The Mobile Enterprise

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IBM Software Group

The next big shift in applications is HERE and NOW… it's mobile

91%	75%	96%	90%	900%
Mobile users keep their device within arm's reach 100% of the time	Mobile shoppers take action after receiving a location based message	Year to year increase in mobile cyber Monday sales between 2012 and 2011	Users use multiple screens as channels come together to create integrated experiences	Increase of global machine-to-machine connections by 2022 (2 billion in 2011 to 18 billion at the end of 2022)

Mobile changes the game for IT

Standard **transactions** to ➤ personalized **engagement**

Millions of PCs to ➤ **billions** of mobile devices

Structured data to ➤ massive amounts of **unstructured** data

Static applications to ➤ **dynamic** services

Rigid infrastructure to ➤ an **elastic** cloud infrastructure

Reactive point security ➤ Intelligent, wholistic, **proactive** protection

and demands you:

- *Address **infrastructure impacts***
- ***Integrate mobile*** applications with/into existing development, business processes, and decision management
- ***Secure*** *your infrastructure from* device to back end systems
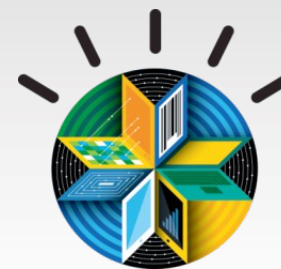- Evaluate how you **expose IT assets**

IBM's Strategic Focus on Mobile

IBM MobileFirst
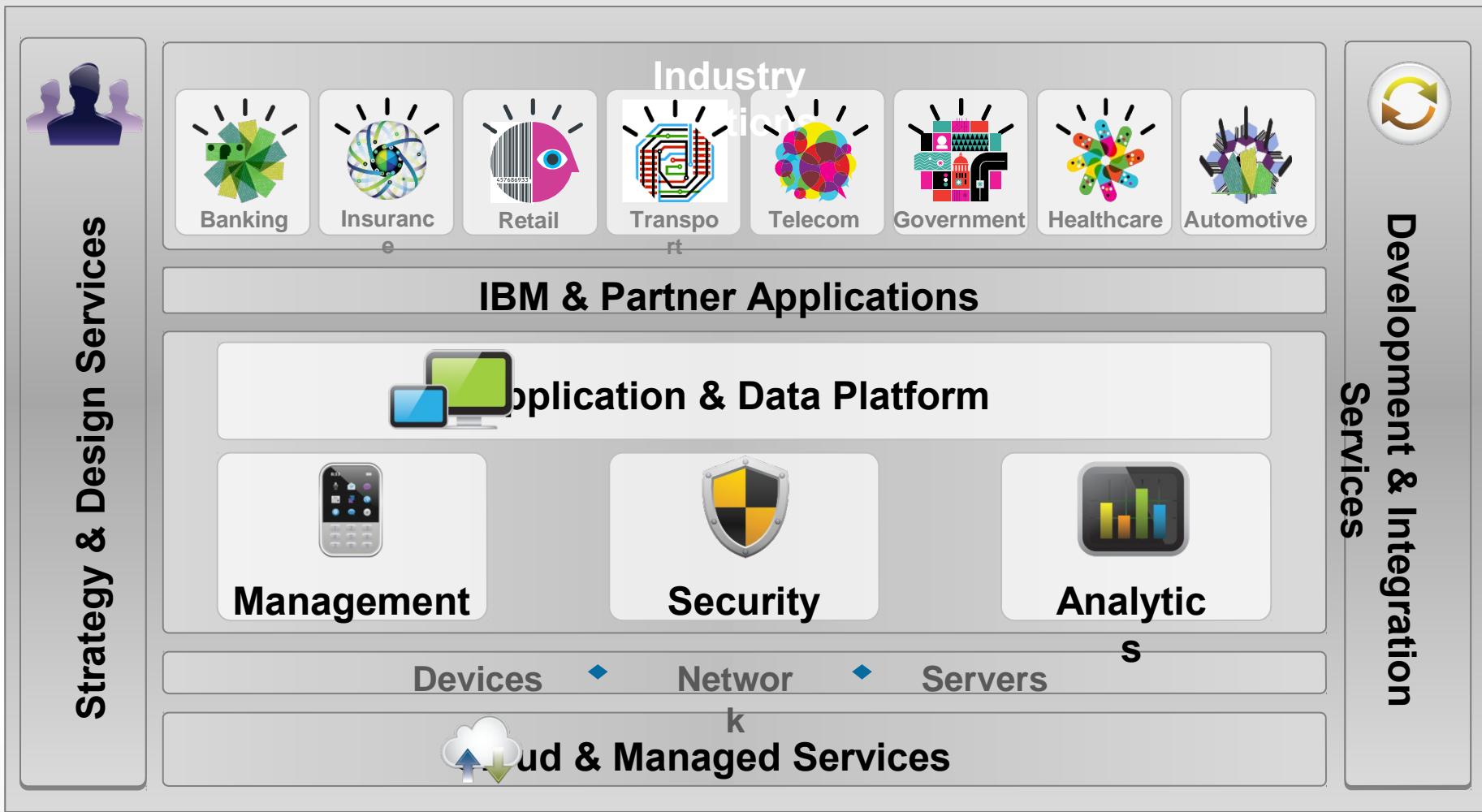
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The Broadest Portfolio of Mobile Solutions	**The Deepest Set of Services Expertise**	**New Industry Partnerships and Resource**

