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Best Practices for Building Mobile Web and Hybrid Applications



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.

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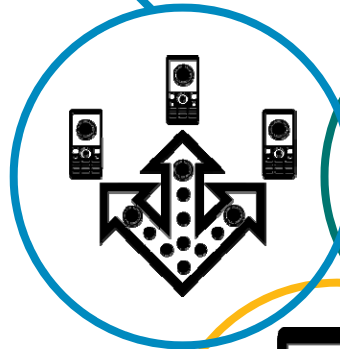
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IBM's strategy addresses full range of mobile enterprise needs

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

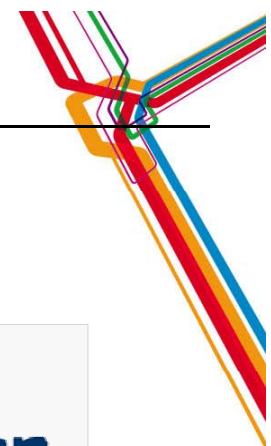


Manage & Secure

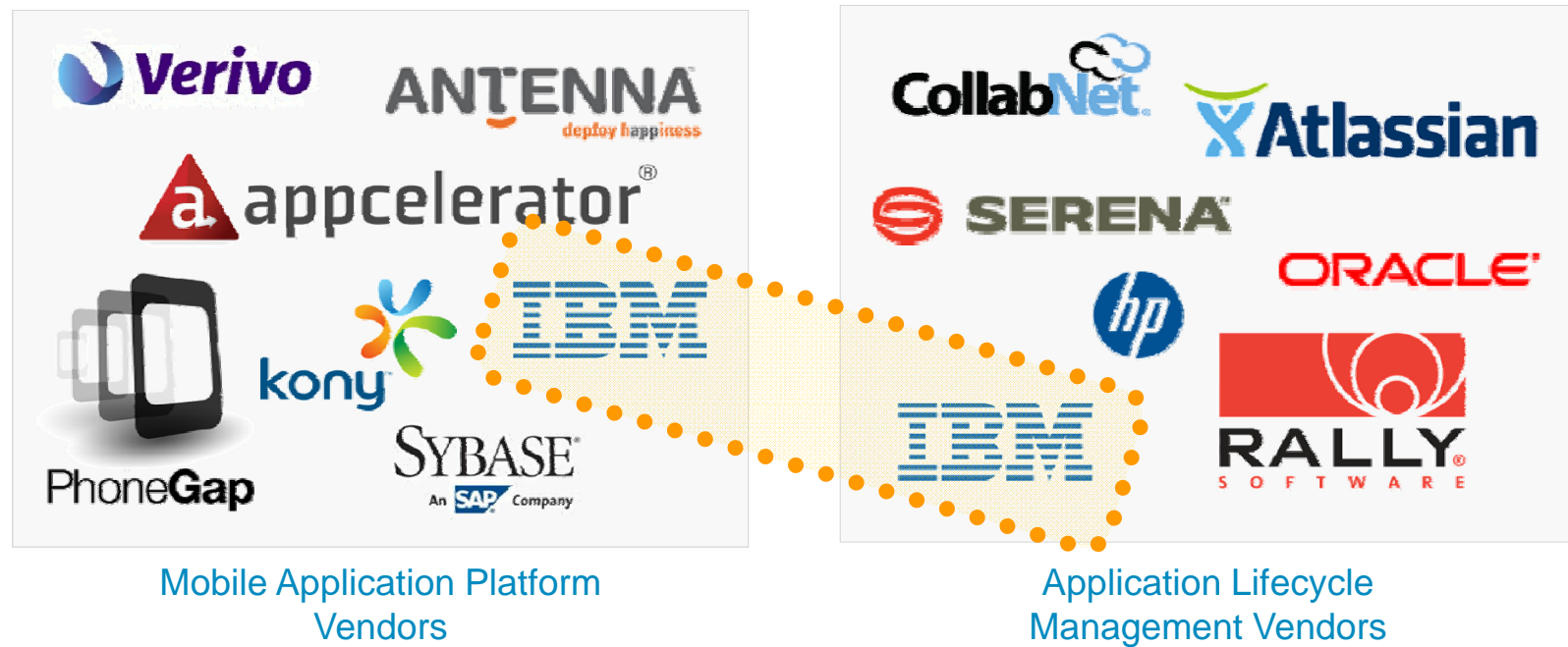
Manage mobile devices, services and applications
Secure my mobile business

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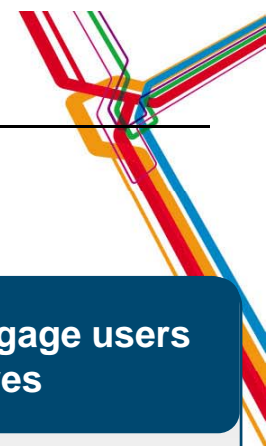
An integrated foundation for mobile development



