



IBM Innovate 2012

Introduction to IBM Mobile Enterprise Development Solution

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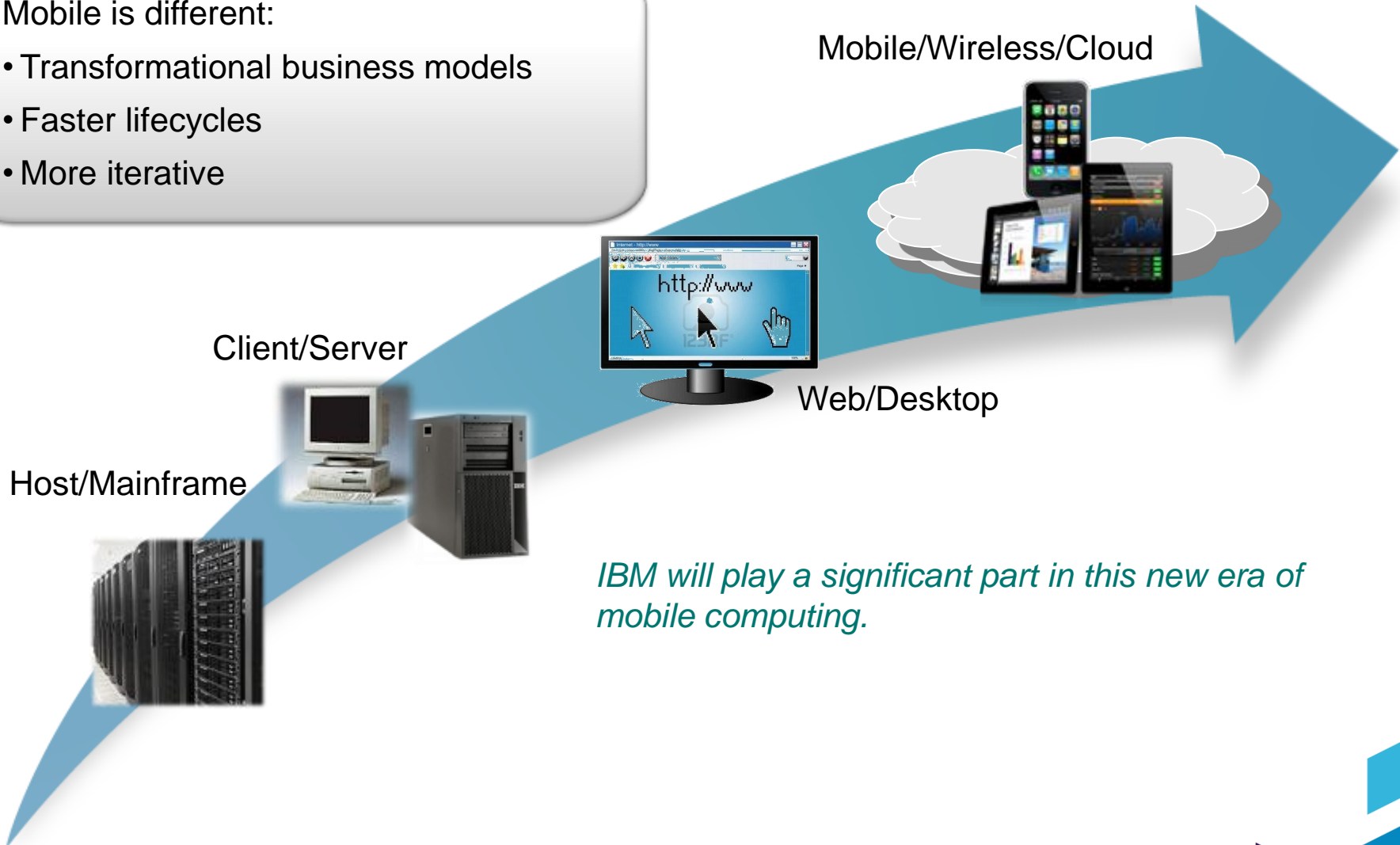
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Mobile is the NEXT dominant phase of computing

Mobile is different:

- Transformational business models
- Faster lifecycles
- More iterative



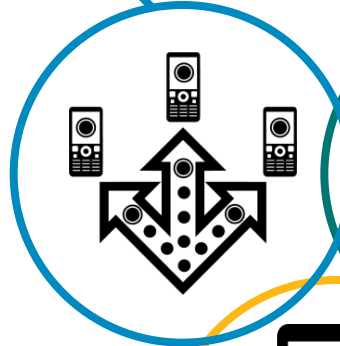
IBM will play a significant part in this new era of mobile computing.

IBM's strategy addresses full range of mobile enterprise needs

Extend & Transform

Extend existing business capabilities to mobile devices

Transform the business by creating new opportunities



Build & Connect

Build mobile applications

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



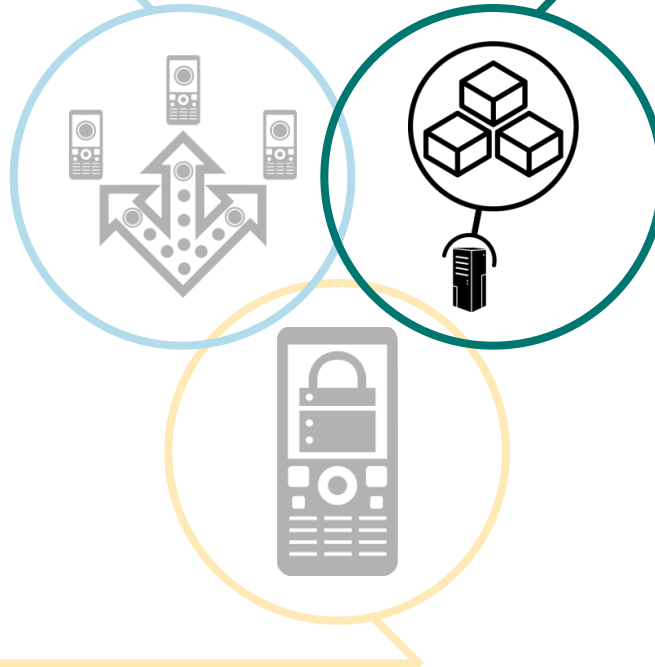
Manage & Secure

Manage mobile devices, services and applications

Secure my mobile business

A deeper look at **Build & Connect** capabilities

Extend & Transform



Build & Connect

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

Key Capabilities

- Mobile web, hybrid and native app development
- Enterprise data, service, and application integration
- Complete development project lifecycle management

