



Business Agility in Action.

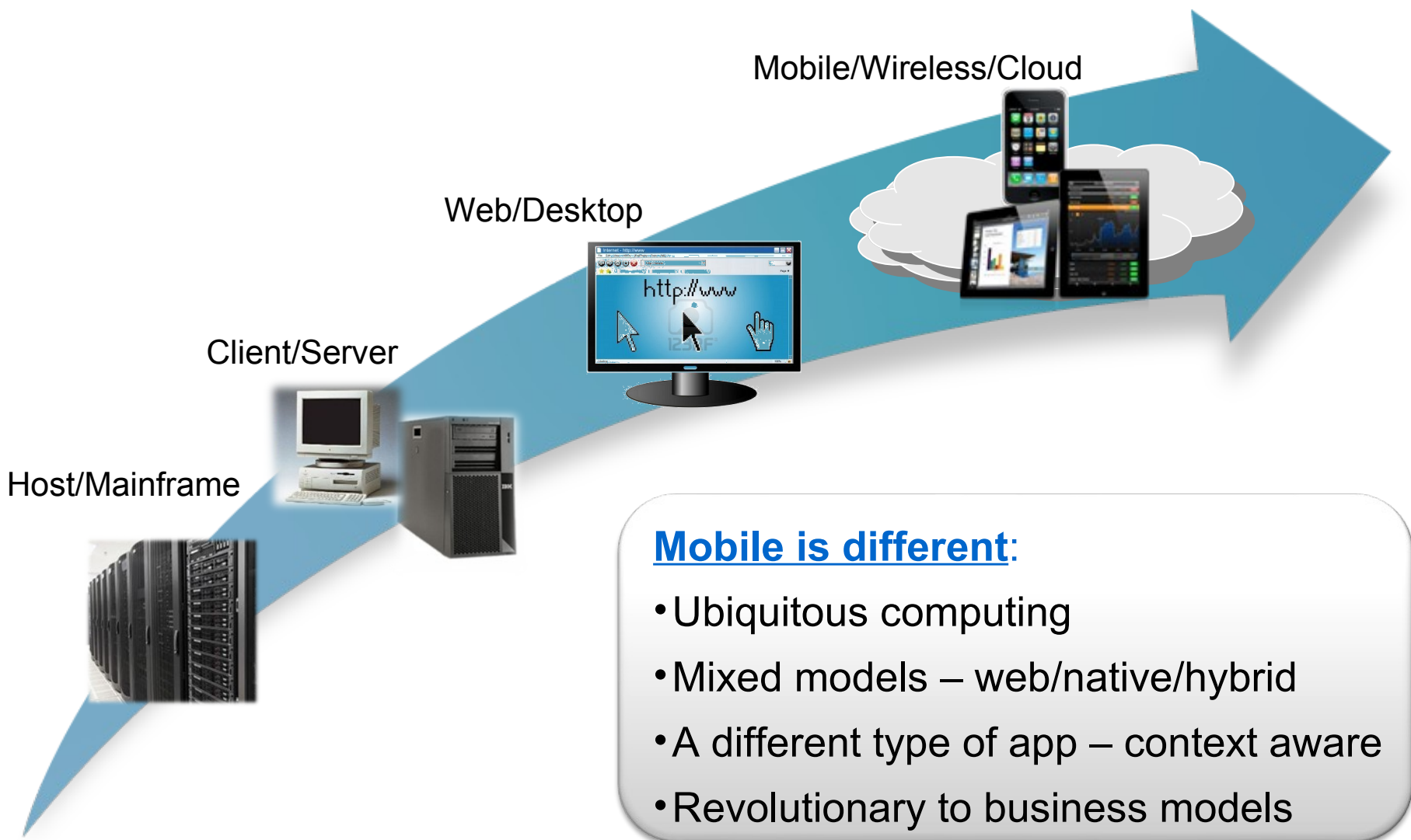
Innovate. Transform. Grow

IBM Mobile Development - Worklight

Ulas CUBUK – IBM Technical Sales

ulas@tr.ibm.com

MOBILE: the next stage in computing's evolution



The Primary Focuses of B2C and B2E are Different

Business to Consumer

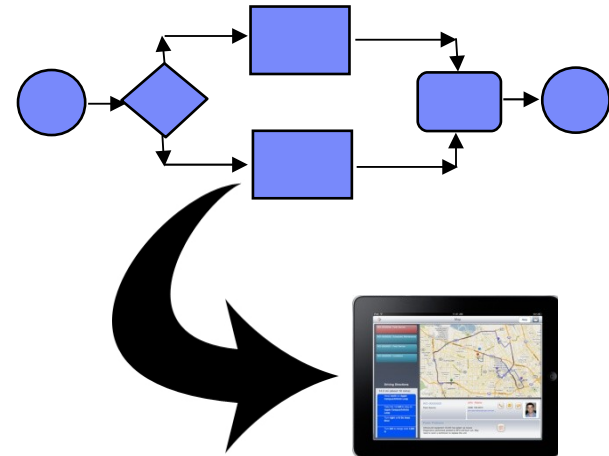
Context Awareness



INCREASE CUSTOMER LOYALTY by delivering the right goods to consumers based on their **UNIQUE NEEDS AT A GIVEN POINT IN TIME.**

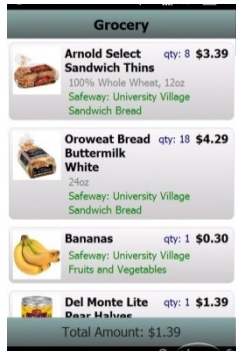
Business to Enterprise

Mobility-linked Business Processes



IMPROVE PROCESS EFFICIENCIES by capturing and automating process interactions **WHERE AND WHEN THEY OCCUR.**

Changing the Grocery Shopping Experience with Mobile Computing



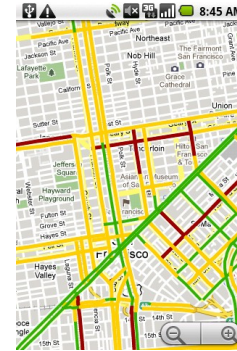
1. Build a shopping list

- Pre-populate a list based on customer history
- Be aware of holidays and dates
- Make suggestions based on past choices and actions



2. Choose a grocery store

- Assure items are in stock



6. Consume Products

- Capture comments and feedback



3. Visit the grocery store

- Provide directions on how to get to the store
- Provide directions WITHIN the store

5. Pay for Products

- Self scan barcodes in the grocery aisle by smartphone
- Make a mobile payment



4. Select Products

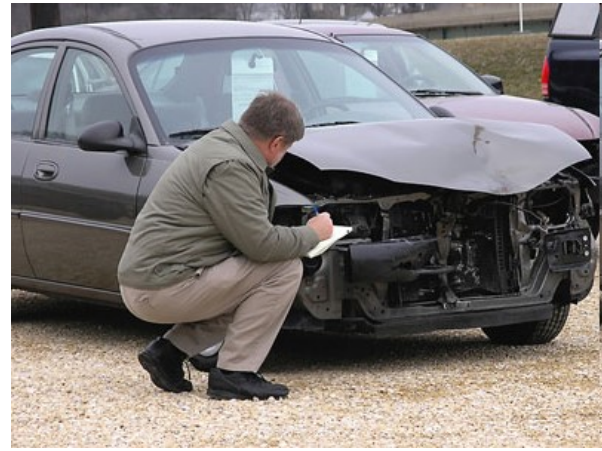
- Identify special needs
 - Allergies
 - Diabetes
 - Calories
- Do price check



Mobility-linked Business Processes: Dramatically Improving Business Productivity of Field Workers



Food Inspection



Insurance Adjusting



On-site Education

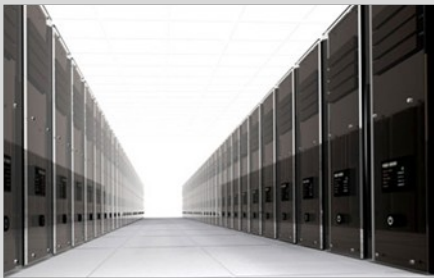


Equipment Repairs

Mobile apps – new challenges



Creating rich, yet cost-effective mobile apps in a fragmented technological landscape.