***IBM provides the only integrated mobile development solution.
Mobile application platform construction tools and lifecycle management***

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Addressing top mobile development pain points

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

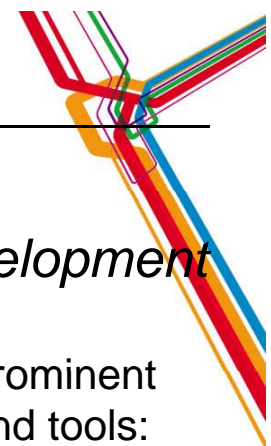
- Recreating instead of leveraging existing business logic **increases maintenance costs and risk of inconsistent behavior**
- Lack of ready back-end services **slows front-end development and increases potential for last minute integration issues**



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

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

App development using native and/or familiar web technologies:

- HTML5
- CSS3
- JavaScript

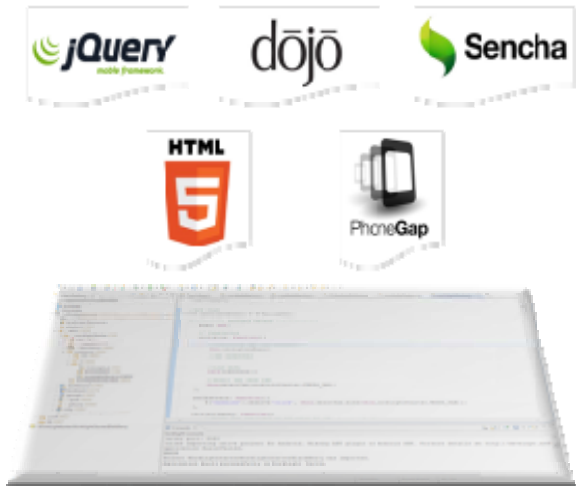


App delivery in variety of forms:

- Mobile Web app
- Hybrid app
- Native



Compatible with prominent HTML5 libraries and tools:

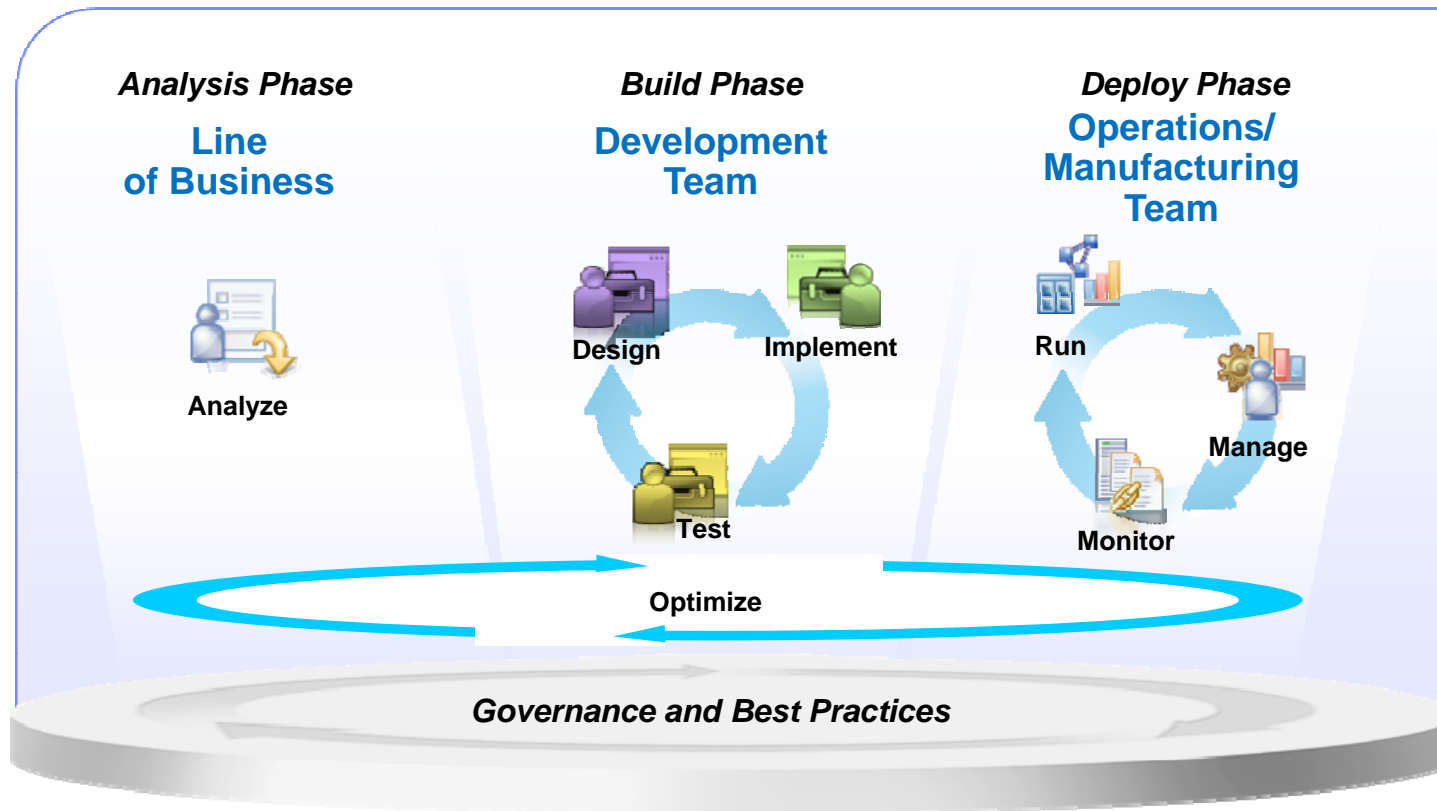


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Mobile development is more than just coding ...



Coding is just one component of the mobile application development lifecycle



Challenge 2: Design and functional quality are both critical to success

- Customers demand good user experience
- Customer facing (B2C) applications
 - ‘Face of the Business’
 - Engage customer personally and drive loyalty
 - User experience is key to brand perception
- Employee facing (B2E) applications
 - Increase worker productivity
 - Speed decision making and action
 - Poor user experience compromises investment





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

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

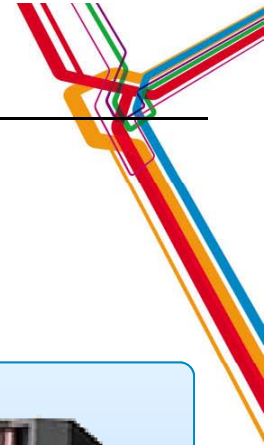
Status: Draft

Comments

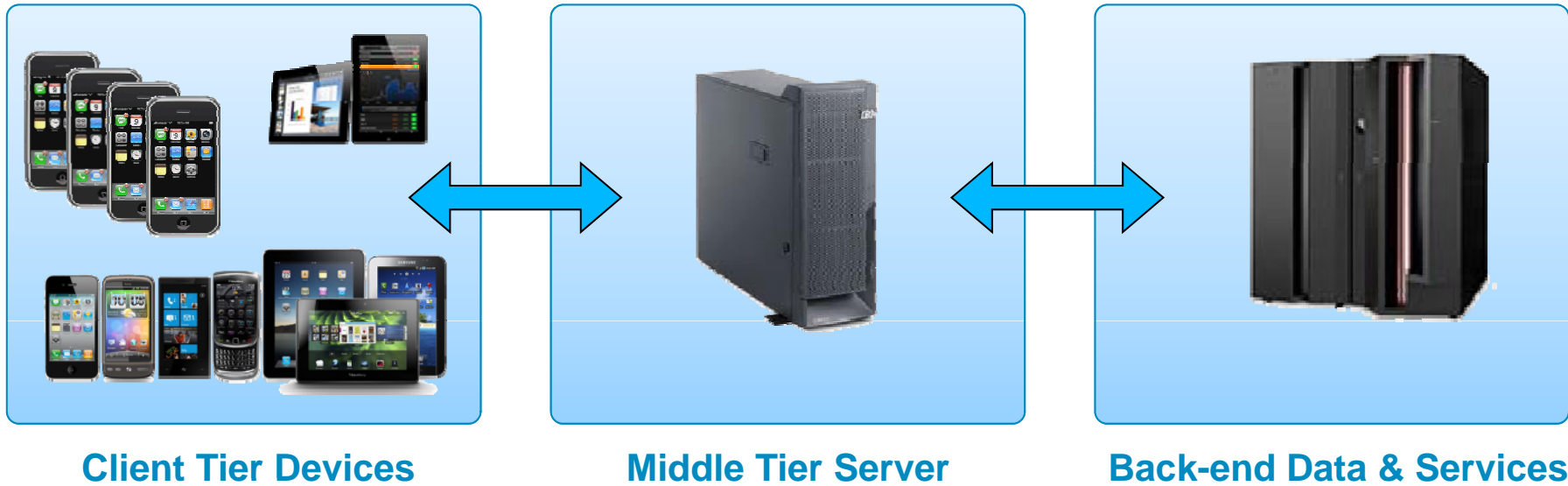
Links (13)