Manage & Secure

Addressing top mobile development challenges

Developing for multiple mobile platforms

- Highly fragmented set of platforms, devices, languages, and tools **increases cost and complexity of development and test**
- Choosing not to support one or more platforms **reduces the reach of an application**



Delivering high quality apps that engage users and meet business objectives

- Poor quality can **negatively impact brand image**
- Bad ratings and comments can **cause other users to avoid trying an app**

Customer Ratings



Integrating with enterprise systems

- Recreating instead of leveraging existing business logic **increases maintenance costs and risk of inconsistent behavior**
- Lack of ready back-end services **slows front-end development and increases potential for last minute integration issues**



Meeting accelerated time to market requirements

- Hand-off errors and delays between teams **slows progress and responsiveness to features and fixes**
- Misalignment of stakeholders **results in late rework and increased cycle times**



Challenge 1: Developing for multiple mobile platforms

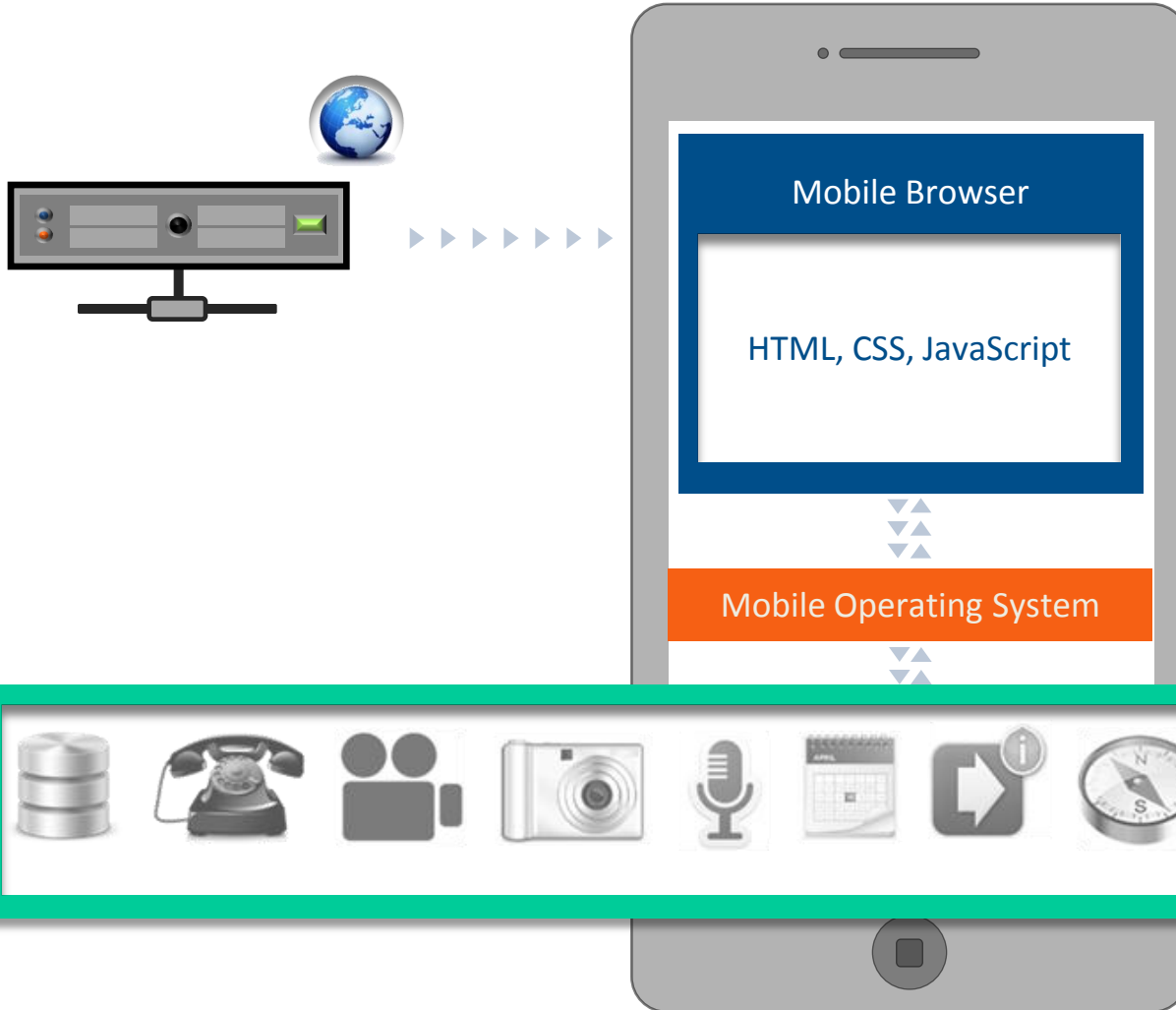
Downloadable (Native) Apps



High-quality user experience and full device access.

Platform-specific, requires unique expertise, expensive to develop and maintain.

