



# IBM Innovate 2012

## Introduction to IBM Mobile Enterprise Development Solution

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IBM Software

# Innovate2012

The Premier Event for Software and Systems Innovation



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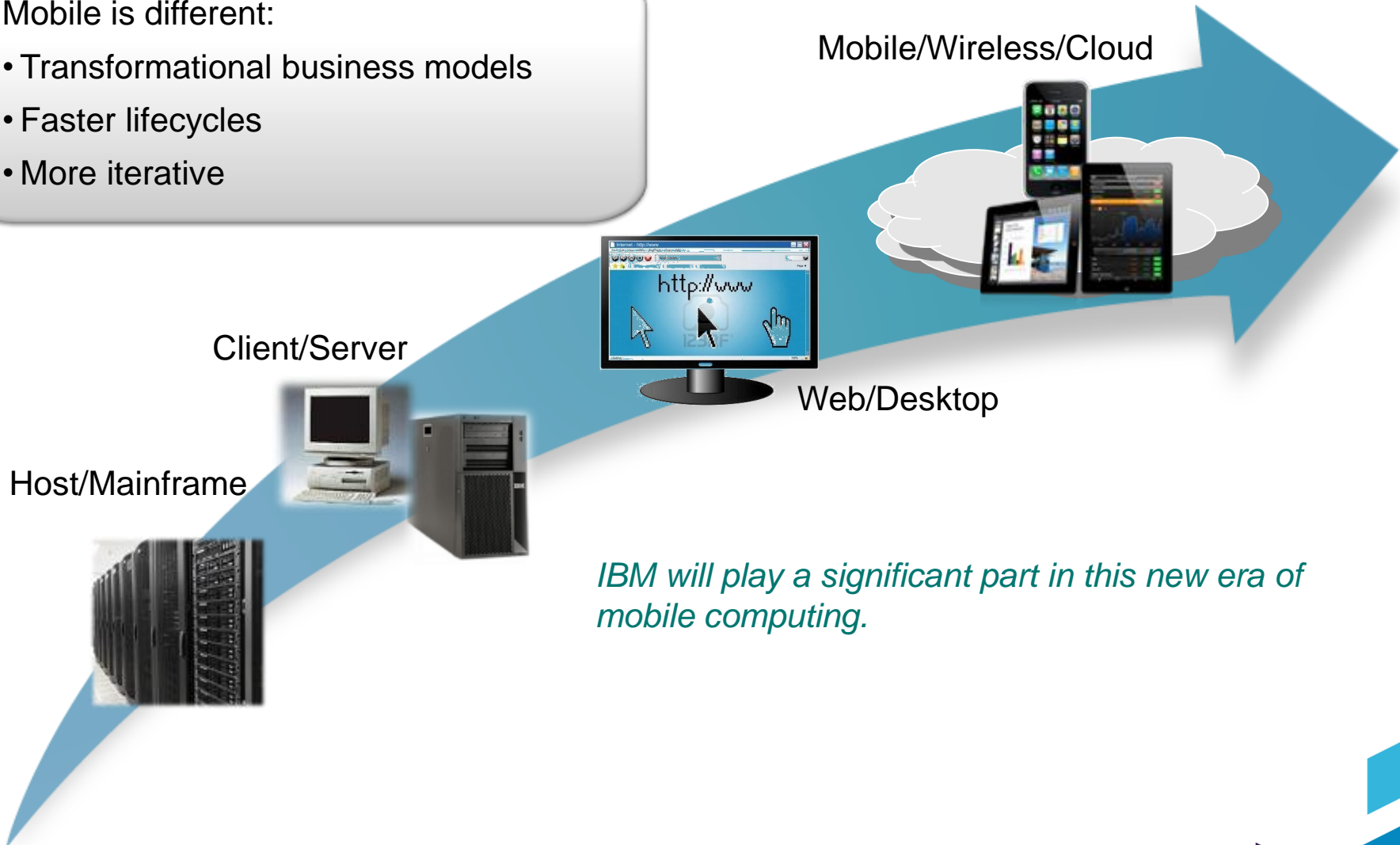
## Agenda