Connecting the enterprise back-end services in a secure and scalable manner



Controlling the growing portfolio of applications deployed “in the wild”

IBM comprehensive mobile strategy

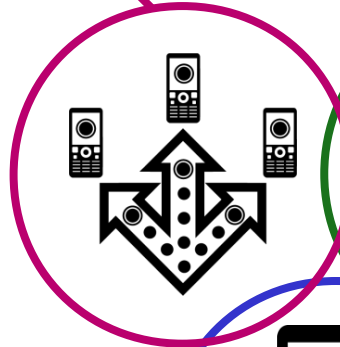
Extend & Transform

Extend existing business capabilities to mobile devices

Transform the business by creating new opportunities

Key Capabilities

- Strategy, planning and implementation
- Mobile-enabled solutions including analytics, commerce, and social business
- Mobile as a service



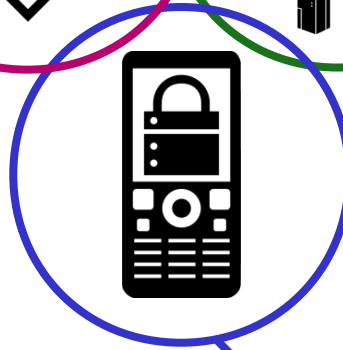
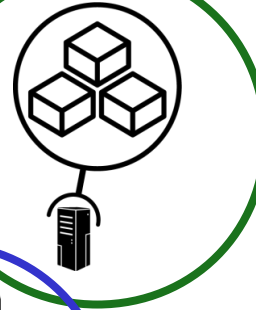
Build & Connect

Build mobile applications

Connect to, and **run** backend systems in support of mobile

Key Capabilities

- Multiplatform mobile web, hybrid and native app development
- Enterprise data, service, and application integration
- Iterative teamwork



Manage & Secure

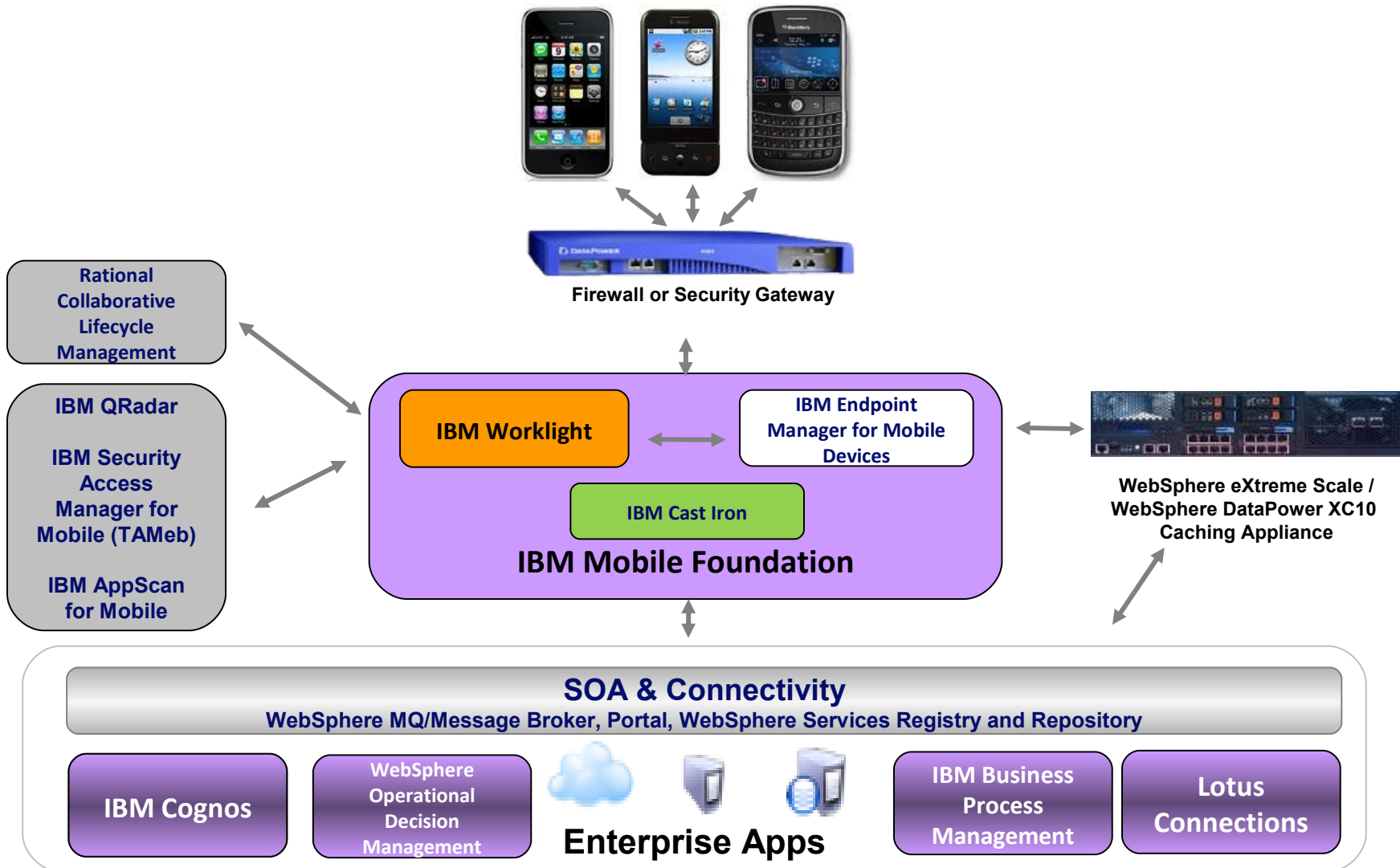
Manage mobile devices, services and applications

Secure my mobile business

Key Capabilities

- Mobile Governance
- Device analytics and control
- Secure network communications & management

IBM Mobile Foundation – sample system topology

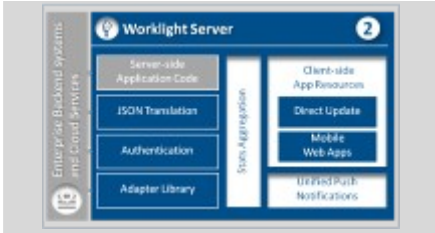


Worklight overview



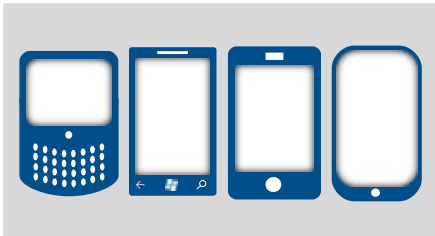
Worklight Studio

The most complete, extensible development environment with maximum code reuse and per-device optimization



Worklight Server

Mobile middleware offering unified push notifications, version management, security and integration