The MobileFirst marketecture

IBM

Strategy & Design Services

Development & Integration Services

Industry

| Banking | Insurance | Retail | Transport | Telecom | Government | Healthcare | Automotive |

IBM & Partner Applications

Application & Data Platform

Management **Security** **Analytics**

Devices ◆ Network ◆ Servers

Cloud & Managed Services

System z considerations for mobile

Infrastructure Impact:
Scaling to meet mobile

Integrating Mobile:
What's old is new

Security:
Mobile is different

Public Exposure:
Introducing your services
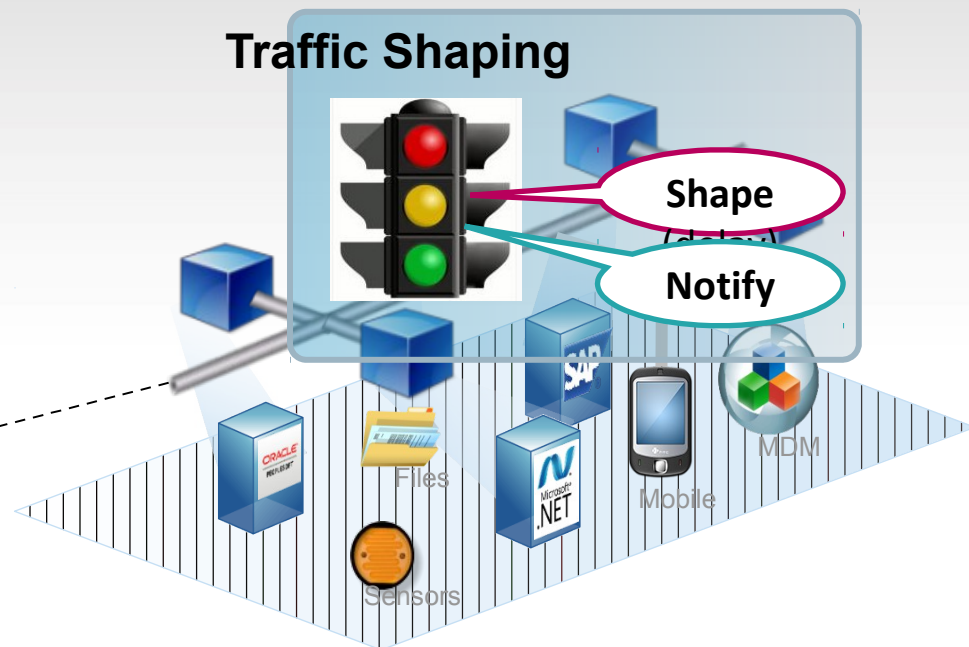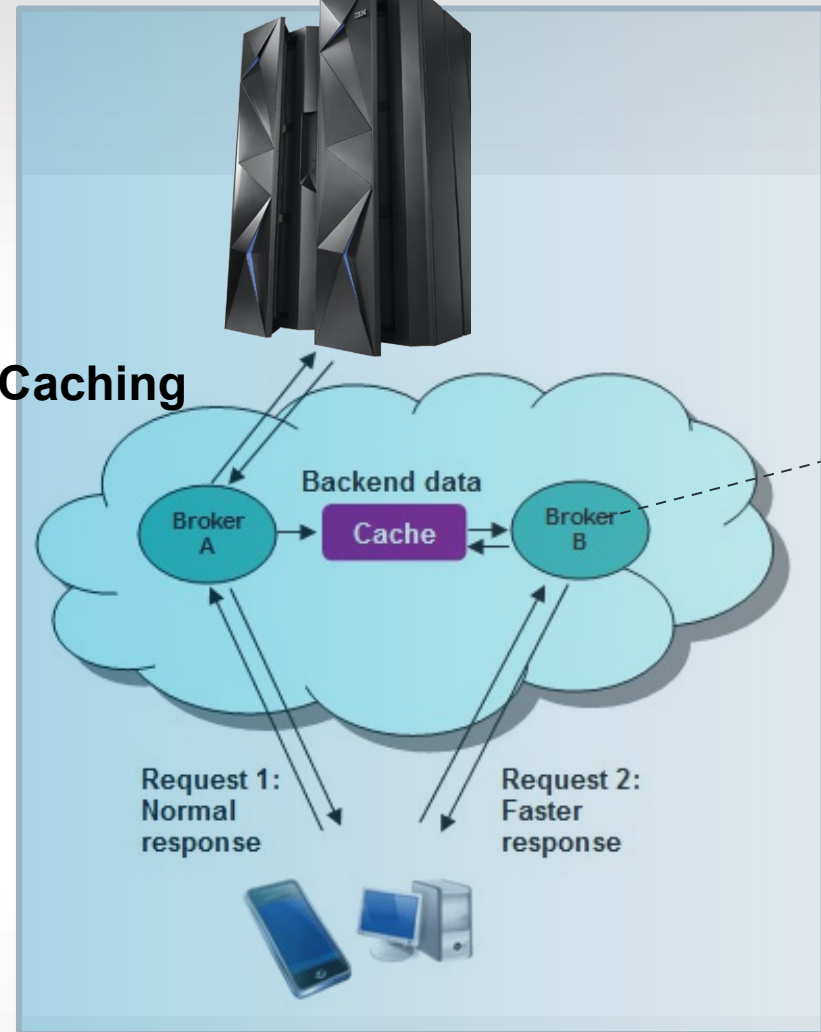and a new business model

Mobile Consumer

Connectivity, traffic control & caching
Extend your Enterprise Service Bus to support mobile by leveraging existing capabilities

Traffic Shaping

Shape

Notify

Caching

Backend data

Broker A → Cache ↔ Broker B

Request 1: Normal response

Request 2: Faster response

ORACLE

Files

Sensors

SAP

.NET

Mobile

MDM

- Conserve processing resources; save costs
- Protect back-end systems, better maintain availability of business-critical services
- Allocate resources to reflect workload priorities as new trends are uncovered