- IBM Mobile Strategy – Client Initiatives
- Addressing Top Mobile Development Challenges
- IBM Worklight
- IBM Rational CLM support for Mobile

# Mobile is the NEXT dominant phase of computing

Mobile is different:

- Transformational business models
- Faster lifecycles
- More iterative



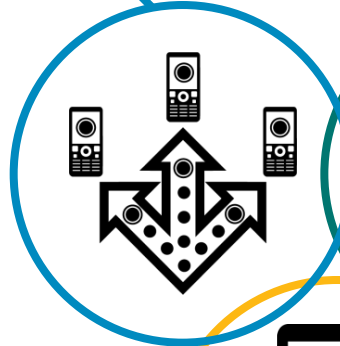
*IBM will play a significant part in this new era of mobile computing.*

# 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



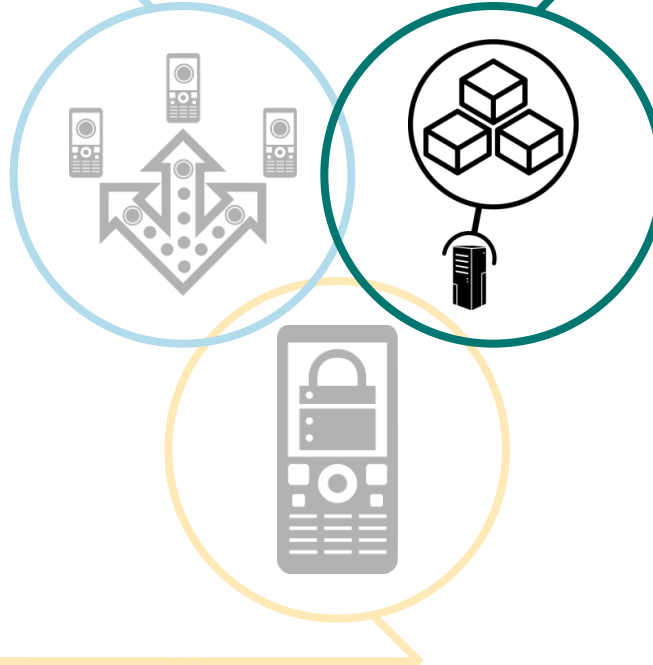