Worklight Runtime Components

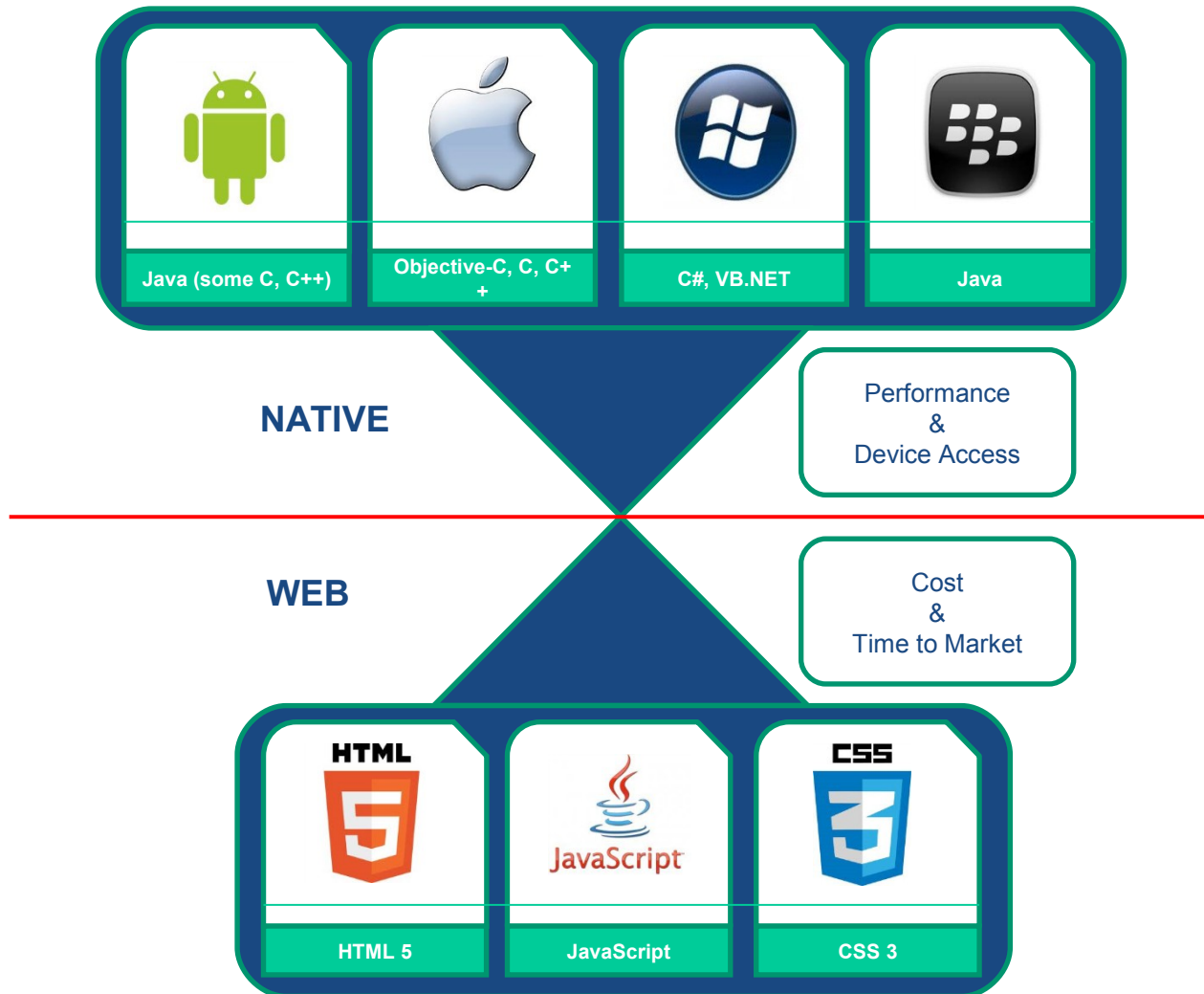
Extensive libraries and client APIs that expose and interface with native device functionality and the Worklight Server



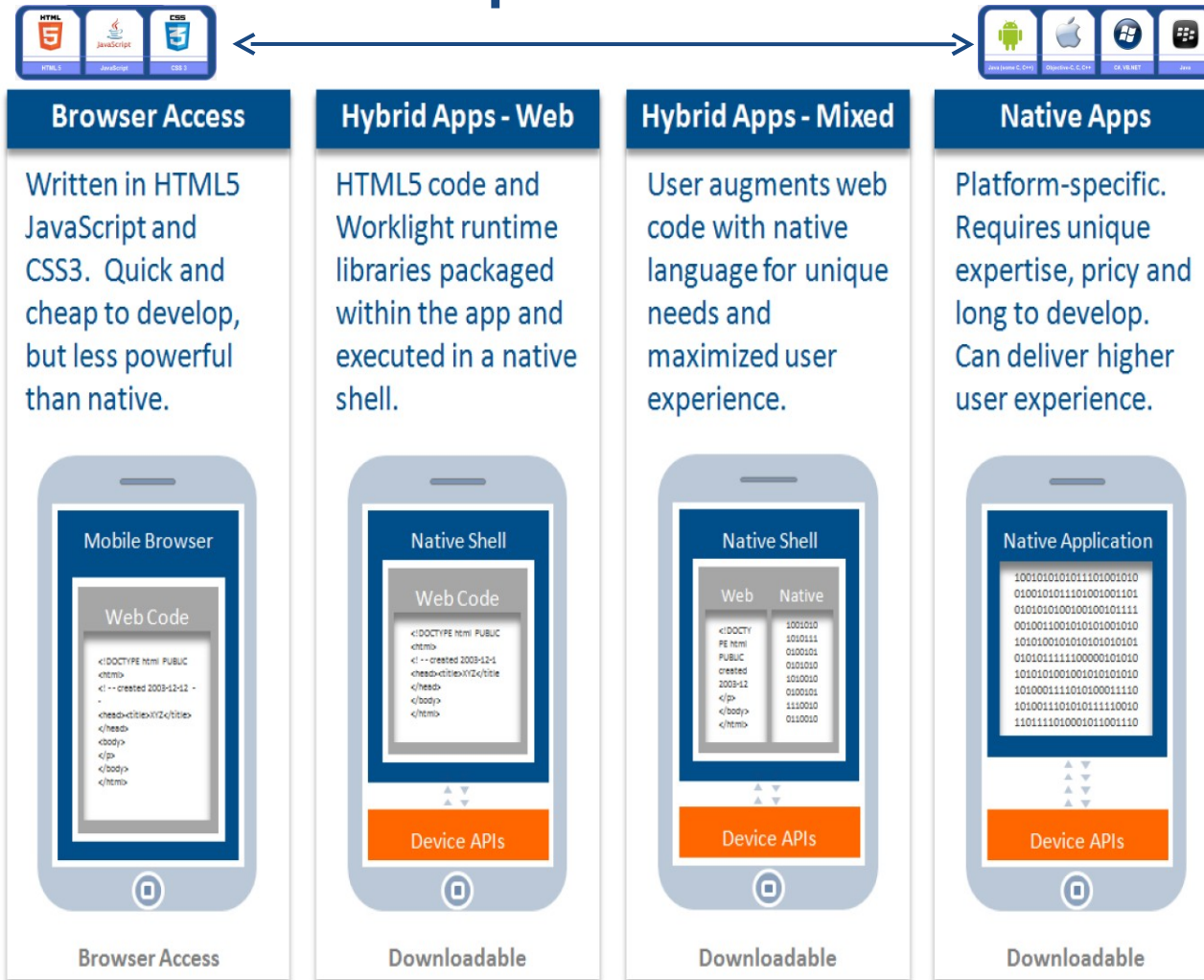
Worklight Console

A web-based console for real-time analytics and control of your mobile apps and infrastructure