Securing the enterprise while leveraging mobile
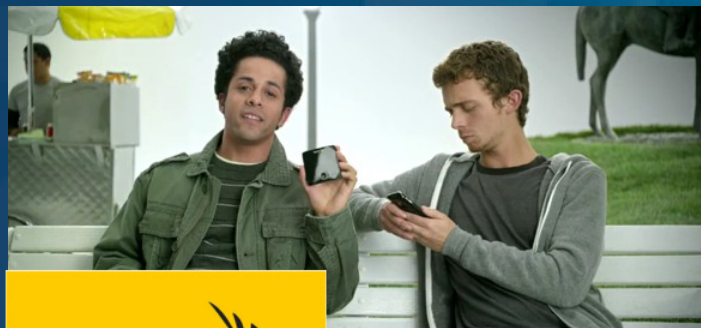
> *"[IBM] brought one of their experts on-site, and truly within an hour, we had racked it and put a simple interface in the [IBM WebSphere DataPower] XC10 and proved that it would work."*
>
> *Alan Krause, IT director Sprint Nextel Corp.*

Challenge & Solution

- Grow its revenue while protecting customer privacy, improving efficiency and cutting costs with a scalable application infrastructure.

- WebSphere® DataPower® devices (XI52 and XC10) to enhance security, provide an integration gateway and improve responsiveness for customers

Key Features & Outcomes

- Helps Sprint process approximately 51 billion transactions per month

- Delivers a response to customers checking eligibility for rebates within milliseconds, as opposed to 0.2 seconds

- Provides an extra layer of security between internal systems and external systems, such as Sprint partner applications

Infrastructure Impact: Extend Your Enterprise Services to Embrace Mobile

Integrating Mobile: What's old is new

Security: Mobile is different

Public Exposure: Introducing your services and a new business model
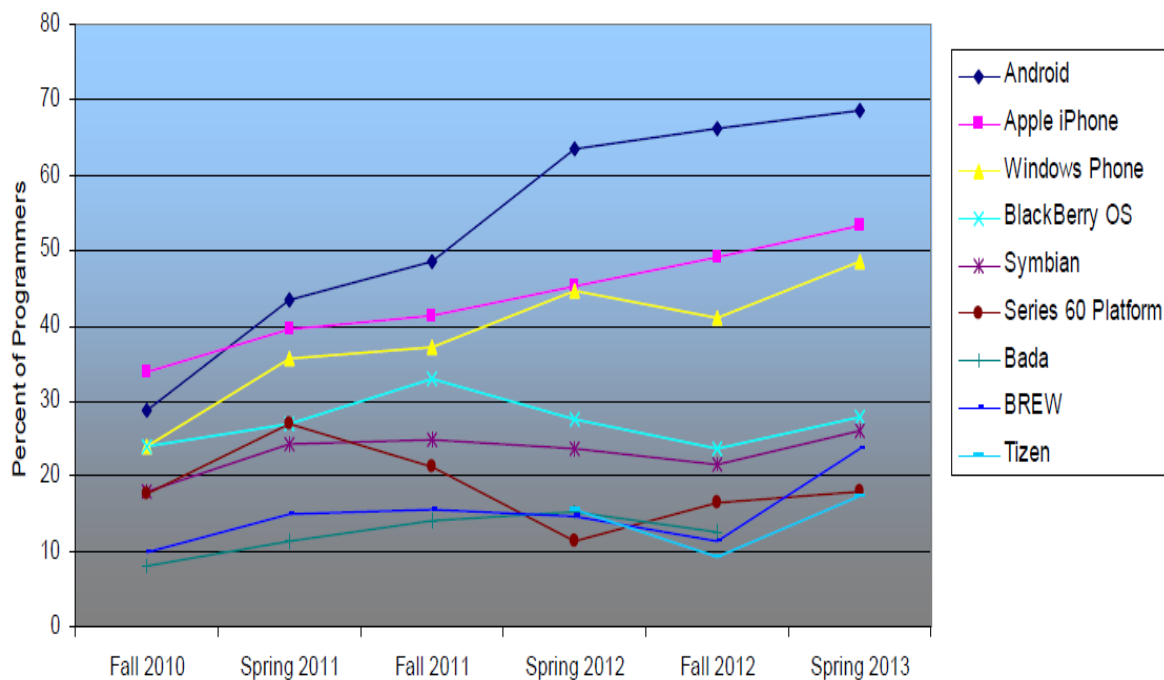
Mobile Consumer

Mobile App Development Challenge: fragmented device market, no one application technology direction

Targeted Platforms for Mobile Apps (Trend)

Legend:
- Android
- Apple iPhone
- Windows Phone
- BlackBerry OS
- Symbian
- Series 60 Platform
- Bada
- BREW
- Tizen

Mobile Development Survey: Vol. I, © 2013 Evans Data Corp.

