How to Rapidly Develop and Integrate Mobile Apps

Simon Peel, Business Leader Mobile Development Europe

Agenda

Building Innovative Apps

The Mobile App Development Lifecyle

Customer Examples

A Landmark Event - 1 Million Mobile Apps

(Apple, Android, Blackberry, Windows Marketplaces)
Compiled by Mobilewalla

2013 - 2M Apps

2012

Dec 2011 - 1M Apps!

App Count Games: **94K** ios, **31K** Android

Top Android phone - Samsung **Galaxy 2**

43% Android, **28%** Apple
18% Blackberry , **7%** Windows
US Smartphone marketshare

Nov 2011 - **7B** Android downloads

Oct 2011 - **18B** Apple downloads

72% of iOS rev from in-app purchases

2011 Virtual goods app revenue - **$3B**

Aug 2011 - Average Android rev per app **$2437**

17% have paid more than **$20** for an app

17% smartphone users report
using no apps on a regular basis

May 2011 - **3B** Android downloads

Feb 2011 - **500M downloads**

Jan 2011 - **10B** Apple downloads

Current App Count (Dec 1, 2011)

Android 320K
Blackberry 43K
Windows 35K
Apple 590K

300M Mobile users

165M Shazam users

March 2011 - **iPad 2** released

Apps **667** minutes per user per month

Top **10** Android apps account for **43%** of all
the time spent by Android consumers

Oct 2010 - **Windows Phone Marketplace** launches

2011 484K Total Apps

2.5 - Avg apps added per month

July 2010 - **1B** Android downloads

Avg iOS owner downloaded **83** apps

1 in 4 downloaded apps are never used again

1 in 4 downloaded apps used **11** times or more

June 2010 - **5B** App Store downloads

April 1 - **App World** launches **BlackBerry**

April 2010 - Apple released the first **iPad.**

140K Total Apps **2010**

81% App Store downloads are free, **98%**
of Android dowloads are free

May 2009 - **57K** ios Apps, **40%** are games

15K Total Apps **2009**

Oct 2008 - **Android Market** launches

July 2008 - **App Store** launches w/ **500 Apps**

2008

Top 4 Categories
as a % of Total App Count

Utilities 7%
Entertainment 16%
Lifestyle 8%
Games 13%

June 2007 -
iPhone launches

2007

"Reaching the million app mark signifies that in an unprecedented amount of time a whole new technology sector has reached maturity, and capitalized on
an immense consumer demand. History has never seen as great a democratization of creative development work." -Leonard Murphy, Mobile Marketing expert and CEO of BrandScan 360, LLC

The Mobile Journey

When will you have...

0 - 3 Mobile Apps or
0 - 3 Mobile Devices or
0 - 3 Backend systems connected?

0   3+

1st Gen Apps   *2nd Gen Apps*

0 Mobile Apps   Mobile Apps = 3
0 Types of Device   Types of Device = 3
0 Backend systems   Backend systems = 3

Time & Complexity ...Innovation?

Source: Based on work by Gartner

Mobile Banking "Innovation" Scenario

Business Drivers

IBM ®

Mobile is the No.1 decision factor for users to switch banks

Bar chart showing decision factors for switching banks:
- Mobile Banking: 32%
- Fees: 24%
- Branch Location: 21%
- Services: 21%
- Others: 2%