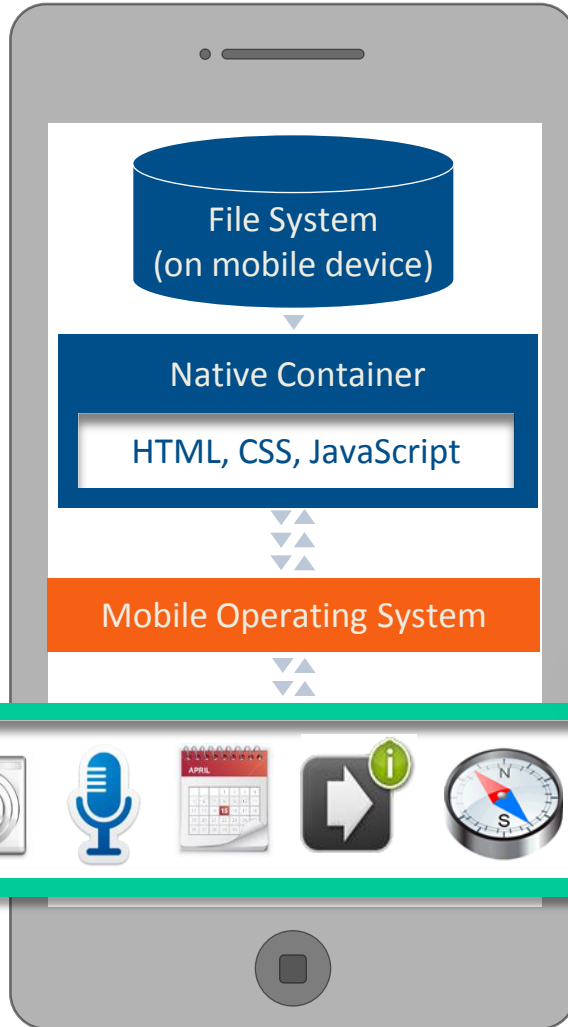
Web Apps



Written in HTML5
JavaScript and CSS3.
Quick and cheap to
develop.

Less powerful than native
and limited device
access.

Hybrid Apps



Combines best of both worlds:

Primarily written in HTML5, CSS, JS while allowing full access to device capabilities.



Developing for multiple mobile platforms - IBM Worklight 5.0

Fast and cost-effective development, integration and management of rich, cross-platform mobile applications



“We chose IBM Worklight because it was the best technology for Lotte to consolidate application development, enhancement and maintenance, while ensuring cost savings and timely delivery to our customers.”

— Kang, Chang Nam, IT Planning Director, Lotte Credit Card

Client Challenge

Using standards-based technologies and tools and delivering an enterprise-grade services layer that meets the needs of mobile employees and customers

Key Capabilities

- Mobile optimized middleware
- Open approach to 3rd-party integration
- Strong authentication framework
- Encrypted offline availability
- Enterprise back-end connectivity
- Unified push notifications
- Data collection for analytics
- Direct updates and remote disablement
- Packaged runtime skins

Developing for multiple mobile platforms

IBM Worklight Open, cost-effective, cross-platform mobile app development

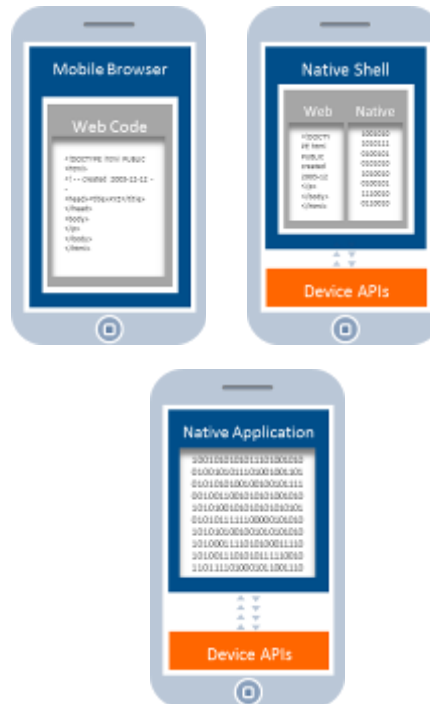
App development using native and/or familiar web technologies:

- HTML5
- CSS3
- JavaScript



App delivery in variety of forms:

- Mobile Web app
- Hybrid app
- Native



Compatible with prominent HTML5 libraries and tools:



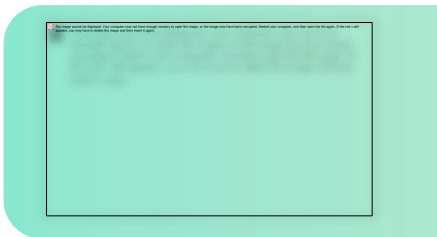
IBM Worklight Integration with native SDKs

The screenshot illustrates the development environment for integrating Worklight with native SDKs. It shows the Eclipse IDE with the following components:

- Package Explorer:** Shows the project structure for 'Worklight Demo', including 'common' and 'native' sub-projects.
- Editor:** Displays the HTML code for 'DemoApp.html', which includes a 'Welcome' button and a link to 'http://www.worklight.com'.
- Preview Window:** Shows a simulated iPhone interface with the 'Worklight' logo and the text 'Welcome to IMPACT'. Below the logo, it says 'This is a demonstration to showcase the flexibility of IBM Worklight v5.0' and 'We hope you enjoy it. Check us out at <http://www.worklight.com>'.
- Console:** Shows the output of the application, including the message 'DemoApp [30853]: init success [Switching to p 0x14201]'.
- Run As Menu:** A context menu is open over the 'native' folder, with the 'Run As' option selected. The 'Run As' submenu is visible, showing options like 'Build All and Deploy', 'Build Environment and Deploy', 'Preview', 'Preview...', and 'Xcode project'.