Traditional Mobile Development Models



Worklight Studio Development Models



Worklight Studio

Eclipse/RAD Based IDE

Native, hybrid and standard web development

Open, familiar, standardized tooling

Environment-specific optimization

Common code with overrides/extensions

Native development options

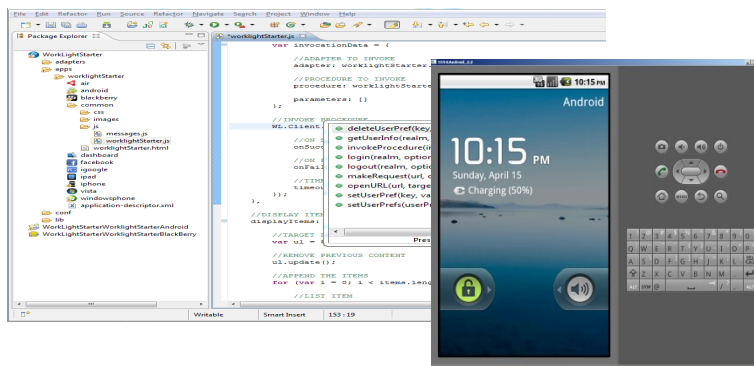
Runtime skins

3rd-party library integration

Device SDK integration

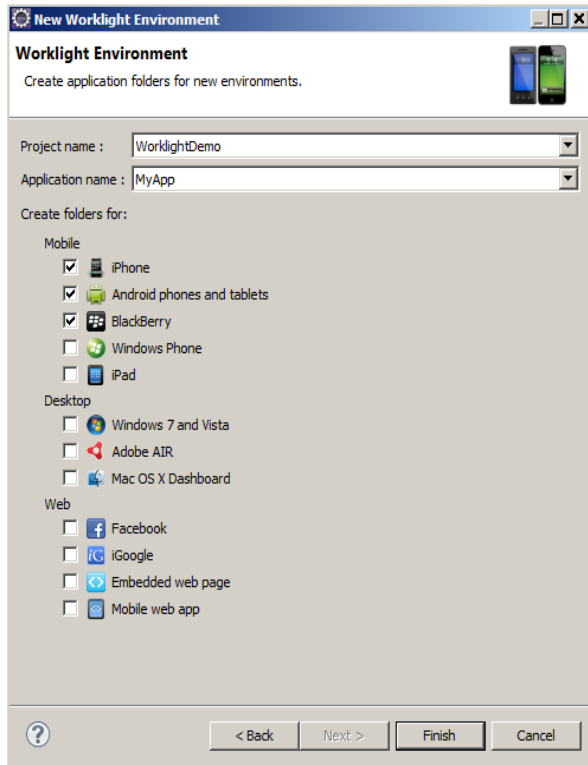
Access to emulators and debugging tools

Supports auto-complete and validation



Worklight Studio

Common Code Structure and Environment Optimisation



common resources serve as the basis for the optimized environments added to the project

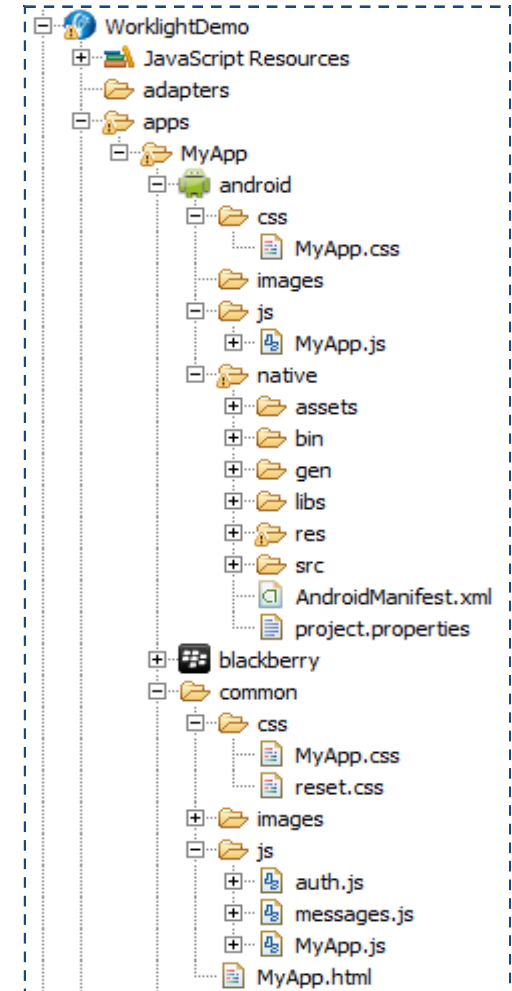
common holds resources that are shared by all environments.

JavaScript from an environment folder is appended to the same file in the common folder

CSS files from an environment folder will be appended to the CSS files in the common folder

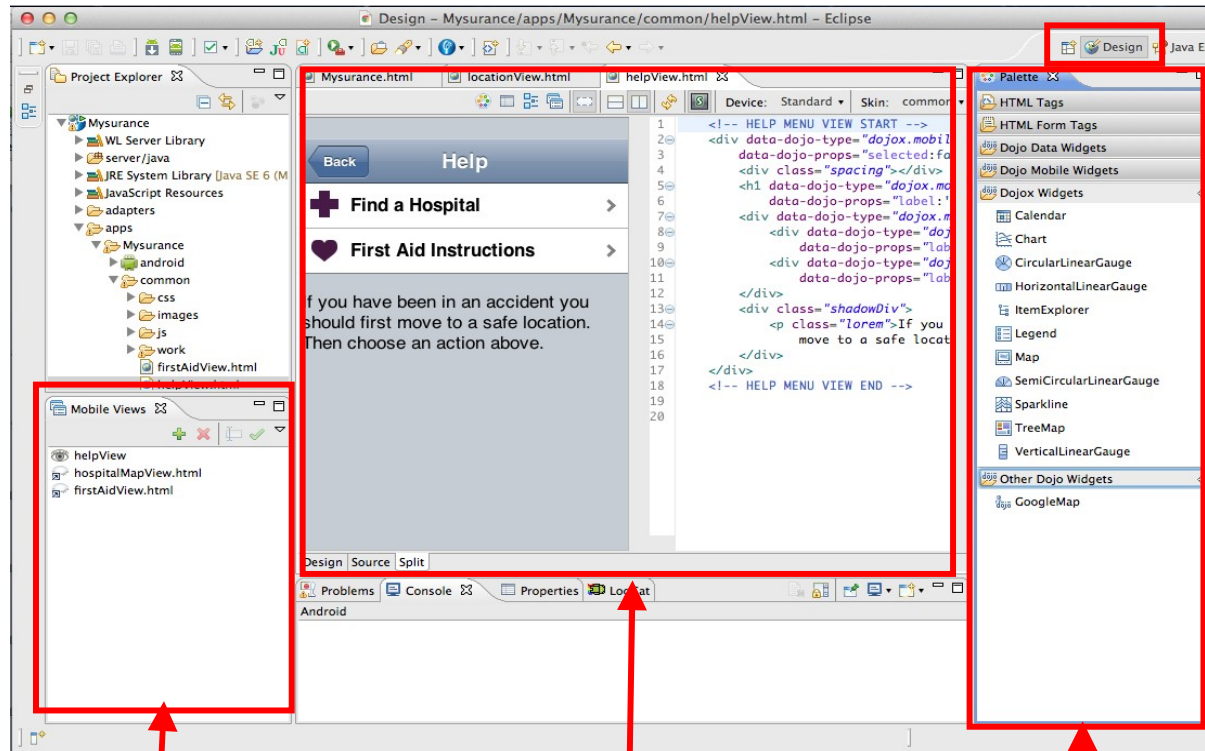
HTML files from an environment folder will override files in the common folder

images from an environment folder will override files in the common folder



Worklight Studio

Visual UI Construction



**Worklight
Design
Perspective**

Mobile Views

- Select which view displays in design tab
- Modify view properties
- Create and delete mobile views