Adoption based on age groups

■ Adoption Percentage

- Age 18-34: 30%
- Age 35-54: 15%

Adoption growth by year
- 2011: 12%
- 2012: 15%
- 2013: 22%
- 2014: 30%
- 2015: 42%
- 2016: 50%
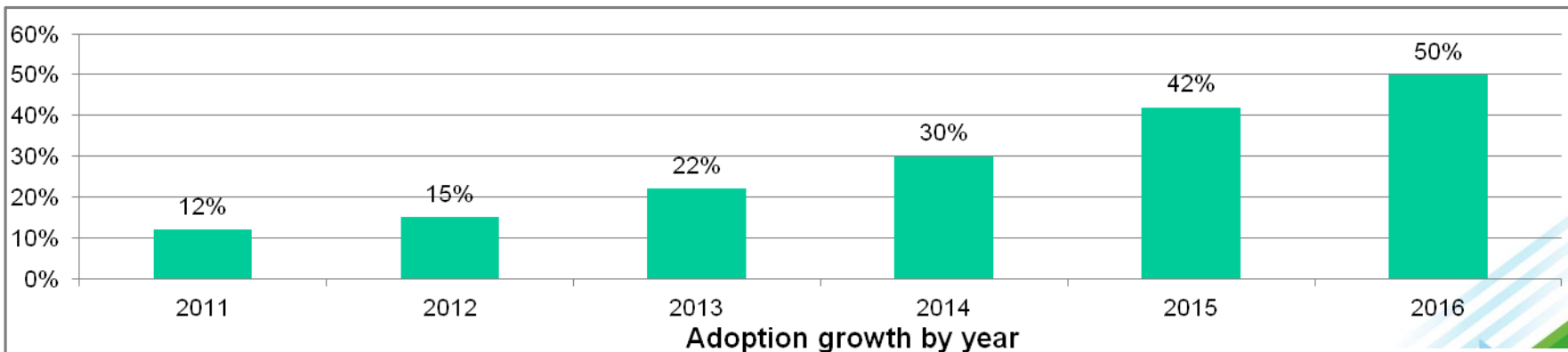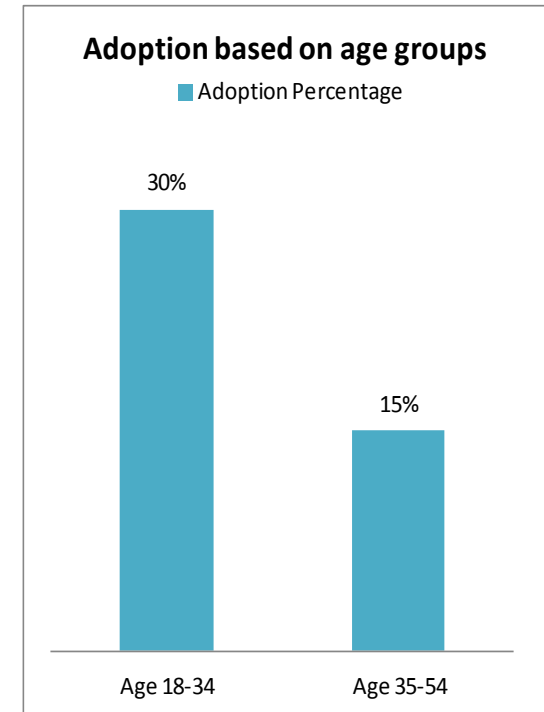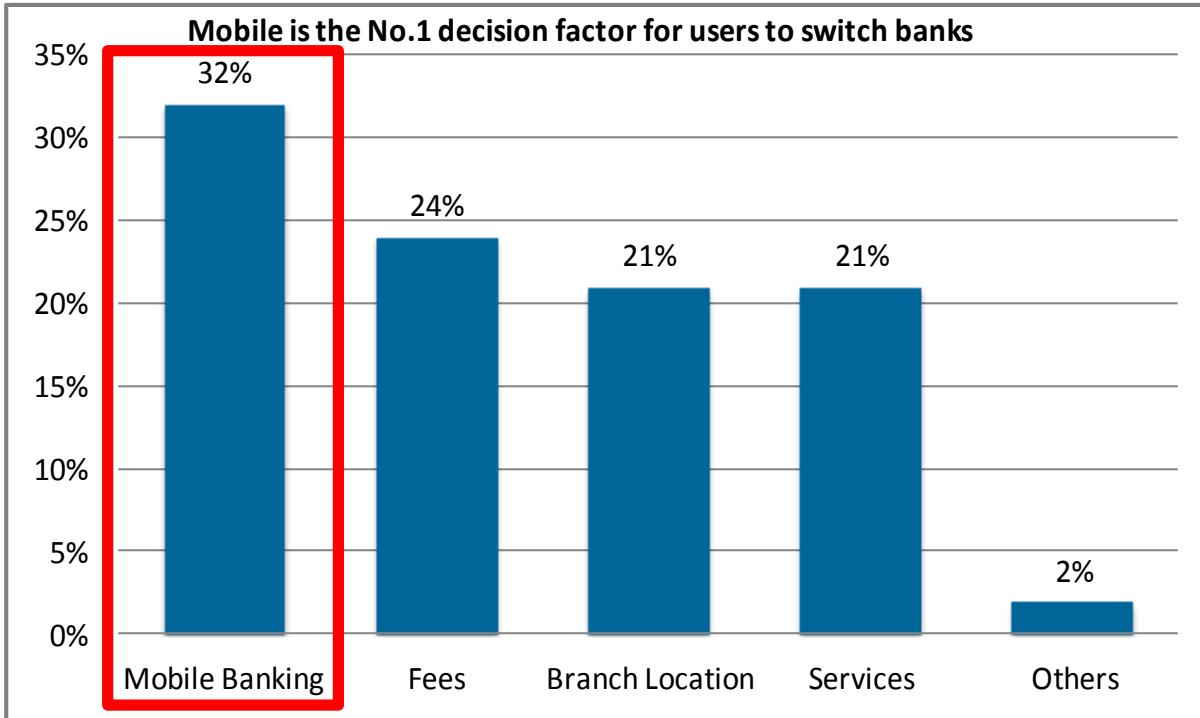
Business Drivers

