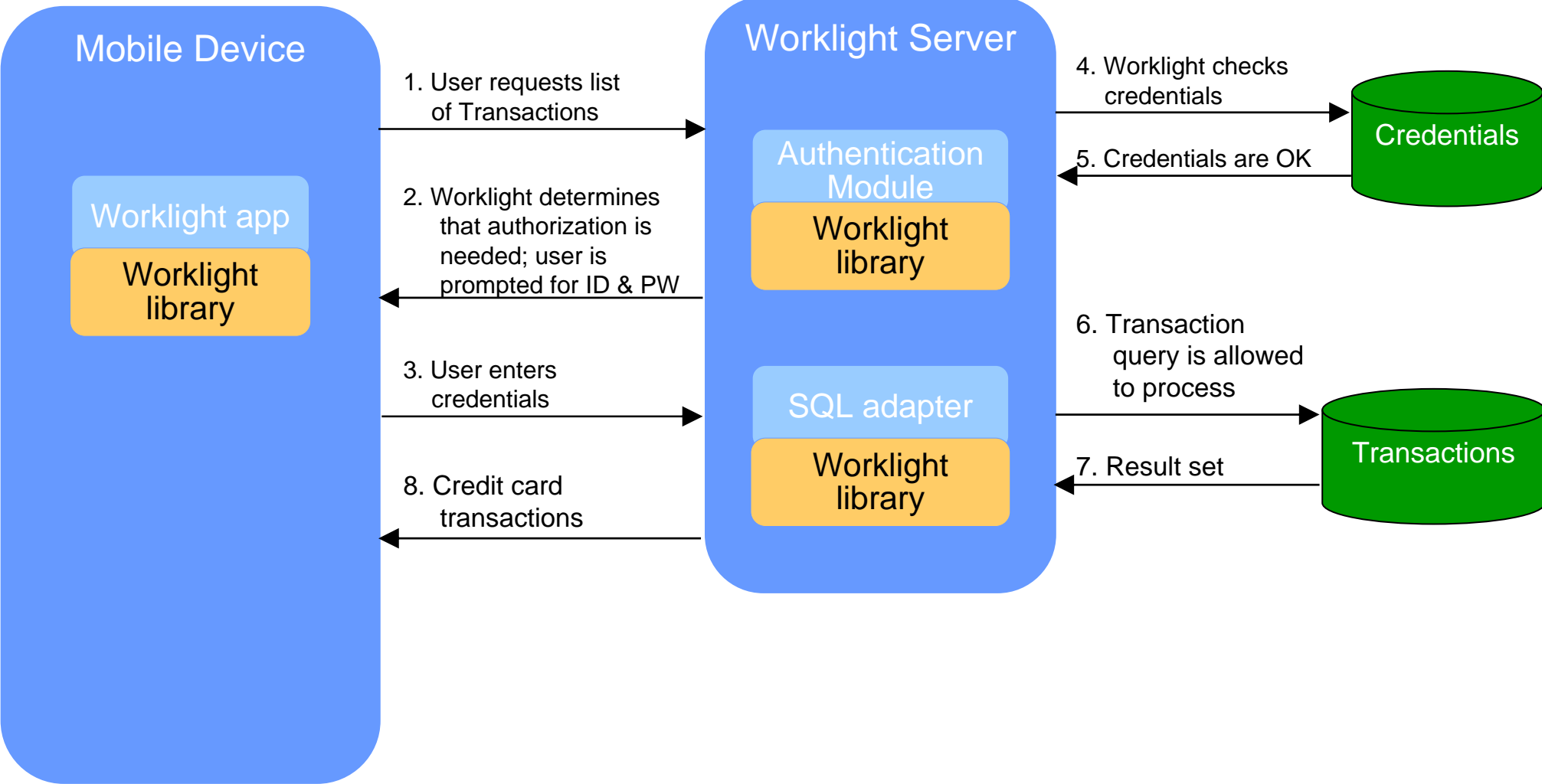
Part 2 – Access enterprise systems through Worklight Server



- Adapters run on the Worklight Server, not the mobile device
- Information about the backend systems (URL or DB name, credentials, etc.) is only stored on the Worklight server, not the mobile device