Rich Page Editor

- Source, Design and Split views
- UI rendering using browser engine, synced with source pane

Palette

- Drag and drop visual elements into the Editor pane.
- Offers HTML constructs and Dojo widgets

Worklight Studio

Build, Package, Deploy and Test Applications

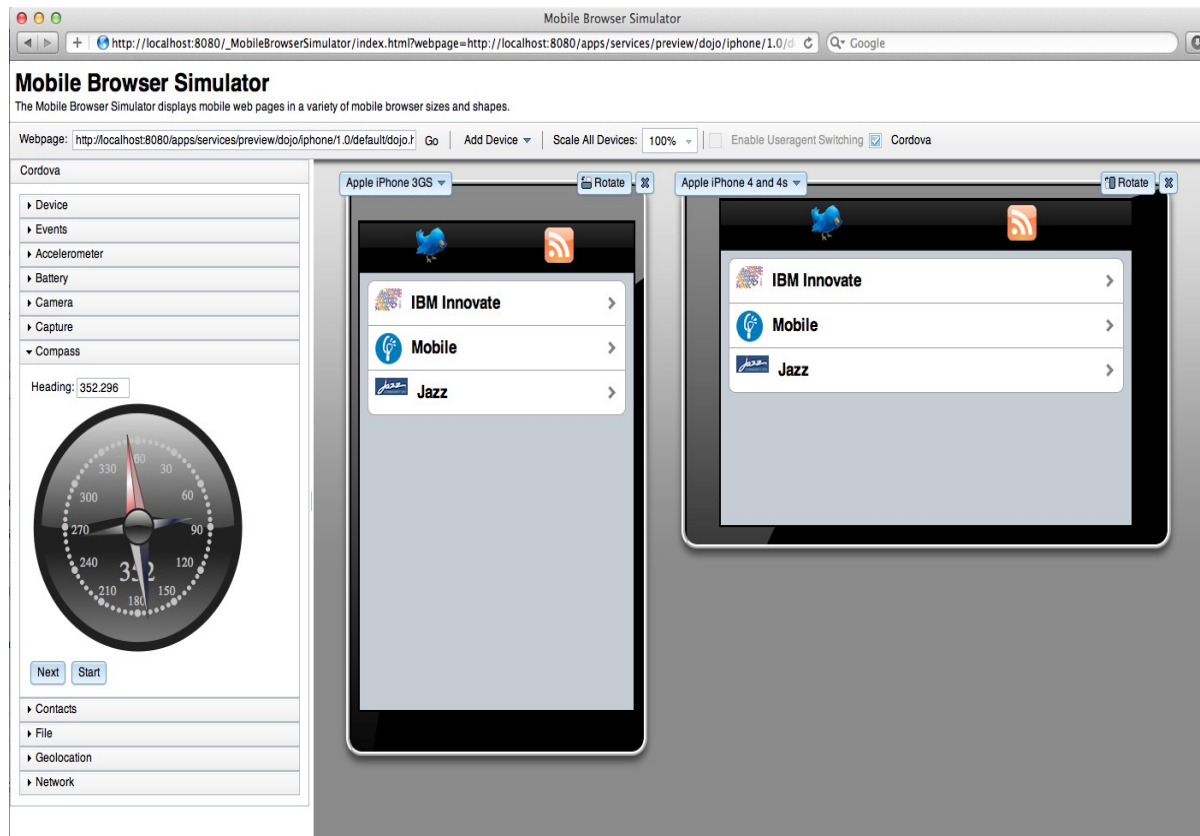
Build and Deploy the Worklight Application to Studio's embedded web container

Preview the application in the Mobile Browser Simulator for device-specific rendering and testing

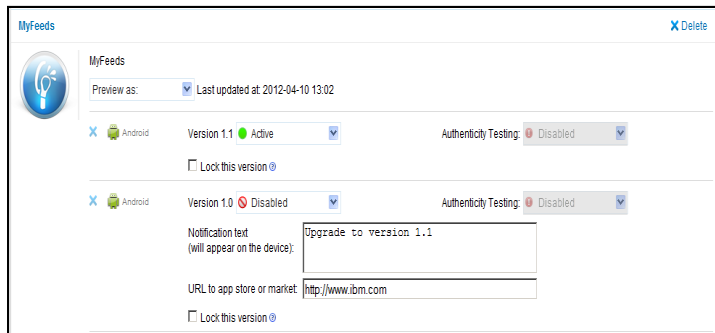
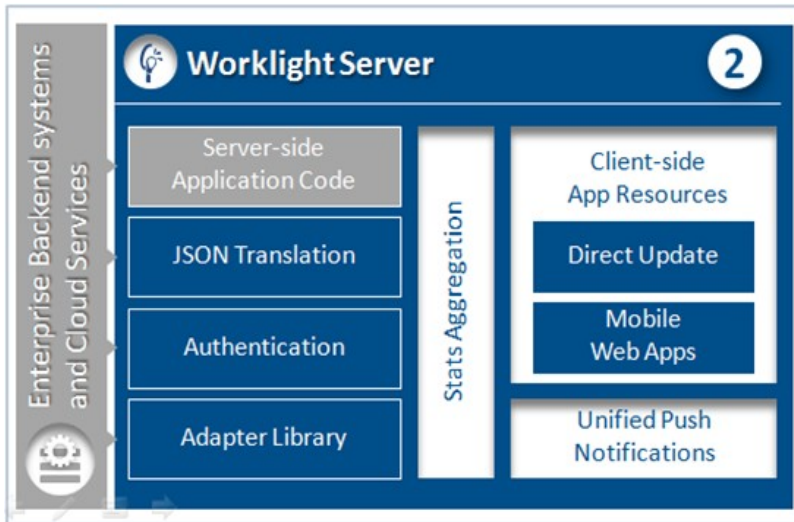
```
<!-- HELP MENU VIEW START
2 <div data-dojo-type="dojo
3 data-dojo-props="sele
4 <div class="spacing">
5 <h1 data-dojo-type="d
6 data-dojo-props="
7 <div data-dojo-type="
8 <div data-dojo-ty
9 data-
10 </div>
11 <div class="
12 <p class="
13 move
14 </div>
15 </div>
16 <!-- HELP MENU V
17
18
19
20
```

Worklight Studio

Preview in Mobile Browser Simulator



- Device specific visualisation and testing on the developer desktop
- Change device types, orientation, device settings (GPS loc, compass, etc...)
 - Supports Cordova and Worklight client API
 - Live debug with Web Inspector/Firefox



Controls **Application Deployment** and **Versioning**

Server and device **Security** control

Adapters with support for SOAP, REST, SQL, LDAP, SAP and more

Performs **Data Transformation** to streamline back-end data for mobile consumption