Share of Average Time Spent per Day with Select Media by US Adults vs. US Ad Spending Share
% of total

TV
42.5%
42.2%

Internet*
25.9%
21.9%

Radio
14.6%
10.9%

Mobile
10.1% ← **Biggest gap**
0.9%

Newspapers
4.0%
15.0%

Magazines
2.8%
9.7%

■ Time spent share   ■ Ad spending share

*Note: *time spent with the internet excludes internet access via mobile, but online ad spending includes mobile internet ad spending; due to this, the total of the ad spending shares for all the media adds up to more than 100%*
Source: eMarketer, _____

134682   www.**e**Marketer.com

Source: The CMO Site, Getting the Most from Mobile Marketing

Requirements from the Business

Be more innovative than our competition

Upsell existing customers

Open up new revenue channels

Decrease complaints over Fraud Protection procedures

Meet John

John buys a big screen TV

Digital Vault

Cancel

Add New Receipt

Label: New LED TV

Add to Home Inventory?   YES

Take Photo

powered by

IBM
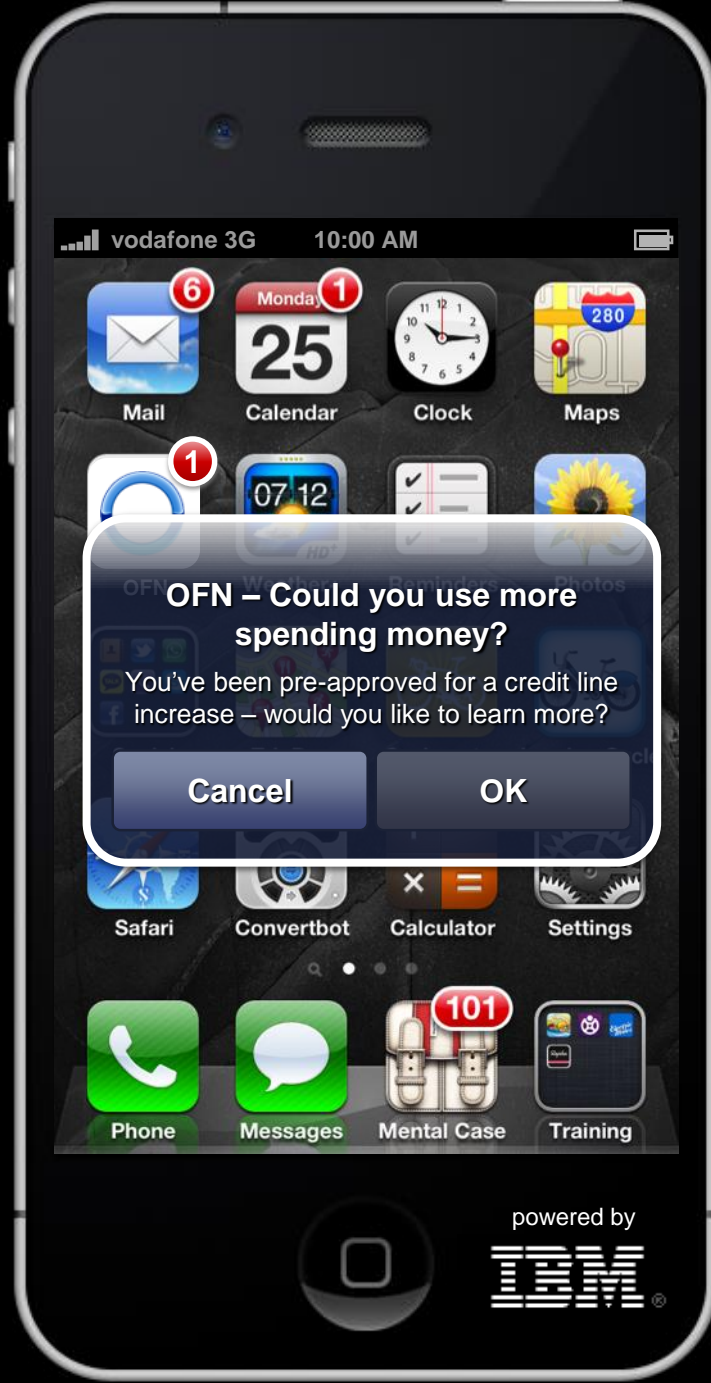
OFN Offers

You have been pre-approved for a £5000 increase in your credit line at your current interest. Just click "Accept" now and access additional funds immediately.

If you accept, you will receive 60 days interest free payments on any purchases made in the next 12 hours.

Current Balance:	**£237**
Current Line:	**£15,000**
New Line:	**£20,000**

Accept   **No, thanks**

powered by

IBM®

OFN Offers

VILLA SPICY

30% off

30% off any entrée over £30

Just present this offer and barcode to the merchant and pay with your OFN card to redeem.

Bon appetit!

9 87654 32109 8

| Highlights | Details | Map |
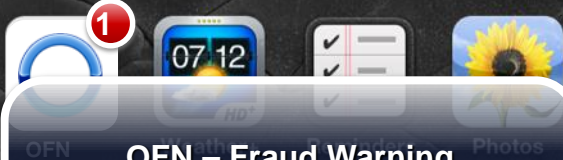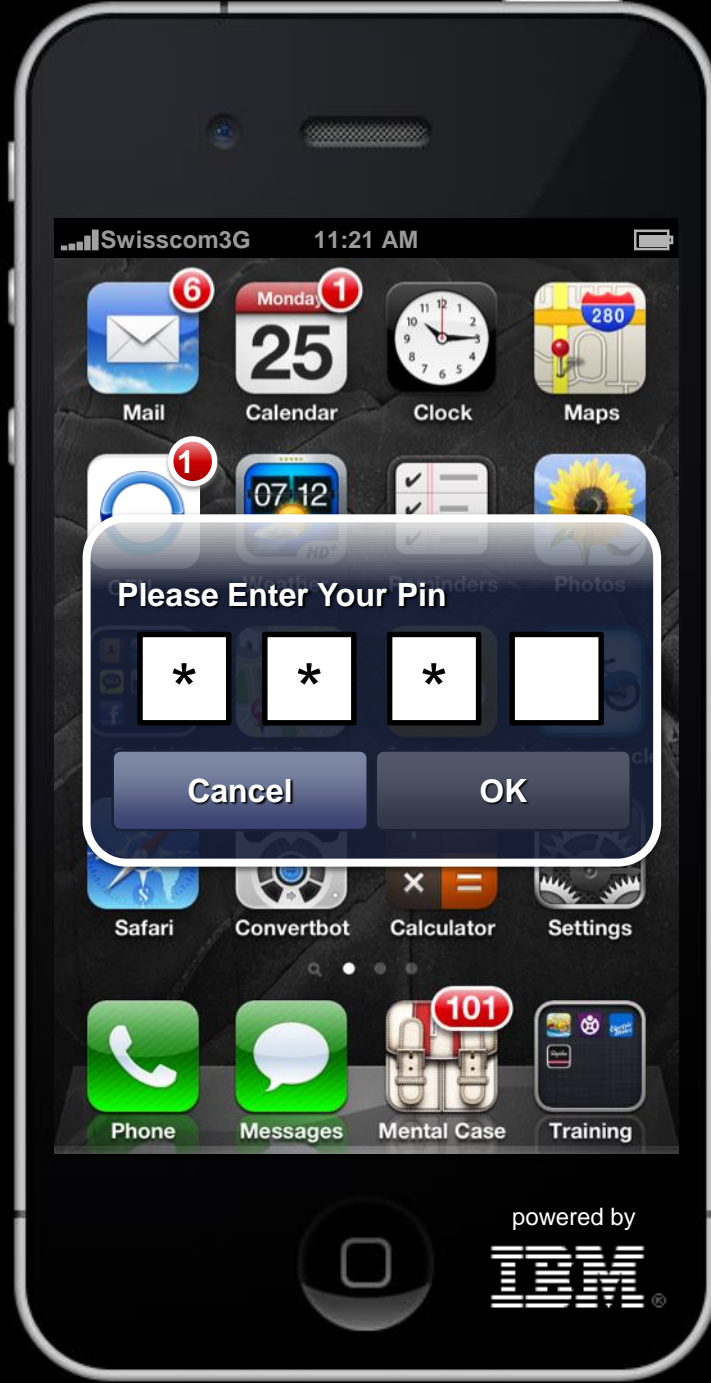
What's Been Holding Back App Innovation?