## Manage & Secure

*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



## 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

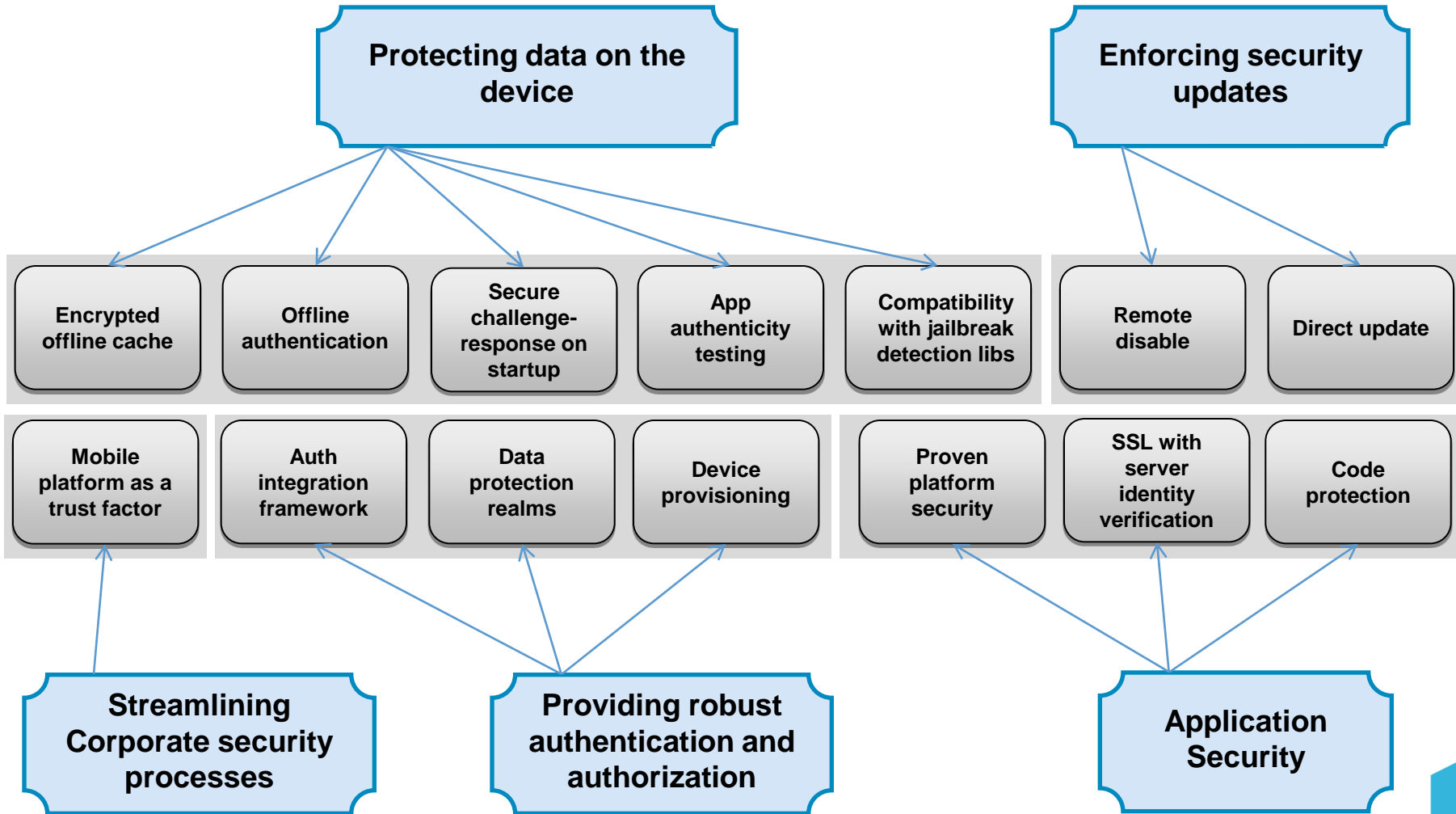
- Mobile optimized middleware
- Open approach to 3rd-party integration
- Strong authentication framework
- Encrypted offline availability
- Enterprise back-end connectivity
- Unified push notifications
- Data collection for analytics
- Direct updates and remote disablement
- Packaged runtime skins