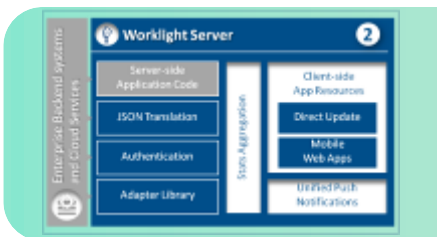
A green arrow points from the 'Run As' menu to the simulator window, indicating the action of running the application on the native SDK.

Worklight mobile platform overview



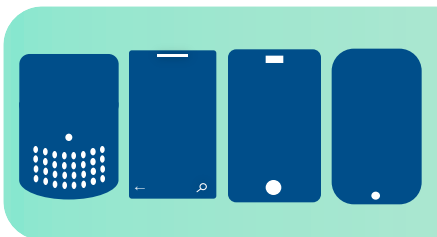
Worklight Studio

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



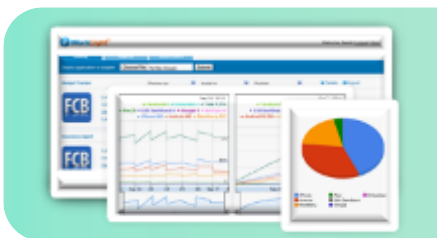
Worklight Server

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



Worklight Runtime Components

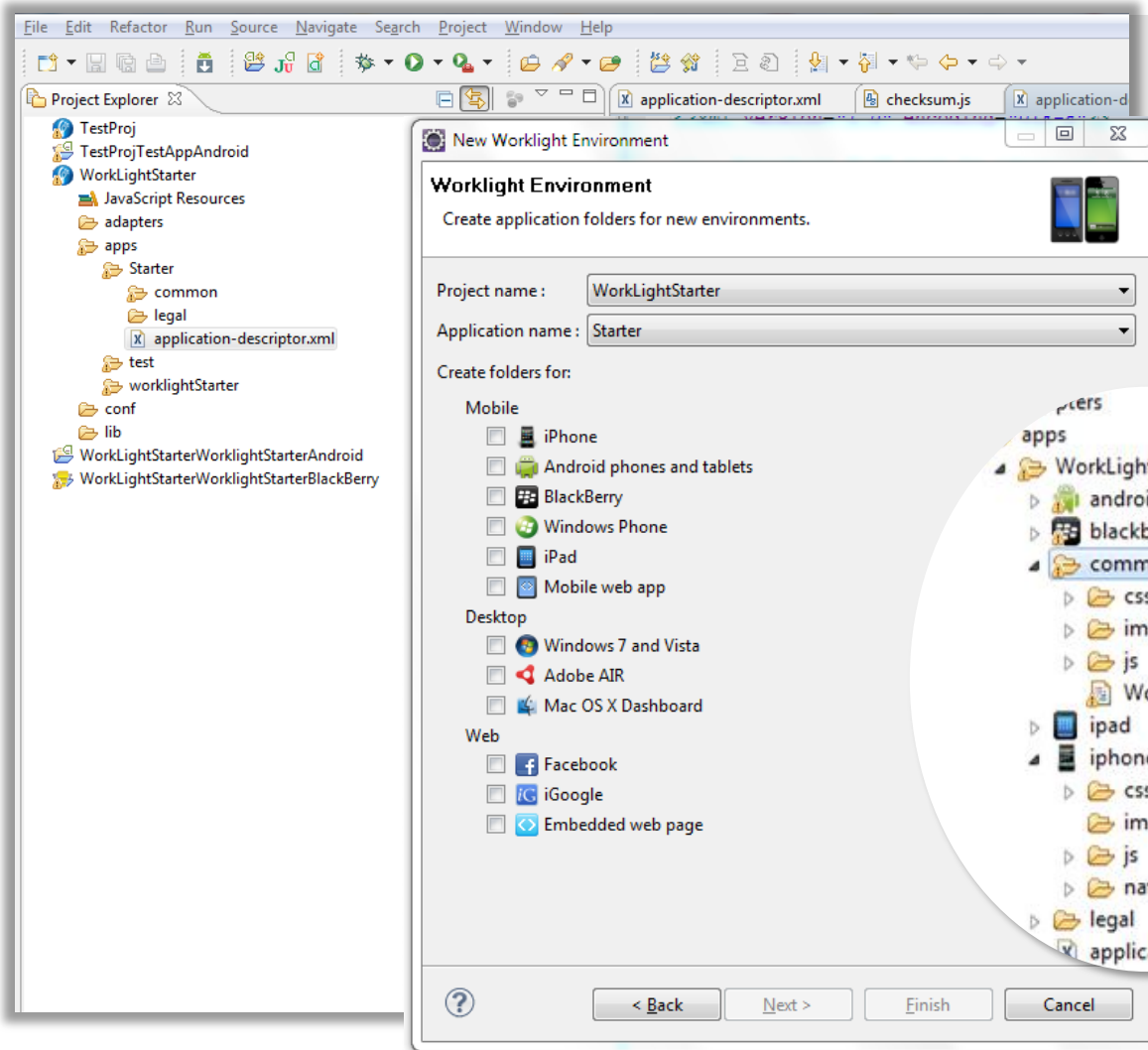
Extensive libraries and client APIs that expose and interface with native device functionality and the Worklight Server