Mobile Apps are different.

- **They run on unstable networks–**interruption is the norm, not the exception
- **They are context-aware –** sensor richness provides constant stream of context information
- **Always on –** An opportunity to deliver greater value since always within arms' reach
- **Smaller screens –** More challenging to make compelling and easy to use
- **Immediacy –** users expect instant everything and have little patience

Management is different.

- **AppStore Terms of Service** present challenges for managing B2C apps
- Greater challenges of application **governance, distribution, and version management**
- Smaller screens pulling content from more sources: **need to choreograph** content from multiple repositories and applications , both on premises and in the cloud

Development is different.

- **More devices** to support, each with its own set of capabilities, OS and UI behaviors
- **More development approaches** to choose from – Web, HTML, Native or a mix
- More **third-party and open-source tools, frameworks and libraries** to choose from
- **Extremely short development** cycles

Security is different.

- **Greater risks** of exposing applications and data on small, light and always on portable devices
- **Greater authentication challenges** associated with content mashups
- **AppStore** Terms of Service can limit security options

Introducing Worklight

Apps

30%

70%

Mobile Application Platform

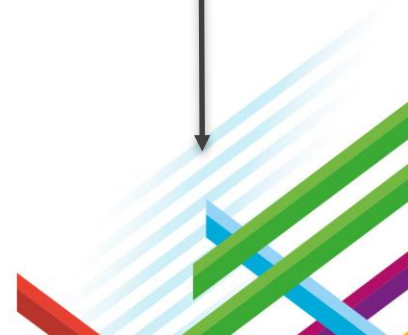Cross-Platform Development and Testing

Offline sync

Security

Geo-fencing

Direct Update

Push Notifications
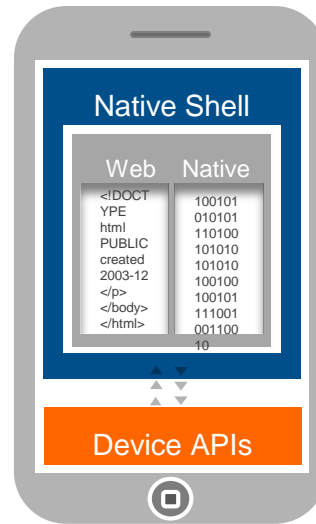
Integration

Multiple Mobile App Development Models

IBM

B2C

B2E

B2B

Browser Access

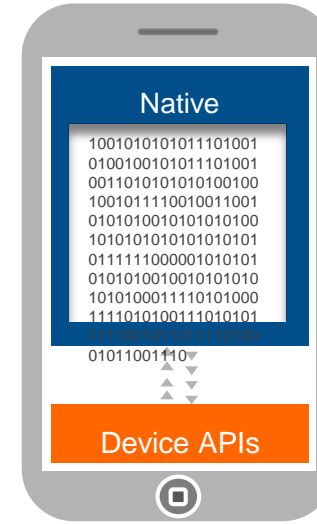Written in HTML5 JavaScript and CSS3. Quick and cheap to develop, but less powerful than native.

Mobile Browser

Web Code

```
<!DOCTYPE html
PUBLIC
<html>
<! - - created 2003-12-
12 - -
<head><title>XYZ</title
>
</head>
<body>
</p>
</body>
</html>
```

Browser Access

Hybrid Apps - Mixed

User augments web code with native language for unique needs and maximized user experience.