More control, better security, fewer server connections

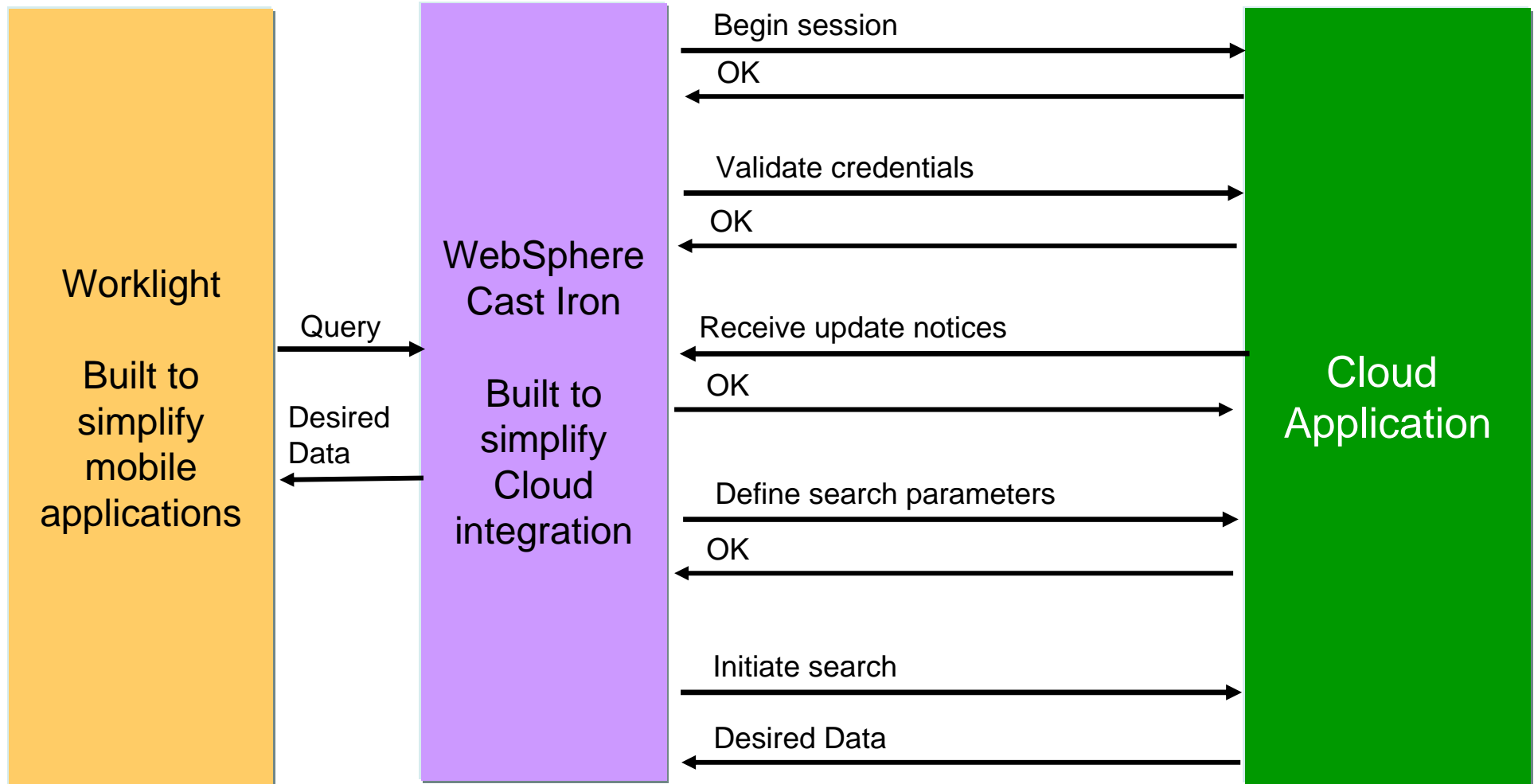
Example: Display Credit Card Transactions



Mobile code handles interaction with user
Server code handles authentication and access

Worklight And WebSphere Cast Iron Make It Simple To Integrate Mobile And Cloud Applications*

Cast Iron handles the sequence of Cloud application interactions, removing complexity from the Worklight application



***Learn more about WebSphere Cast Iron later today!**

IBM Mobile Foundation Solves The Mobile Challenges



How do you make rich, yet cost-effective mobile apps in a fragmented technological landscape?



How do you connect the mobile devices to the enterprise back-end services in a secure and scalable manner?



How do you manage the growing portfolio of applications and devices?

Worklight Controls Deployed Applications

The screenshot displays the Worklight management interface for an application named 'TestApp'. At the top, there are navigation tabs for 'Catalog', 'Push Notifications', 'Reports', and 'Active Users'. Below these is a deployment bar with a text input field for 'Deploy application or adapter:', a 'Browse...' button, and a 'Submit' button. The main content area shows the application details for 'TestApp', including a 'Preview as:' dropdown and a 'Last updated at: 2012-04-04 10:40' timestamp. A list of application versions is shown below, each with a device icon, version number, and status. The status for each version is indicated by a colored circle: green for 'Active', a green circle with an exclamation mark for 'Active, Notifying', and a red circle with an 'X' for 'Disabled'. Two versions are highlighted with blue rounded rectangles: 'Version 2.0' (Active, Notifying) and 'Version 1.0' (Disabled). The 'Version 2.0' entry has a 'Notification text' field containing the message 'This version is no longer current, please upgrade'. The 'Version 1.0' entry has a 'Notification text' field containing 'This version is no longer supported.' and a 'URL to app store or market' field containing 'http://someappstore'. A blue arrow points from the text 'Customized user messages by device and version' to the notification text field of the 'Version 2.0' entry. Another blue arrow points from the text 'Remotely disable applications by device and version' to the 'Disabled' status of the 'Version 1.0' entry.