Worklight Console

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

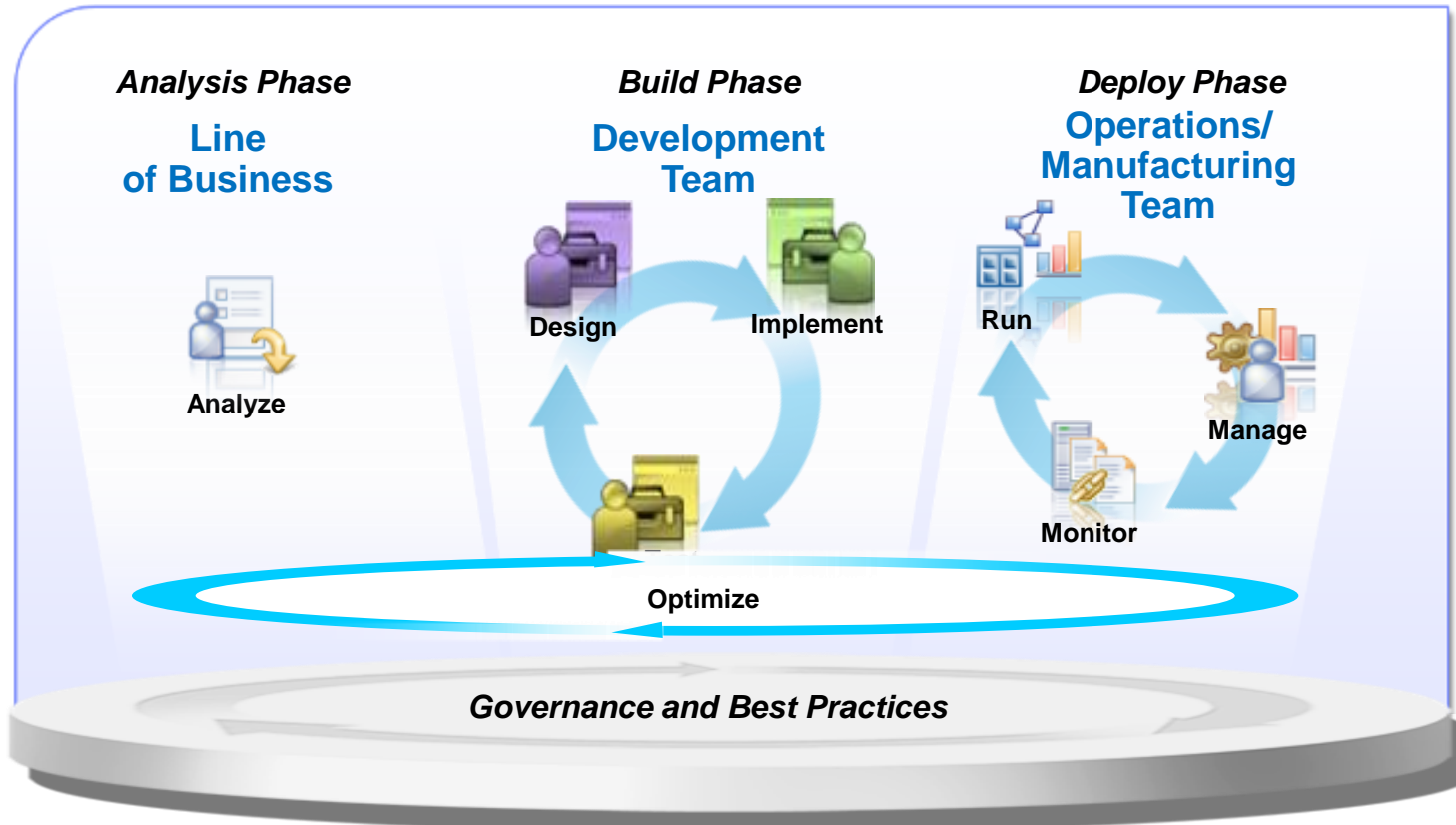
Common web codebase facilitates reuse



- Worklight projects contain:
- Applications (mobile UI)
 - Adapters (stateless services)

Challenge 2: Delivering high quality apps that engage users and meet business objectives

Mobile development is more than just coding ...



Coding is just one component of the mobile application development lifecycle

Focus on user experience first to achieve outside-in design

1 The app displays the Dividend Contribution screen

2 The user selects Choose an account to pay from

362: Dividend Contribution - Mobile

Overview

362: Dividend Contribution - Mobile

Description:

Project: JKE Banking (Requirements)

Team Ownership: JKE Banking (Requirements)

Created On: Apr 21, 2012 11:14:17 AM

Created By: Bob

Modified On: Apr 21, 2012 12:13:19 PM

Modified By: Bob

Is Suspect: Select a profile

Type: Storyboard

Format: Storyboard

Status: Draft

- ✓ Collaborate as a team using comments and annotations
- ✓ Get feedback from non-technical stakeholders

Formal reviews drive agreement and prevent re-work

✓ Reviews & approvals ensures artifacts are reviewed and/or approved by key team members and captures compliance requirements.