# IBM Worklight Integration with native SDKs

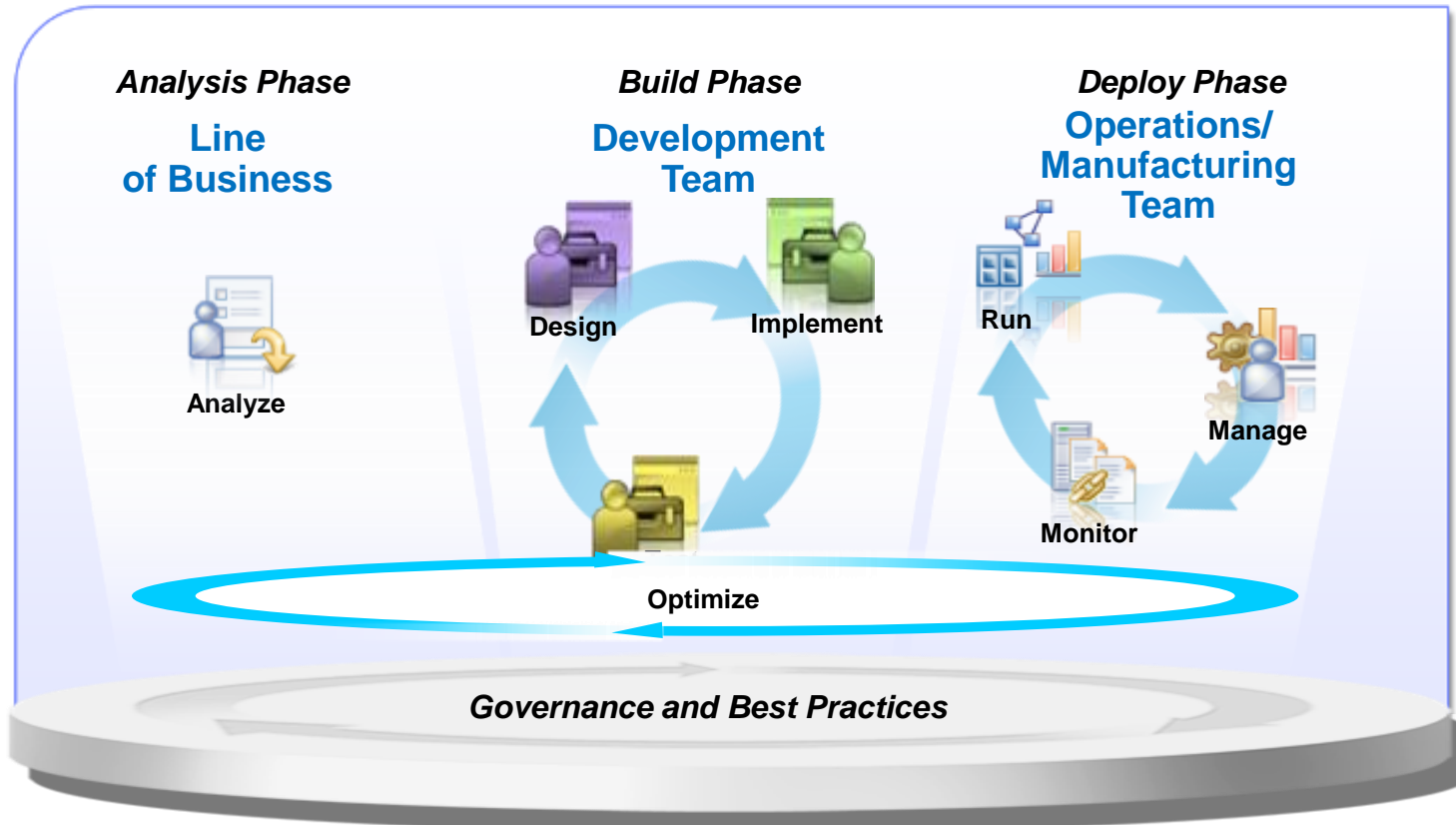
The screenshot illustrates the Eclipse IDE environment for developing a native mobile application. The Package Explorer on the left shows the project structure, including a 'native' folder. The central editor displays the HTML code for the application, which includes the Worklight logo and navigation links. A context menu is open over the 'native' folder, with the 'Run As' option selected, showing a list of actions including 'Xcode project'. To the right, the 'Running DemoApp on iPhone 4.3 Simulator' window shows the application running on a simulated iPhone. The simulator displays the 'Demonstration' app interface, which includes the Worklight logo and a welcome message: 'Welcome to IMPACT. This is a demonstration to showcase the flexibility of IBM Worklight v5.0. We hope you enjoy it. Check us out at <http://www.worklight.com>'. A green arrow points from the 'Run As' menu to the simulator window.

# IBM Worklight Security Features Mapping



# 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

Requirements Management (RM)

JKE Banking (Requirements)

Project Dashboard Artifacts Collections Modules Reports

JKE Banking (Requirements) > JKE Business Recovery Matters Project > User Story Elaboration > Storyboards >

Go to Frame List 362: Dividend Contribution - Mobile

1 The app displays the Dividend Contribution screen

2 The user selects Choose an account to pay from

Collaborate as a team using comments and annotations

Get feedback from non-technical stakeholders

IBM Unapporated browser

# 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

**Approval**

Participant's Review: In progress 0% completed Your role: Approver

Overall Review: Draft In progress 85% completed Pause Review

Due: Apr 18, 2011

Instructions to reviewers:  
List of requirements for our second sprint. All comments have been resolved. Please review and approve requirements as written.