Native Shell

Web	Native
<!DOCT YPE html PUBLIC created 2003-12 </p> </body> </html>	100101 010101 110100 101010 101010 100100 100101 111001 001100 10

Device APIs

Downloadable

Native Apps

Platform-specific. Requires unique expertise, pricy and long to develop. Can deliver higher user experience.

Native

```
1001010101011101001
0100100101011101001
0011010101010100100
1001011110010011001
0101010010101010100
1010101010101010101
0111111000001010101
0101010010010101010
1010100011110101000
1111010100111010101
0101100111011
010110011107
```
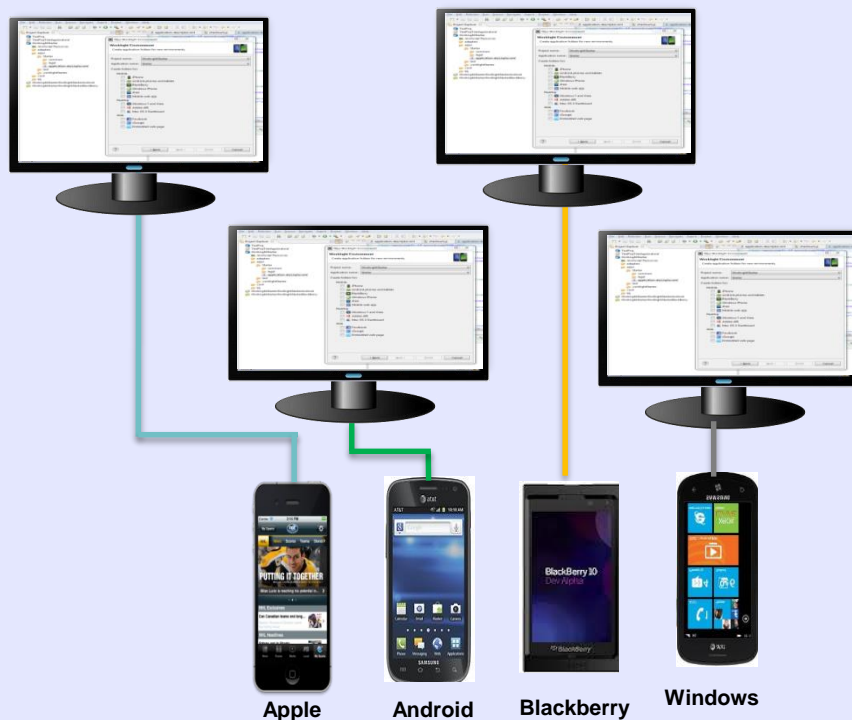
Device APIs

Downloadable

Multi-platform development with a shared codebase

From the complexity of many…

- Multiple sets of tools & frameworks
- Four codebases to develop and maintain

Apple   Android   Blackberry   Windows

To the simplicity of one

- One development environment
- One codebase to develop and maintain

Apple   Android   Blackberry   Windows

Results of Using a Mobile App Dev Platform

Rapid Beta App created

- Multiple Devices to be supported
- Multi-geo user base
- Extended to notebook users

Rapid Demo App Development

- Access to CRM, SAP ERP, Lotus Notes
- Showcases for business
- Training for developers

A Set of Standardized Components

- Document access and viewer
- Authentication
- Data access interface (adapter)
- Customized mobile design palette