Requirements



Work Items

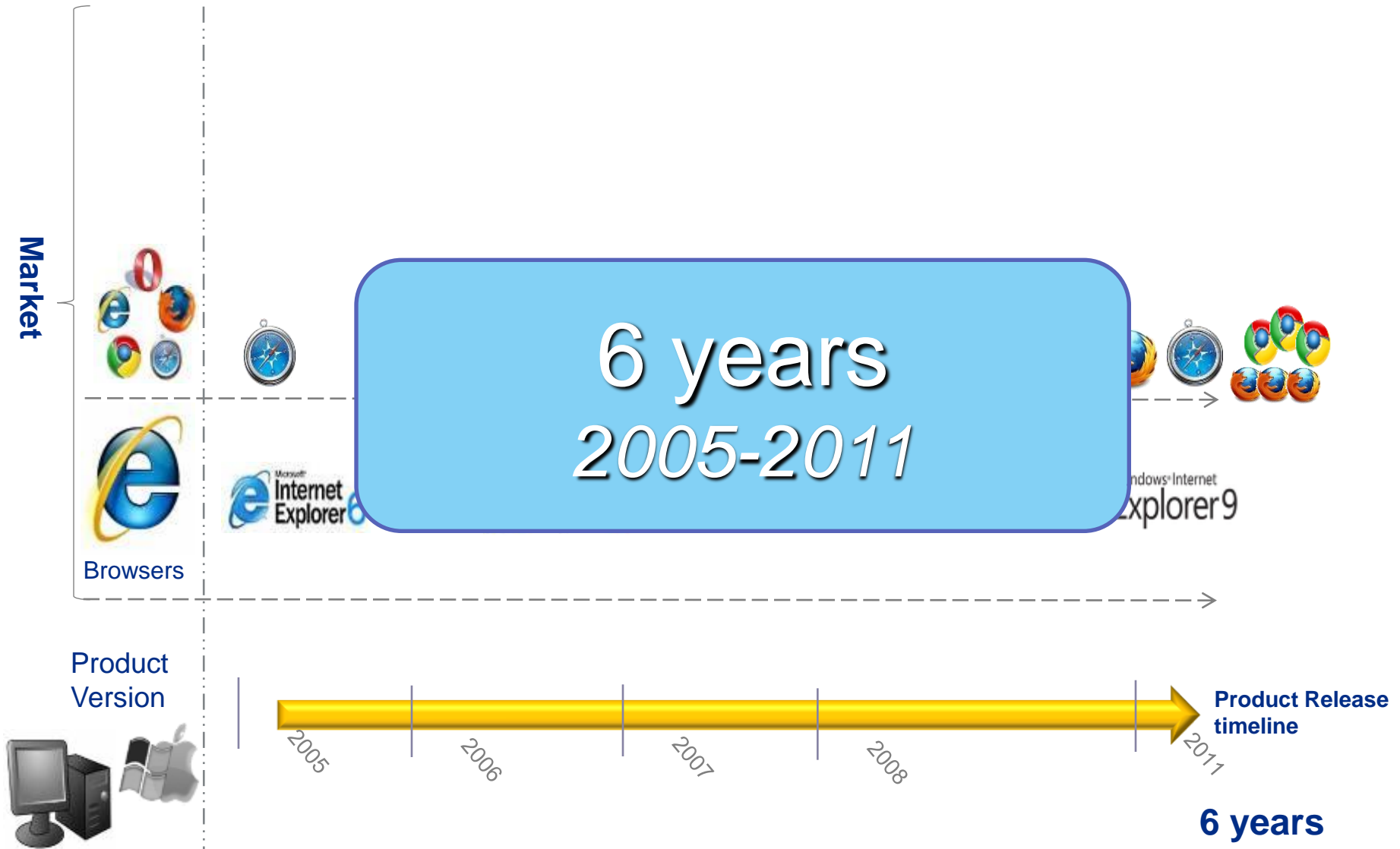


Test Artifacts

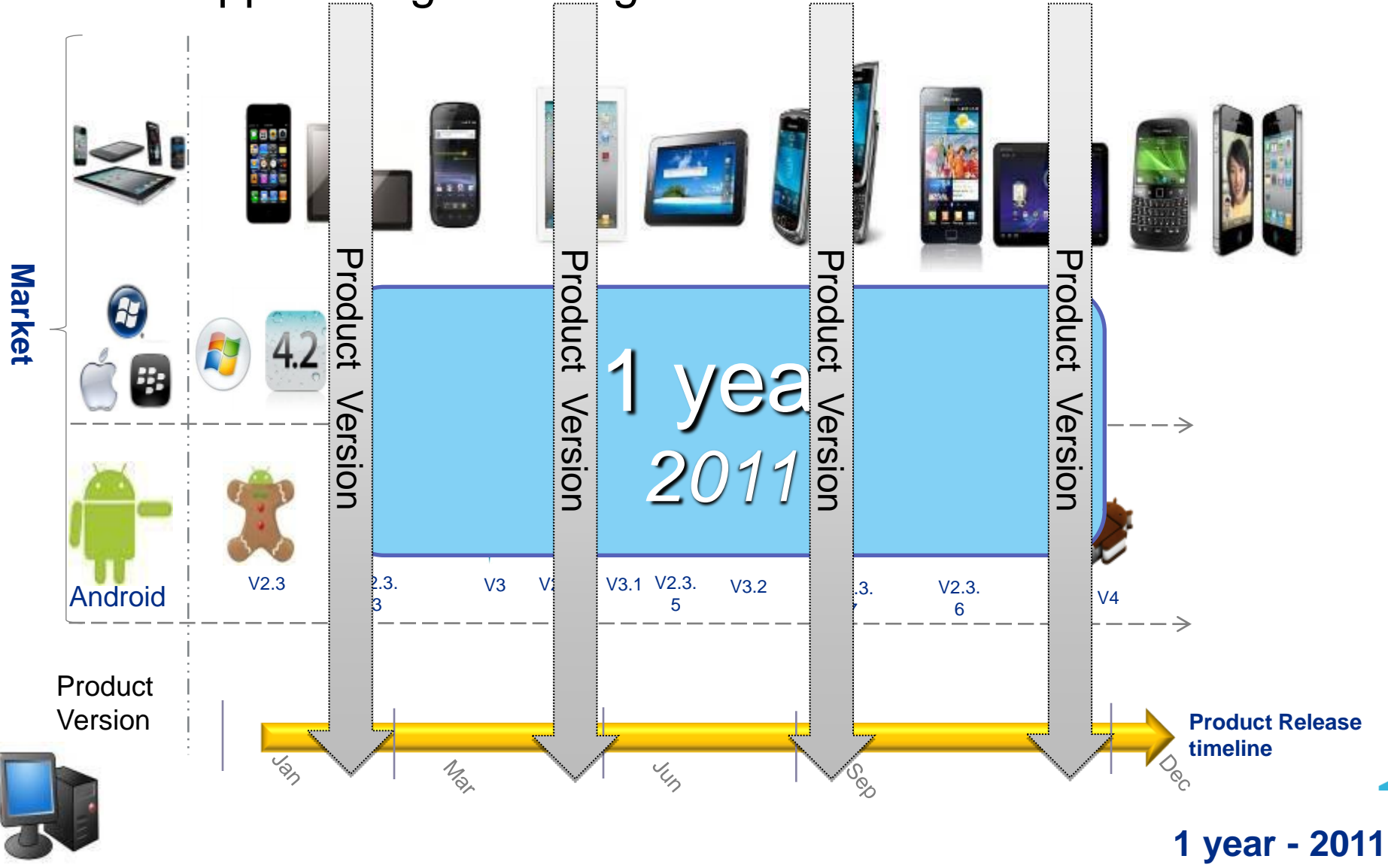


Review Type	Name	Status	Comments
Approver	Bob	Pending	
Reviewer	Sally	Pending	

Web App Testing Challenge – Last 6 Years



Mobile App Testing Challenge – 1 Year



1 year - 2011

Challenge 3: Integrating with enterprise systems

Integrating with existing systems

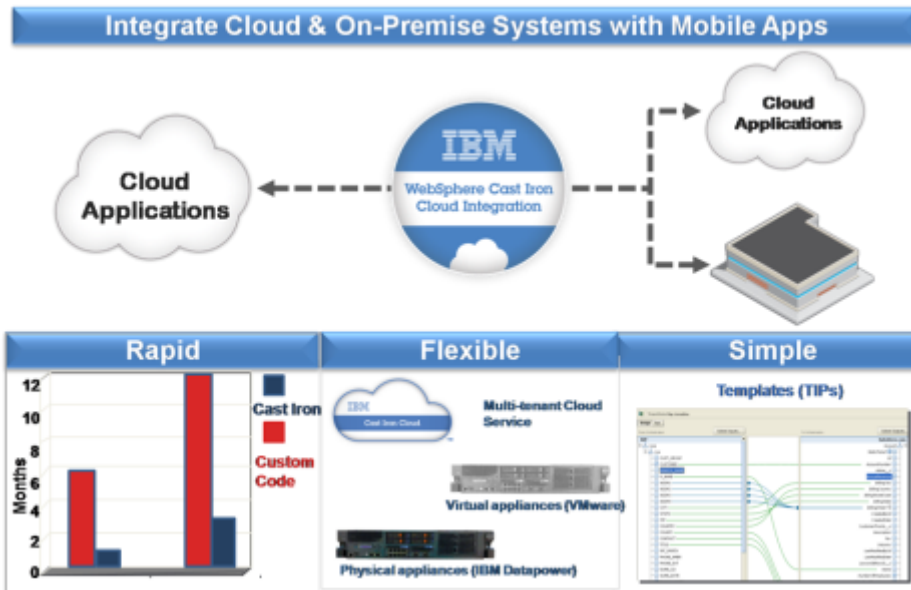


- Mobile applications need to connect to enterprise back-end data and services
- Existing programs and services may need to be modified for the mobile app
- Multiple skills will be involved, responsible for different parts of the mobile application

Rapid, simple & flexible connectivity for mobile apps

WebSphere Cast Iron Cloud integration