Participant	Type of Participant	Review results
Bob	Approver	Done - 5 Approved
Deb	Approver	Done - 5 Approved
Marco	Approver	60% - 2 Approved, 1 Disapproved
Tanuj	Approver	

Work Items

Test Artifacts

**18: Dividend Allocation by Percentage**

Test Case Overview | Snapshots | History

Originator: Tanuj Owner: Tanuj State: Under Review

Description: select a list of potential donations and enter percentages for each

**Formal Review**

List the people who will be reviewers and approvers of this content and define your roles.

View: All

Show All items per page

Review Type	Name	Status
Approver	Bob	Pending
Reviewer	Sally	Pending

**Task 41**

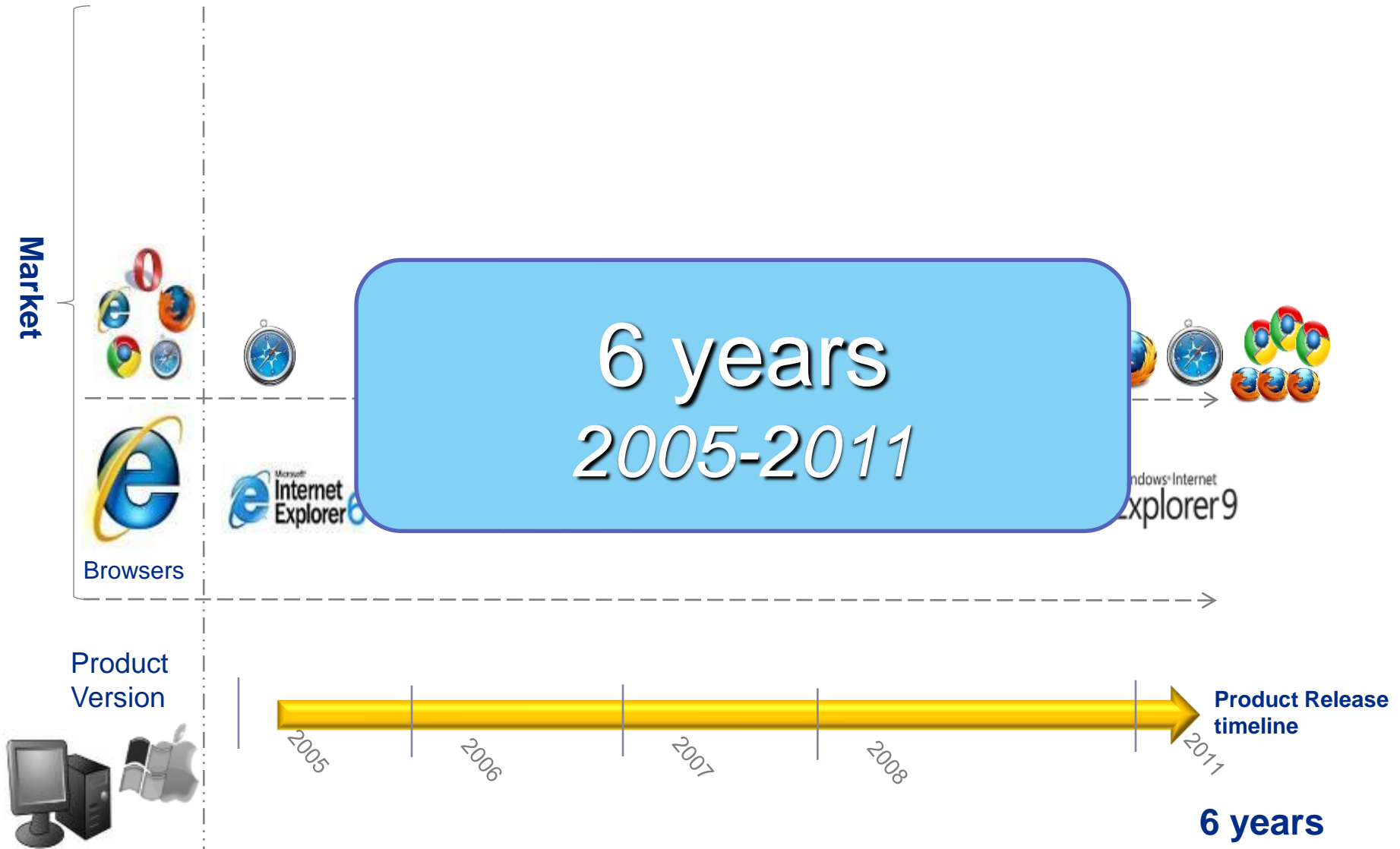
Summary: Implement - Frequency of dividend transfer