Mobile Development Survey: Vol. I, © 2013 Evans Data Corp.

On device applications development

· **30% reusing web technology** for mobile applications

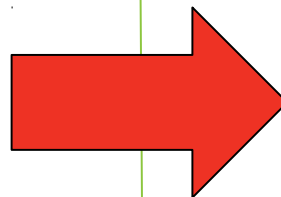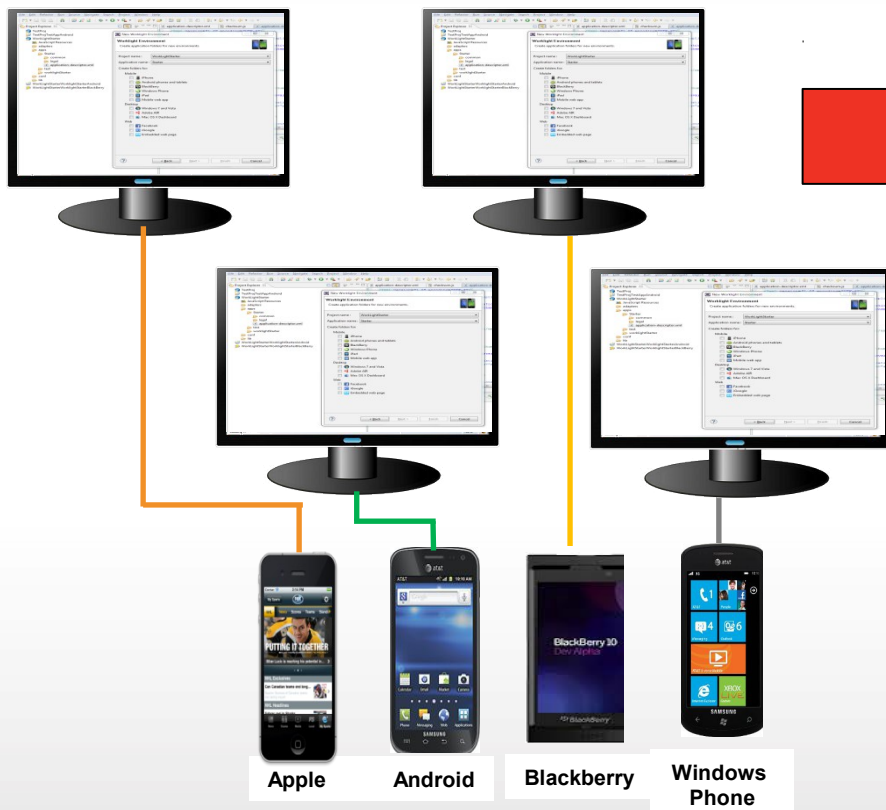· **30% are writing device specific**