Mobile ROI – 60% Overall Cost Savings

- 30% savings in app development
- 80% savings in interfacing with backend systems
- 90% savings in content maintenance
- 50% savings in technical maintenance
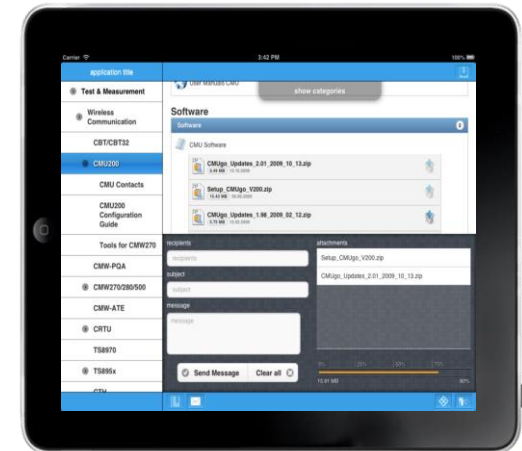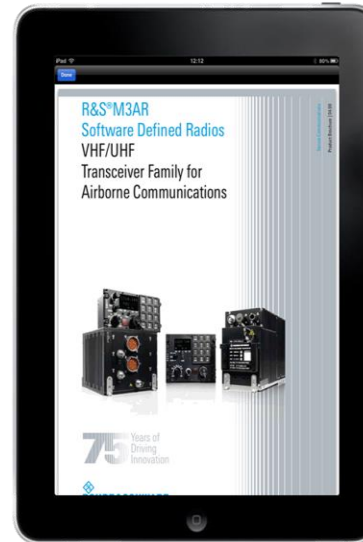
Product Catalog and Order Tablet App for Sales Personnel

1st app built by 1 Developer in 12 Weeks, including customized authentication, MDM integration, SAP connectivity, offline access, mobile-triggered server emailing, JQuery UI library, Cordova plug-in

ROHDE & SCHWARZ

Agenda

Building Innovative Apps

The Mobile App Development Lifecyle

Customer Examples

The IBM Mobile App Development Lifecycle

Design & Develop

Instrument

Obtain Insight

Integrate

Manage

Test

Deploy

Scan & Certify

Design the user experience and develop apps using a cross-platform development approach

Design & Develop

Instrument

Integrate

Test

Scan & Certify

Deploy

Manage

Obtain Insight

Instrument the App for analytics, security, and management control

Integrate your App with back-end data, systems and cloud services

Design & Develop

Instrument

Obtain Insight

Integrate

Manage

Test

Deploy

Scan & Certify

Test earlier, more often, and for less with automated mobile app functional testing

IBM

Design & Develop

Instrument

Obtain Insight

Integrate

Manage

Test

Deploy

Scan & Certify

Scan, evaluate and certify your App with a vulnerability analysis tool

Design & Develop

Instrument

Obtain Insight

Integrate

Manage

Test

Deploy

Scan & Certify
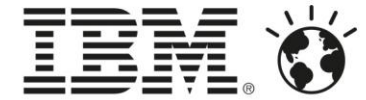
Deploy using a combination of internal and external App stores

Manage authentication, enforced updates and versions

Design & Develop

Instrument

Obtain Insight

Integrate

Manage

Test

Deploy

Scan & Certify

Analyze and improve the effectiveness of your App through usage data

Gartner has recognized IBM as a leader in the Magic Quadrant for Mobile Application Development Platforms

Magic Quadrant for Mobile Application Development Platforms
Ian Finley, Van L. Baker, Ken Parmelee, David Mitchell Smith, Ray Valdes, Gordon Van Huizen
Aug 7, 2013

"As unprecedented numbers of enterprises build mobile applications, the mobile application development platform market continues to grow and evolve rapidly."

This Magic Quadrant graphic was published by Gartner, Inc. as part of a larger research note and should be evaluated in the context of the entire report. The full report is available at
http://ibm.co/13TU2Dm

Figure 1. Magic Quadrant for Mobile Application Development Platforms

IBM was positioned as a leader in the Forrester Wave™: Enterprise Mobility Services, Q1 2013