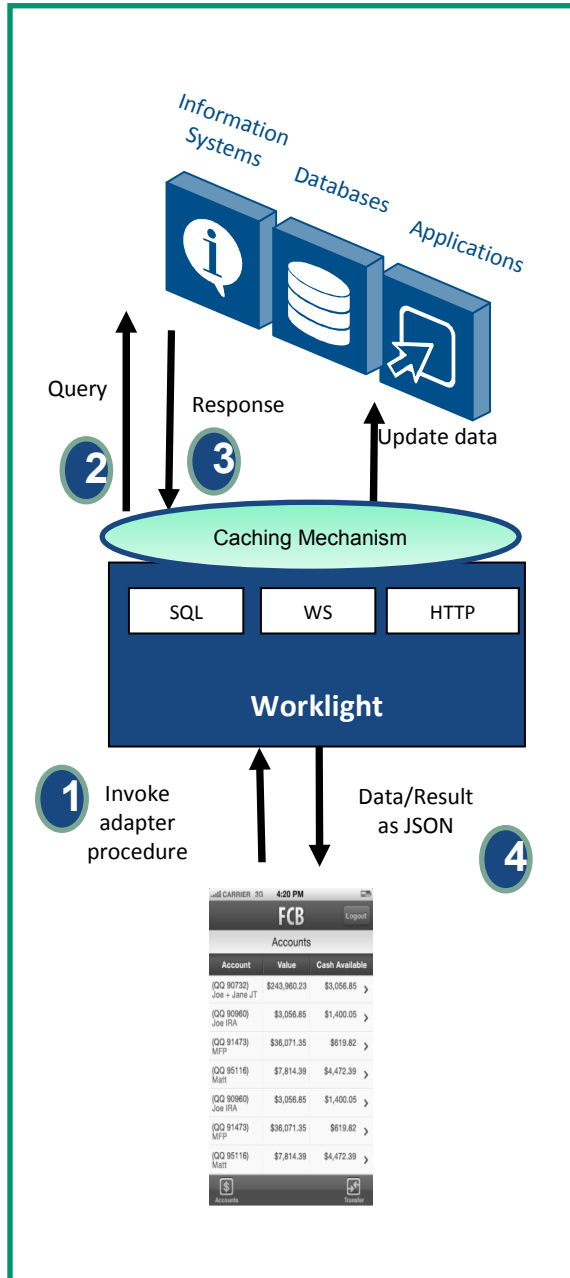
Push Notification administration

Analytics including user adoption and usage data

Runs on **WebSphere Application Server** versions 7, 8, 8.5 including the **Liberty Profile**

Supports **Physical Clustering** for high availability

Worklight Server Adapters



Universality

Supports multiple integration technologies and back-end information systems. Out of the box support for SQL, HTTP (REST and SOAP) and Cast Iron Adapters

Read-only as well as Transactional Capabilities

Adapters support read-only and transactional access modes to back-end systems

Fast Development

Defined using simple XML syntax, and easily invoked by clients with JavaScript API

Security

Use of flexible authentication facilities to create connections with back-end systems
Adapters offer control over the identity of the connected user

Caching

Caching utilized to store retrieved back-end data

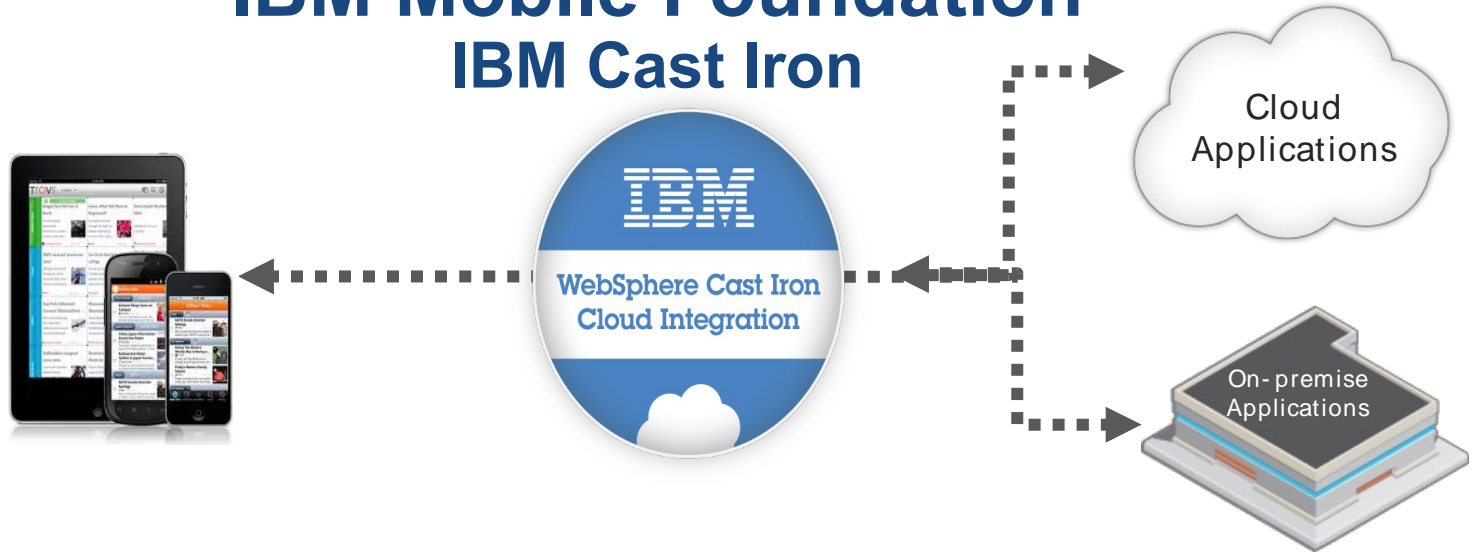
Transparency

Data retrieved from back-end applications is exposed in a uniform manner regardless of the adapter type

Flexibility

Open interface for custom adapter development

IBM Mobile Foundation IBM Cast Iron



Flexible

Comprehensive

Rapid

Connectivity to hundreds of apps

Reusable templates (TIPs)