Simple and flexible integration for all connectivity projects, allowing you to rapidly integrate SaaS and back-end systems with mobile apps



Client Challenge

Simplified and cost effective mobile integration to back-end systems and cloud

Key Capabilities

- Native connectors and template integration processes to connect mobile apps to backend & cloud systems
- Bidirectional connectivity and business logic
- Centralized monitoring
- Simple and flexible, user-friendly, wizard-based, “configuration, not coding” architecture

Challenge 4: Meeting accelerated time to market requirements

Meeting tight time-to-market requirements

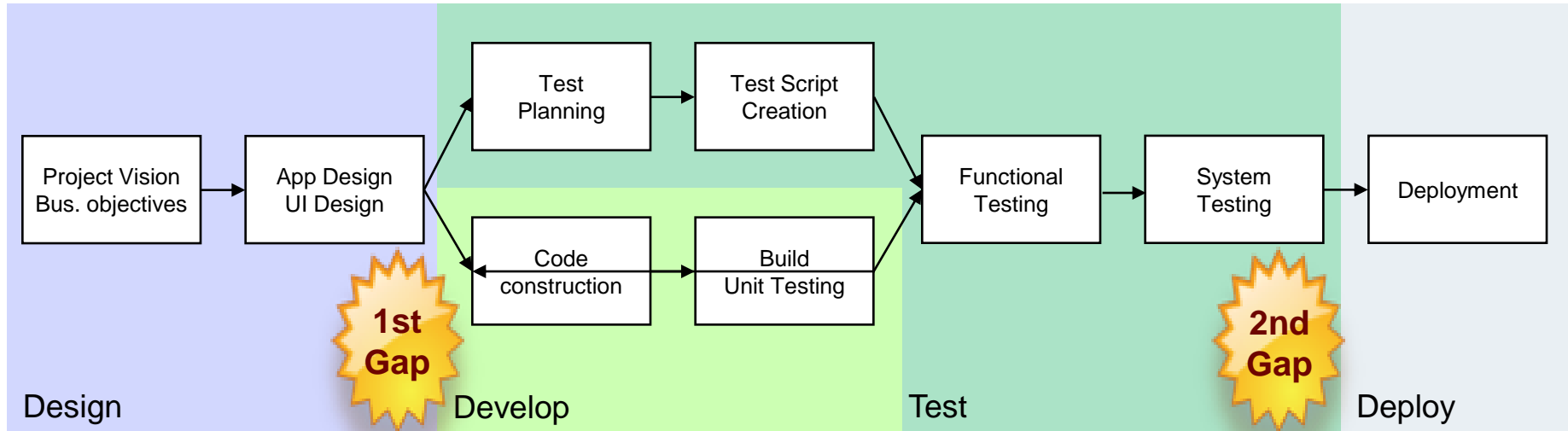
Mobile is pushing traditional delivery approaches to the breaking point