Worklight

Welcome, Guest | [Logout](#) | [About](#) | [License](#)

Catalog Push Notifications Reports Active Users

Deploy application or adapter: Browse... Submit

TestApp ✕ Delete

TestApp

Preview as: Last updated at: 2012-04-04 10:40

✕ Android Version 3.0 ● Active

✕ Android Version 2.0 ● Active, Notifying

Notification text (will appear on the device): This version is no longer current, please upgrade

✕ Android Version 1.0 ⊘ Disabled

Notification text (will appear on the device): This version is no longer supported.

URL to app store or market: http://someappstore

✕ BlackBerry Version 2.1 ● Active

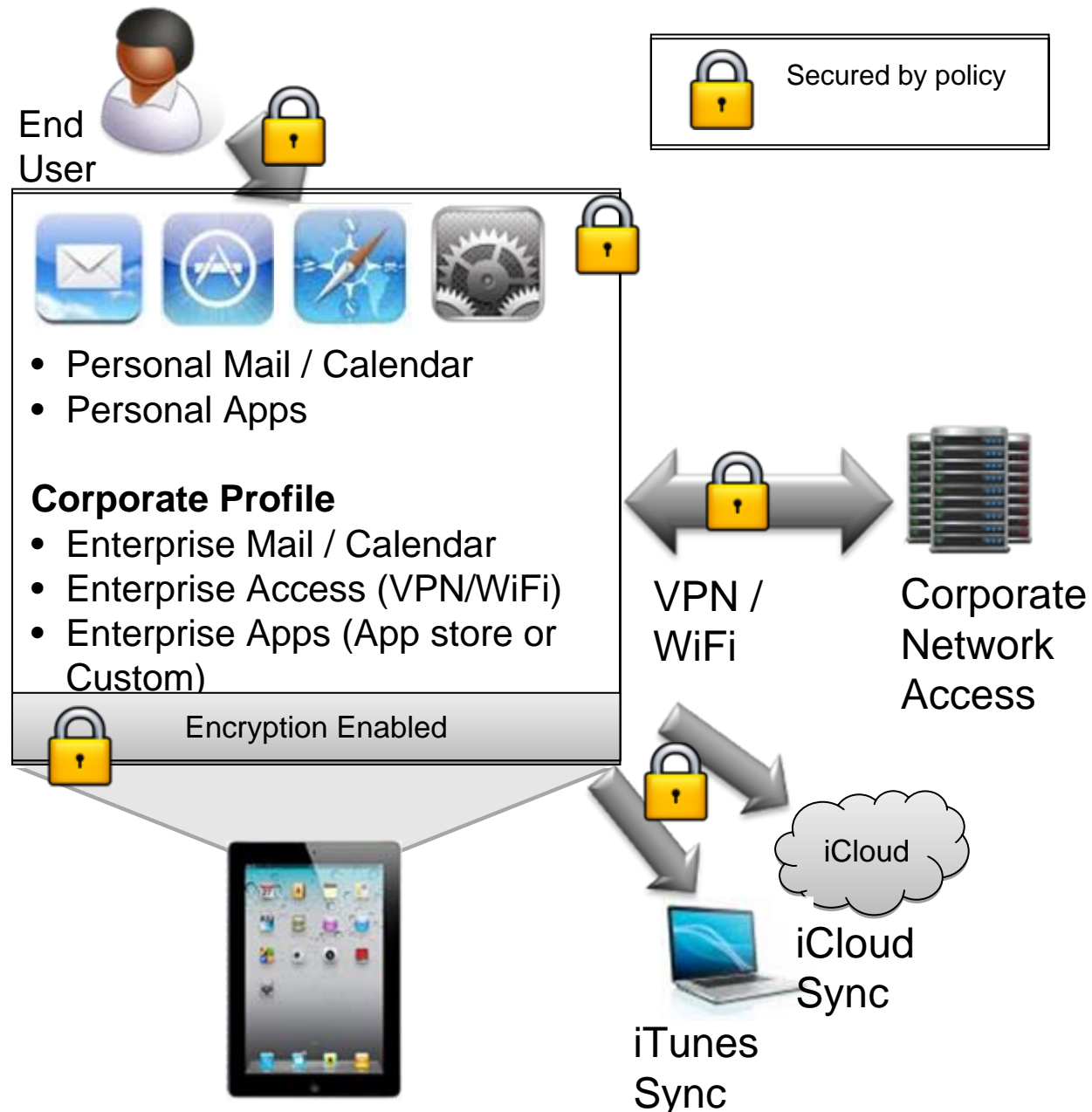
✕ BlackBerry Version 2.0 ● Active

Customized user messages by device and version

Remotely disable applications by device and version

IBM Endpoint Manager For Mobile Devices Controls Devices

- Enable password policies
- Enable device encryption
- Force encrypted backup
- Disable iCloud sync
- Disable access to corporate email, apps, VPN, WiFi if device is not compliant with policies
- Selectively wipe corporate data if employee leaves company
- Fully wipe if lost or stolen



IBM Mobile Foundation Solves The Challenges In Supporting Mobile Applications



IBM enables you to make rich, yet cost-effective mobile apps in a fragmented technological landscape



IBM enables you to connect the mobile devices to the enterprise back-end services in a secure and scalable manner



IBM helps you to control the growing portfolio of applications and devices