Approvals (1) - 1 pending

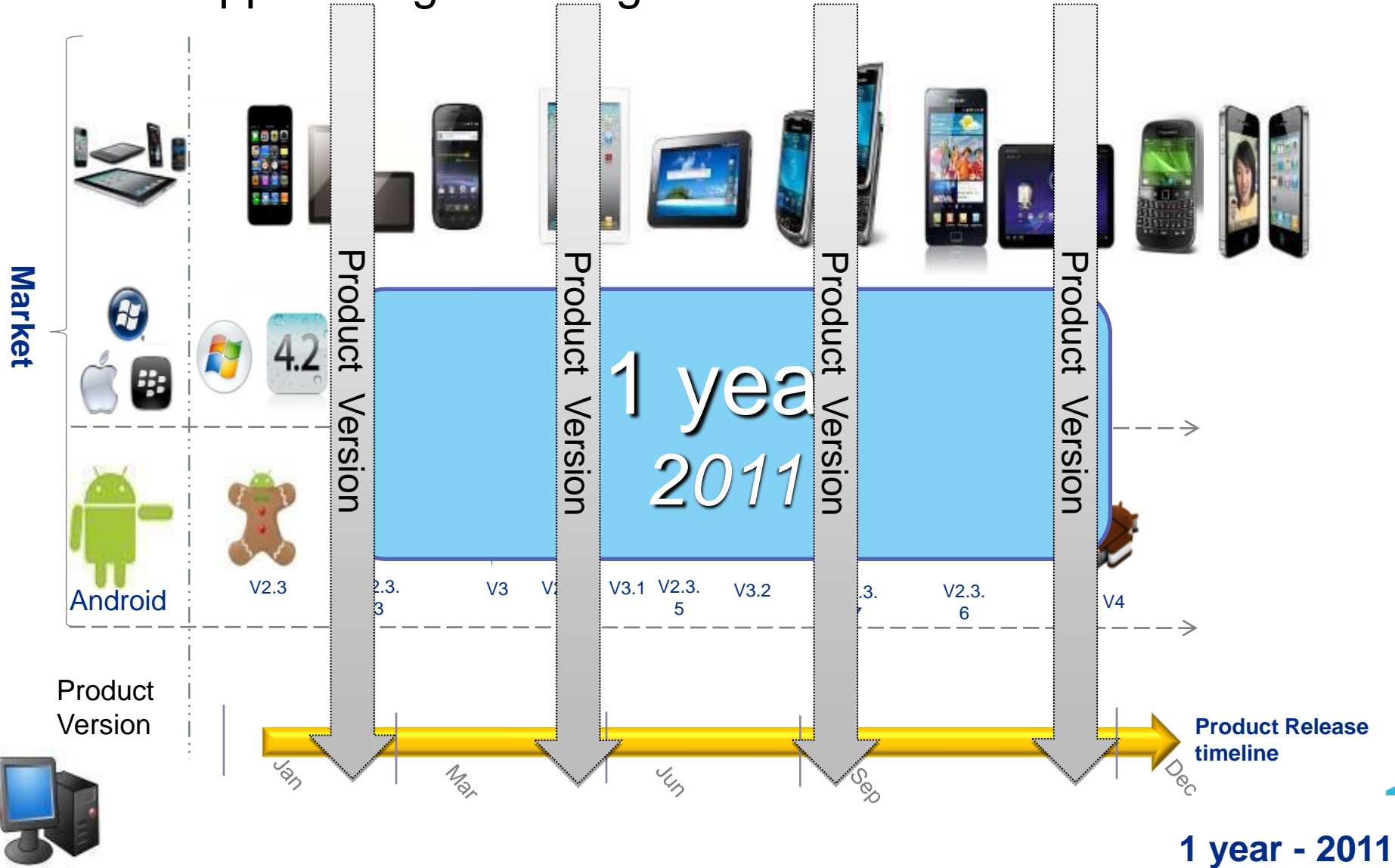
Type	Name	State
Review	Check of algorithm to prevent transfer on weekend	Pending
	AI	Pending
	Curtis	Pending
	Tanuj	Approved