	Mobile Apps	Desktop Apps
Time-to-market	Weeks to Months	Months to Years
Frequency of updates	Once every several weeks	12-18 month cycles



Factors affecting project velocity



There are 2 key gaps affecting project velocity:

- **Gap 1:** Early in project definition
 - Results in rework due to miscommunication of app specification
 - Slows progress due to hand-off errors and confusion between team members
- **Gap 2:** Later in project delivery
 - Lack of automated deployment and validation
 - Mismatches between app requirements and available production infrastructure

Mobile software development is a **team** sport

- Software development **involves a team of people** with diverse skills using different tools
 - Design, development, test, operations, etc.
- Tools can make or break collaboration
 - Fragmented tools create silos
 - Integrated tools break down barriers
- Effective development depends on ...
 - Defined goals
 - Transparency of progress and quality trends
 - **Aligning teams across the entire application development lifecycle**



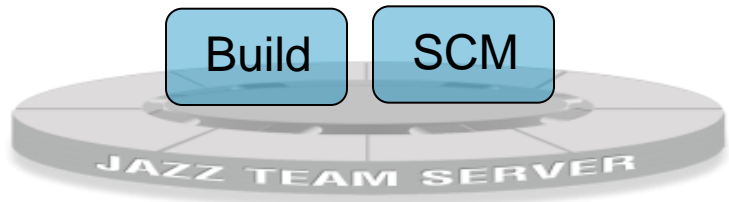
Example Value of Integration - Mobile and ALM



Mobile devices & emulators



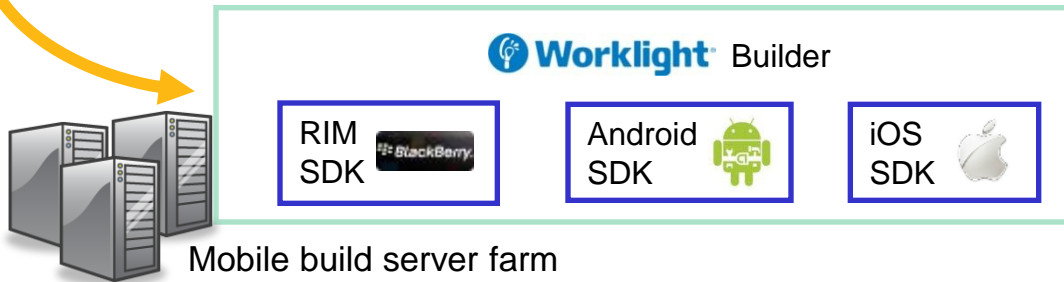
RTC build engine and Worklight mobile build utility provide a controlled build environment for mobile apps – both native and hybrid



Team repository of apps



App stores



Worklight Application Center

IBM Worklight Application Center Applications Devices Welcome Demo User IBM

You are in: Applications

Application Management

Available Applications

Add Application Display:

1 - 5 of 9 Page 1 | 2 Previous | Next

Sort by: Label ^ | OS | Update Date Show inactive



App Center Installer
 iOS (com.ibm.appcenter)
 Installation: **unrestricted** | Administration: **restricted**
 version 1 | 4/25/12 11:44 AM | ★★★★★ (1)



Dojo Showcase
 iOS (com.ibm.mobile.DojoShowcase)
 Installation: **unrestricted** | Administration: **restricted**
 version 20120404 | 4/25/12 7:29 PM | ☆☆☆☆☆ (0)



Dojo Showcase
 Android (com.ibm.mobile.dojoshowcase)
 Installation: **unrestricted** | Administration: **restricted**
 version 20120404 | 4/26/12 1:11 PM | ☆☆☆☆☆ (0)



PhoneGap Showcase
 iOS (com.ibm.mobile.PhoneGapShowcase)
 Installation: **unrestricted** | Administration: **restricted**
 version 20120404 | 4/25/12 7:29 PM | ★★★★★ (1)



TestApp
 Android (com.TestApp)
 Installation: **unrestricted** | Administration: **restricted**

IBM delivers a scalable and incrementally deployable mobile solution

Developing for multiple mobile platforms

- ✓ Cross-platform mobile web and hybrid app development, test, and build
- ✓ Manage plans, tasks, code, builds from a common development workbench
- ✓ Agile planning



Delivering high quality apps that engage users and meet business objectives

- ✓ Linkage and traceability across all phases of development
- ✓ UI sketching and storyboarding
- ✓ Test plan optimization and management and integration with mobile “Device-clouds”
- ✓ Portfolio management

Customer Ratings



Integrating with enterprise systems

- ✓ Integrate Worklight Studio with the Rational IDEs to create a comprehensive IDE for all parts of the app (UI, mid tier, back-end)
- ✓ Extend enterprise assets as mobile-consumable services and connect via Worklight adapters



Meeting accelerated time to market requirements

- ✓ Automate and manage continuous, end-to-end build and deployment process with RTC
- ✓ Deploy to private dev/test app
- ✓ Reduce cycle times by aligning dev and operations teams



QUESTIONS

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