Where Used

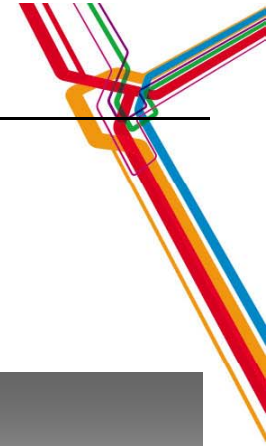
IBM Unsupported browser Jazz TS



Testing the end-to-end mobile solution



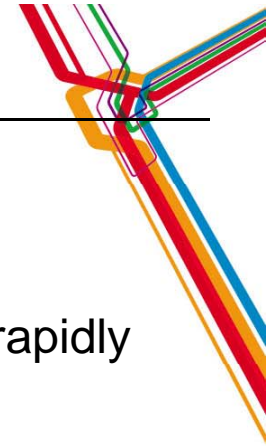
Testing involves much more than just the mobile front-end



Challenge 3: Integrating with existing systems



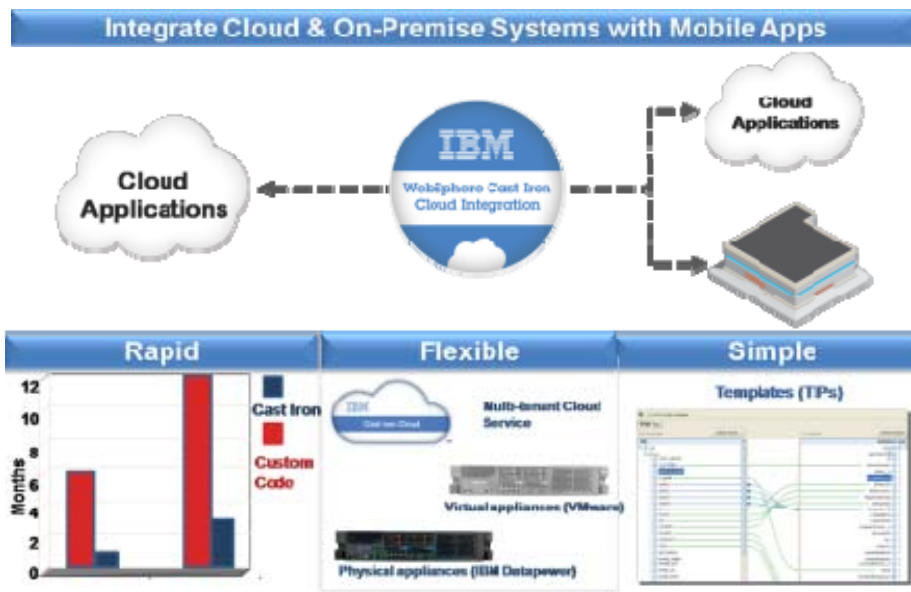
- Mobile applications need to connect to enterprise back-end data and services
- Existing programs and services may need to be modified for the mobile app
- Multiple skills will be involved, responsible for different parts of the mobile application



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

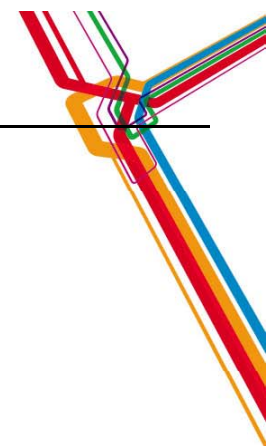
Simplified and cost effective mobile integration to back-end systems and cloud

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

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Challenge 4: Meeting tight time-to-market requirements

Mobile is pushing traditional delivery approaches to the breaking point

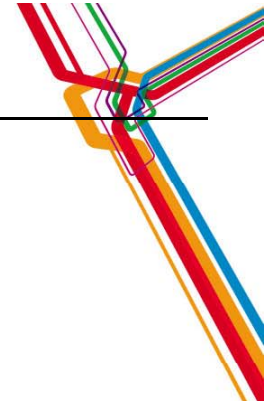


	Mobile Apps	Desktop Apps
Time-to-market	Weeks to Months	Months to Years
Frequency of updates	Once every several weeks	12-18 month cycles



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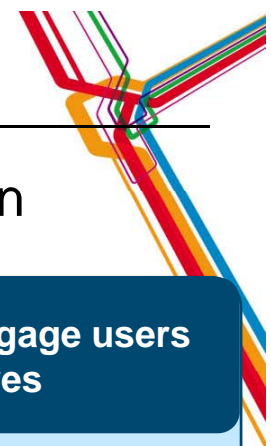
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Mobile software development is a **team** sport

- 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**





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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Thank You