# 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

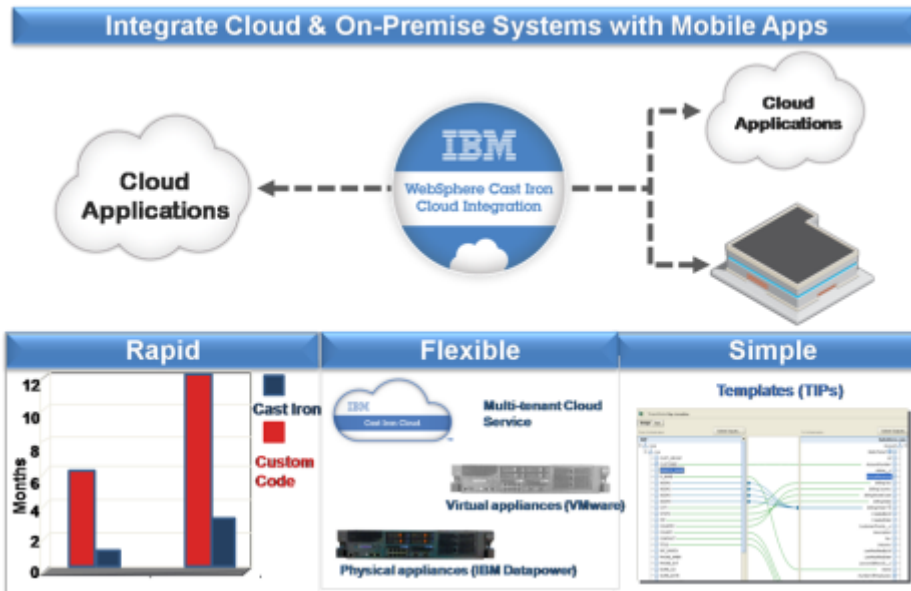


- Mobile applications need to connect to enterprise back-end data and services
- Existing programs and services may need to be modified for the mobile app
- Multiple skills will be involved, responsible for different parts of the mobile application

# 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
<b>Time-to-market</b>	Weeks to Months	Months to Years
<b>Frequency of updates</b>	Once every several weeks	12-18 month cycles