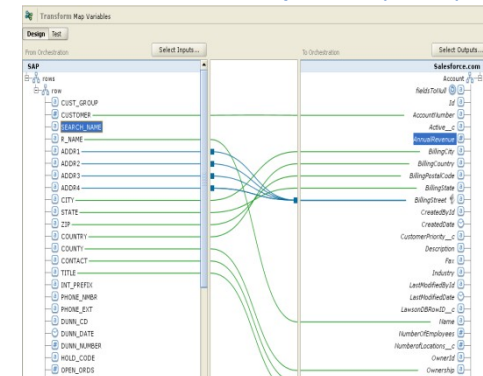


WebSphere Cast Iron Live

Hypervisor Edition

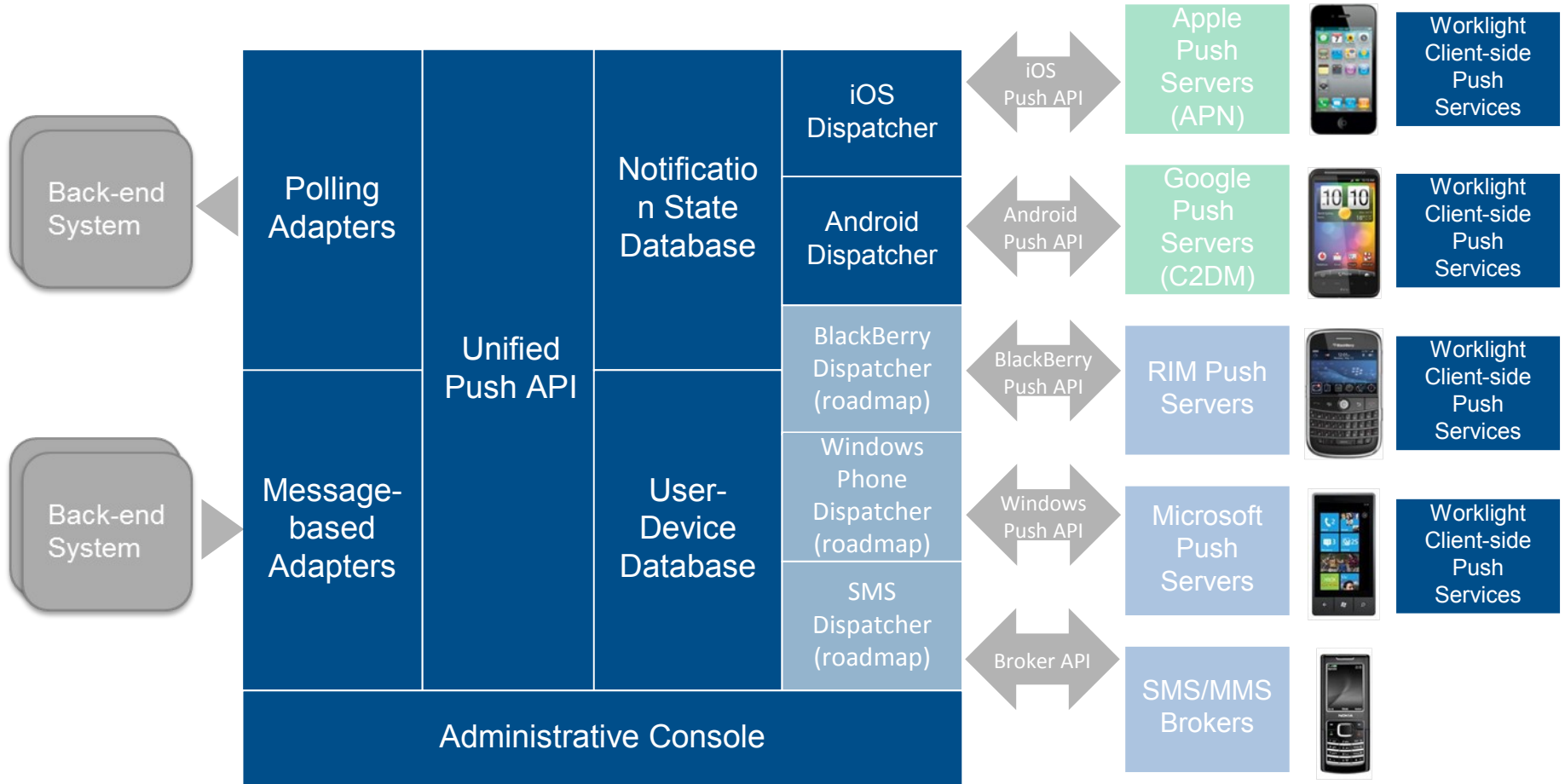


Physical appliances (IBM)

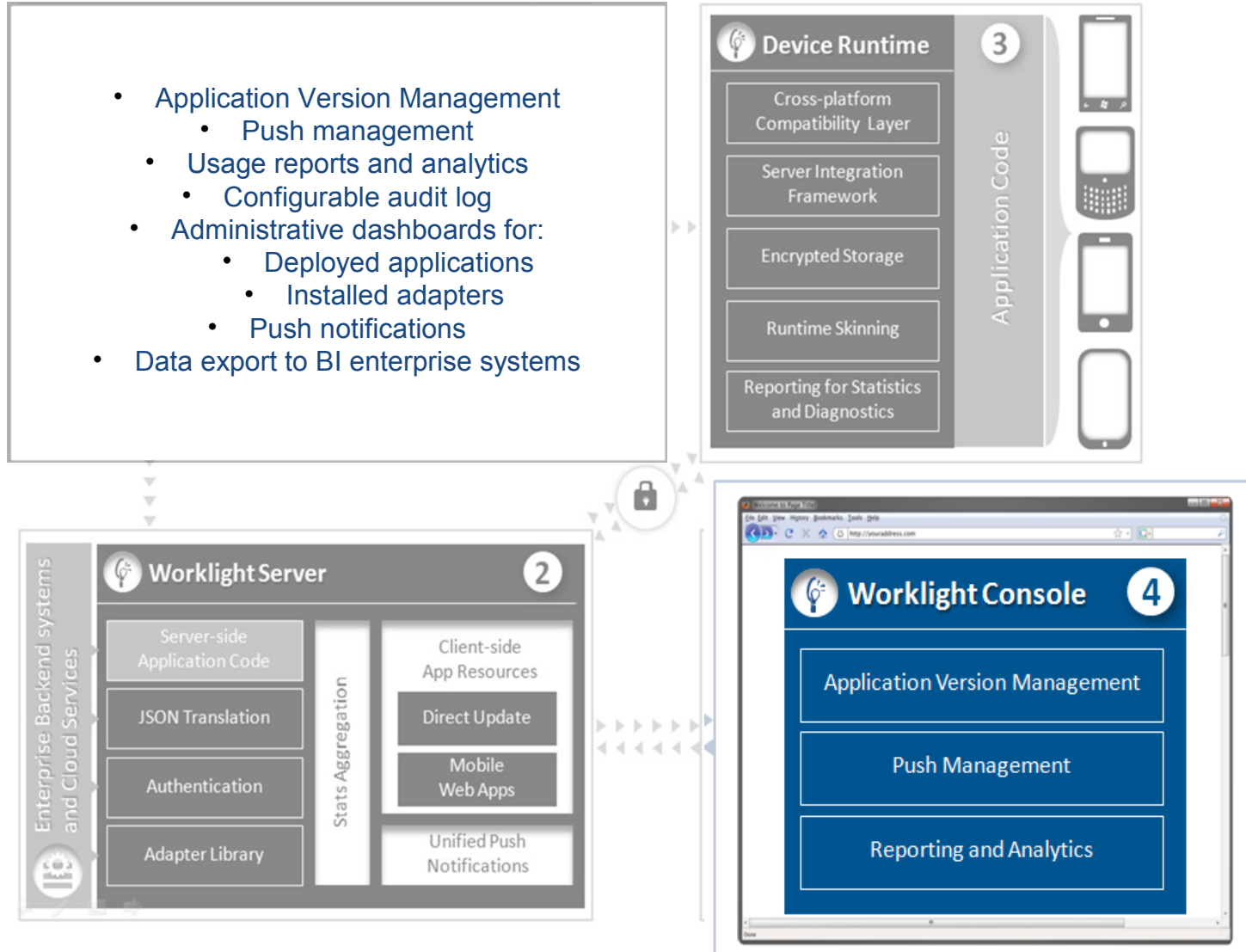


Worklight Server

Unified Push Notifications Architecture



Worklight Console



Worklight Console Application Versioning

[Catalog](#) | [Push Notifications](#) | [Reports](#) | [Active Users](#)

Deploy application or adapter: [Browse...](#) [Submit](#)

MyFeeds [X Delete](#)

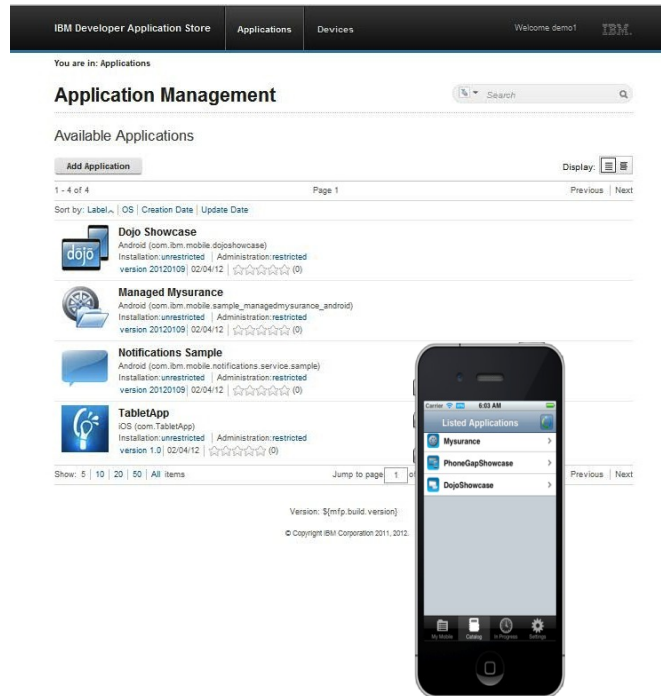
MyFeeds
 Preview as: [Last updated at: 2012-04-16 08:52](#)