IBM received the highest score possible in "Current Offering"
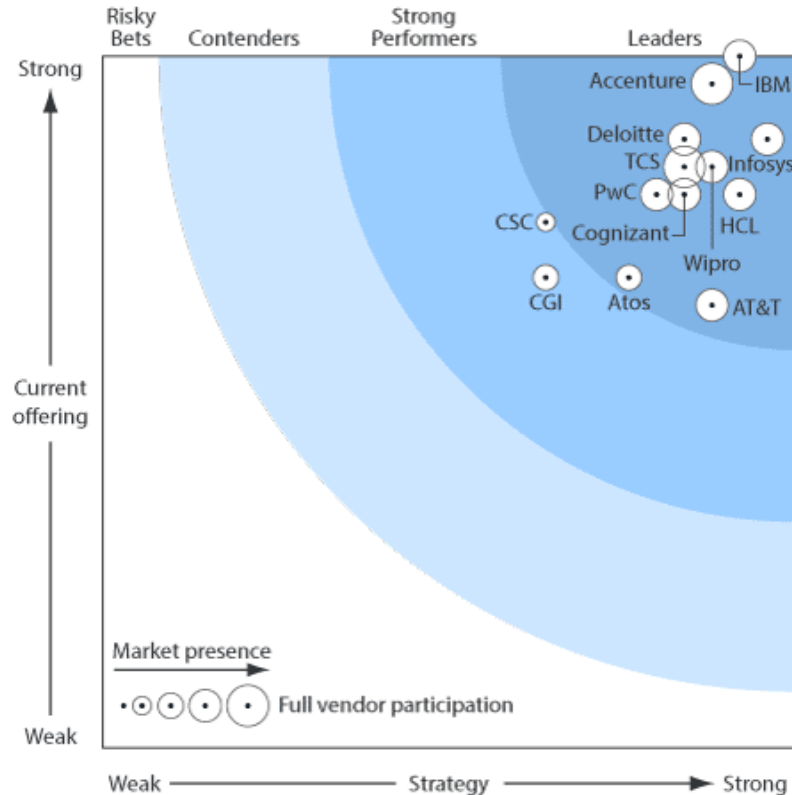
Source: Forrester Research Inc. "Forrester Wave™": Enterprise Mobility Services, Q1 2013".

Full report can be accessed at **http://www.ibm.com**

Agenda

Building Innovative Apps

The Mobile App Development Lifecyle

Customer Examples

Euroscript's "AdOn" App

Euroscript's "AdOn" App

Euroscript's "AdOn" App

- Why Worklight
  - Manageability – being able to manage all your mobile applications from 1 single environment
  - Maintenance and development are 10 – 100 times easier than traditional mobile app development
  - Speed of development
  - Multi platform support
  - Professional environment for development, testing and usage of mobile apps
  - Big plus: DTAP environment, structured deployments and automated testing for mobile apps

euroscript
THE WORLD OF DOCUMENTS

Unipol / Unisalute in Italy provides differentiating mobile capabilities to end-users

...some private key features
Customer Area

Unipol customer can consult at any time:

- Account statement with the state of processing of requests for reimbursement;

- A Calendar with upcoming appointments;

- Feedback section to tell us how you have been satisfied in latest situations.

...some public key features
Online Prevention

Engaging new customers with useful health tests:

- Visual test

- Audiometric test

- Quality of sleep

- Dental prevention

ClickSoftware, ClickAppStore

An online bank has shipped industry-leading mobile capabilities and has many more on the way

"We utilize a hybrid/HTML5 approach to achieve our goals with Worklight using web technologies (HTML, Java Scripting, CSS) everywhere we can, and native code where we need to."

Challenges

Company estimated that up to 40 percent of its future business would come from providing mobile accessibility to its products and services. They sought a solution that would provide the scalability needed to support high volumes of data, significant numbers of users and a sizable development team
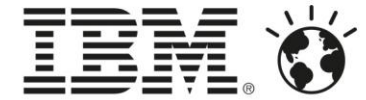
Solution

Implemented IBM Worklight software to support its mobile-application-development project. The Worklight software provides the scalability the client needs to address the predicted increase in data and user volumes anticipated once the project is completed.

Benefits

- Able to develop mobile applications quickly and efficiently, supporting future business growth at a lower cost than its previous mobile platform provider could offer.

- Gained scalability to support higher data and user volumes once the mobile apps were deployed.

Mobile Innovation Workshop

One day interactive workshop with an IBM Mobile expert to help enterprises plan and develop a customized roadmap for success

Workshop

For Line of Business and IT leaders seeking expertise and experience in developing, enhancing, and/or executing their mobile enterprise strategy.

Client Value

- Industry expertise with top use cases and successes
- Capability assessment including identification of opportunities and gaps in mobile strategy
- A detailed client report and next steps

Highlights

- Interactive discussion to understand client business drivers, pains and requirements
- Overview of IBM MobileFirst Strategy, technology & POV's
- Industry trends & imperatives
- Structured working session to outline next steps

To schedule a workshop, email: ibmmobile@us.ibm.com

How to Rapidly Develop and Integrate Mobile Apps

Simon Peel, Business Leader Mobile Development Europe