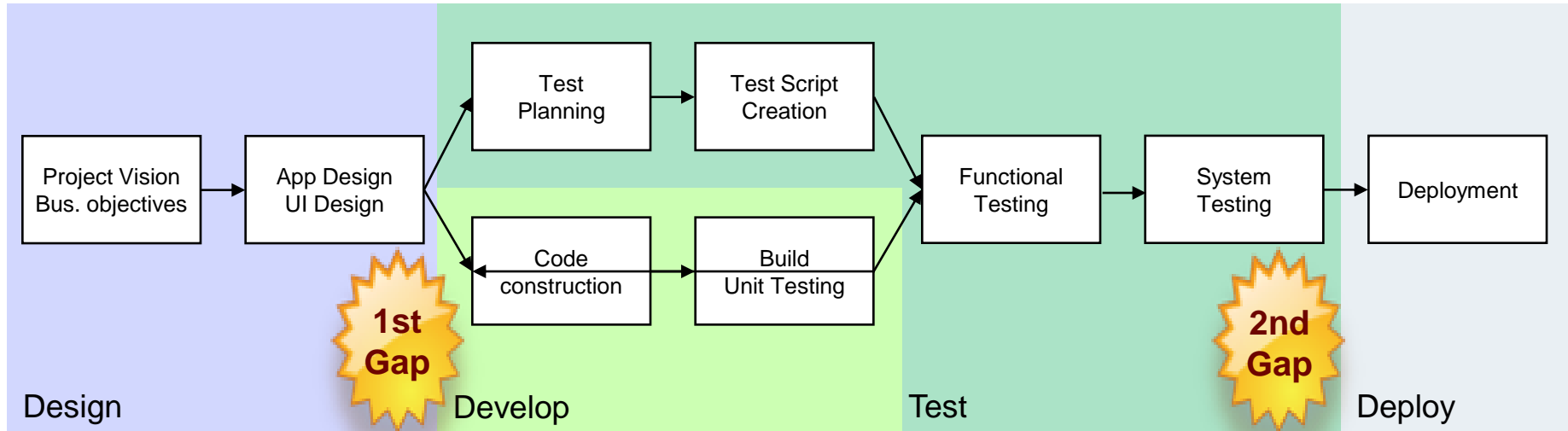
## Mobile software development is a **team** sport

- 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**





# 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

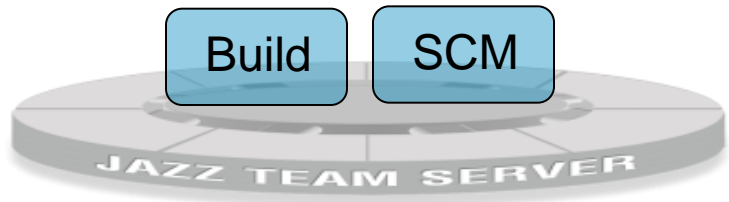
# Example Value of Integration - Mobile and ALM



Mobile devices & emulators



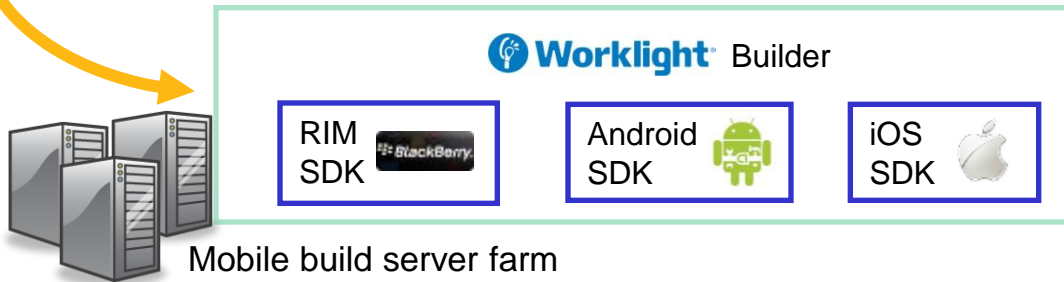
*RTC build engine and Worklight mobile build utility provide a controlled build environment for mobile apps – both native and hybrid*



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

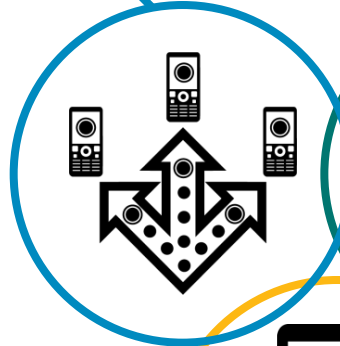


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# QUESTIONS

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