	Version 1.0 ● Active	Authenticity Testing: ! Disabled
<input type="checkbox"/>	Lock this version	
	Version 1.2 ● Active	Authenticity Testing: ! Disabled
<input type="checkbox"/>	Lock this version	
	Version 1.1 ● Active, Notifying	Authenticity Testing: ! Disabled
	Notification text (will appear on the device): <input type="text" value="Version 1.2 has been released"/>	
<input type="checkbox"/>	Lock this version	
	Version 1.0 ● Disabled	Authenticity Testing: ! Disabled
	Notification text (will appear on the device): <input type="text" value="Upgrade to version 1.1"/>	
	URL to app store or market: <input type="text" value="http://www.ibm.com"/>	
<input type="checkbox"/>	Lock this version	
	Version 1.0 Get App URL	

Device specific versions are uncoupled

Supports multiple versions on the same platform

Worklight Application Center Private App Store

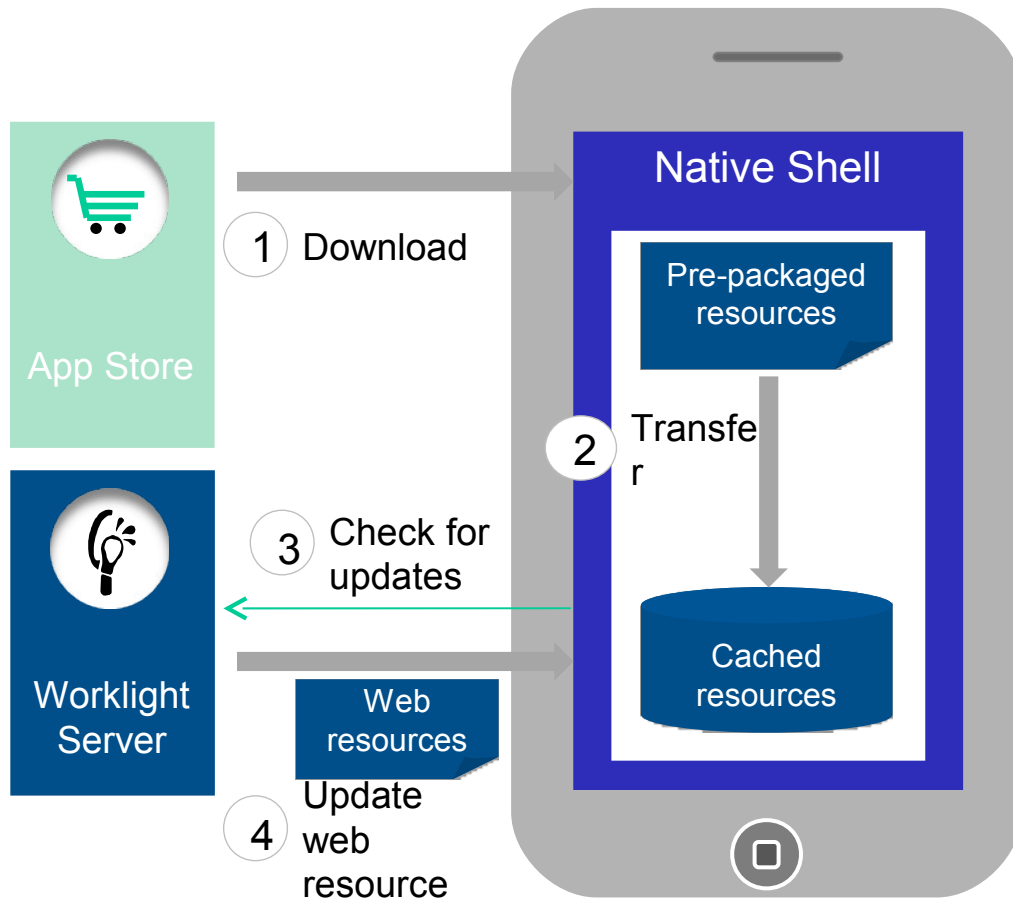


A cross platform private mobile application store similar to public app stores but focused on the needs of an organization or a team

Key capabilities:

- delivers distribution and management of mobile applications within a company / teams
- easy distribution of iOS and Android apps within a team
- provides versioning and updates
- centralizes rating and feedback information
- controls who can modify or install an application
- easy to install and simple to run

Direct Update – on-device logic



Web resources packaged with app to ensure initial offline availability

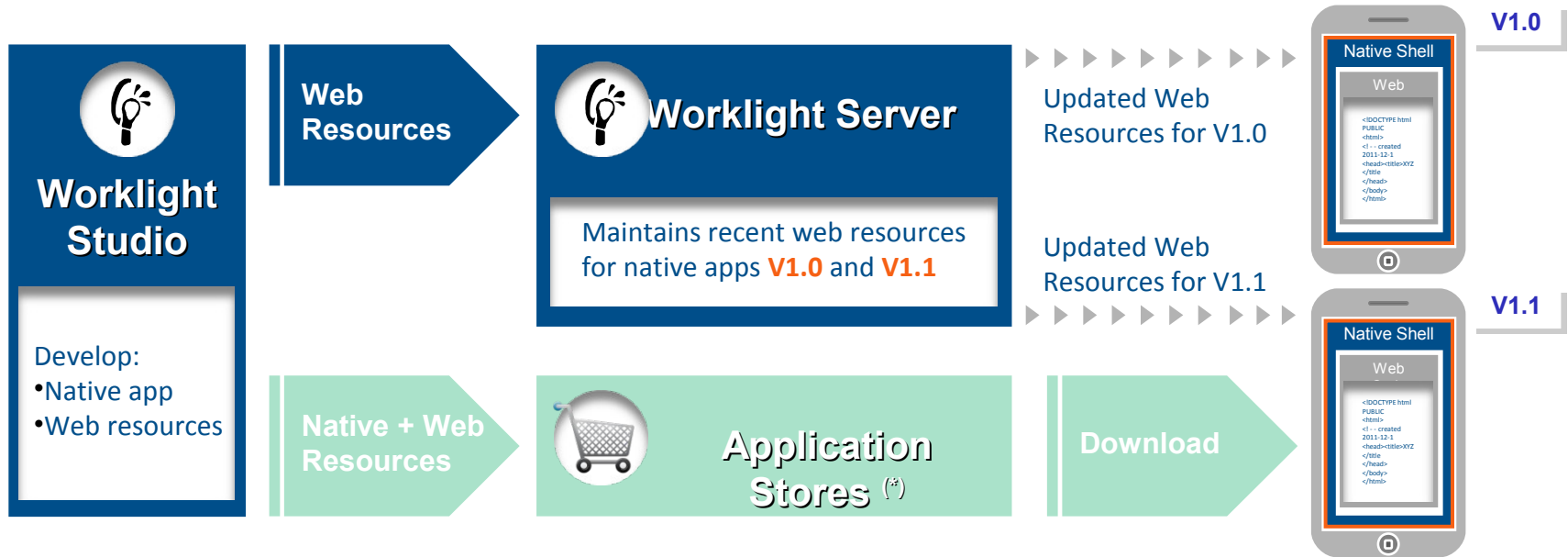
Web resources transferred to app's cache storage

App checks for updates

- On startup
- On foreground

Updated web resources downloaded when necessary

Direct Update - distribution



(*) During development cycles, testers automatically get recent web resources via internal distribution mechanisms and not application stores.