IBM Worklight: Rapid multi-platform development using a single shared codebase

From the complexity of many..To the simplicity of one

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

- One development environment
- One codebase to develop and maintain

Worklight Eclipse based Studio

UI
Simulato
r

Apple   Android   Blackberry   Windows Phone
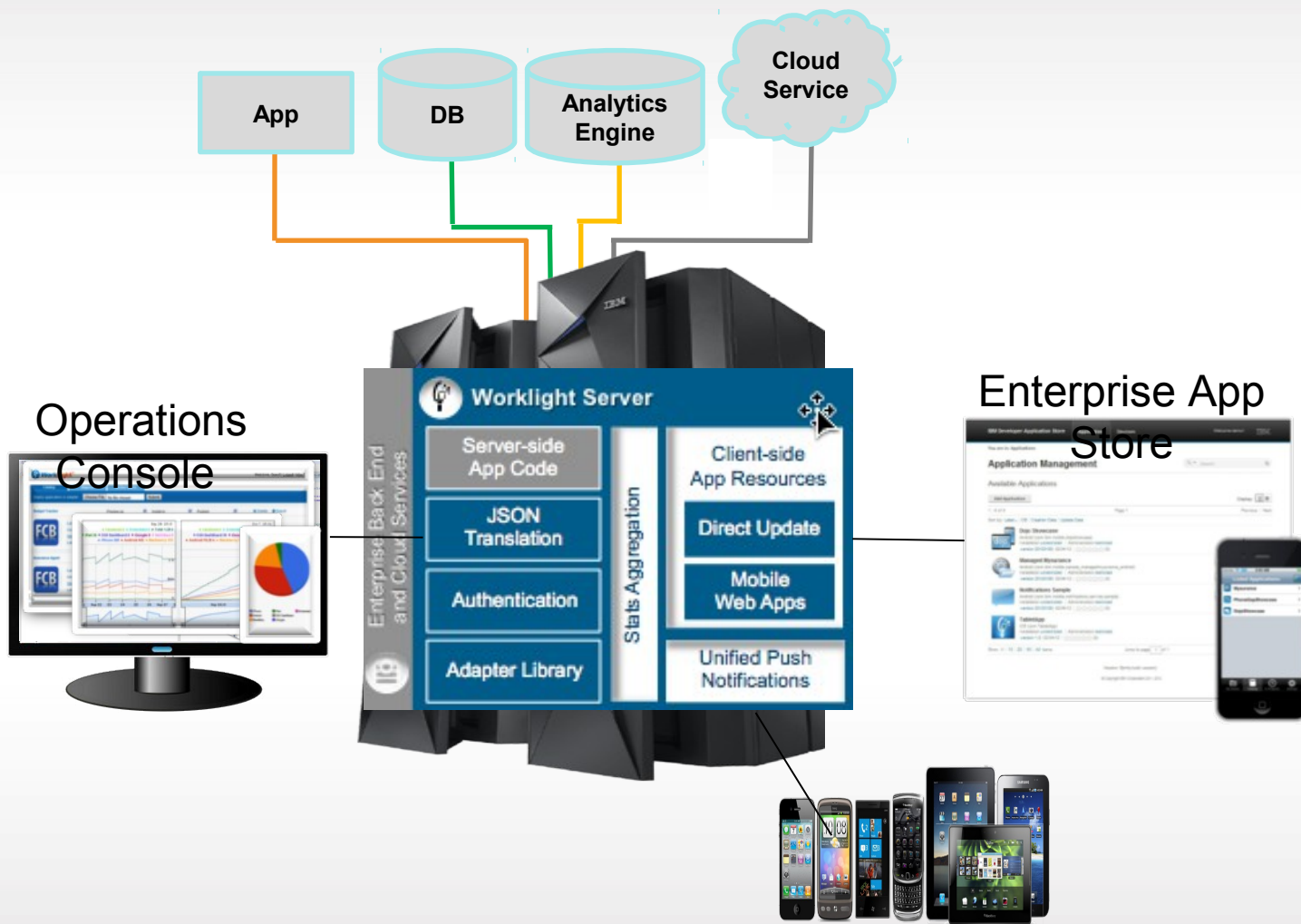
Apple   Android   Blackberry   Windows Phone

1

Worklight Runtime Server: A control point for access to the enterprise

*Caching, authentication, mobile application management and push notifications*

Cloud Service

App   DB   Analytics Engine

Worklight Server

Enterprise Back End and Cloud Services

Server-side App Code

JSON Translation

Authentication

Adapter Library

Stats Aggregation

Client-side App Resources

Direct Update

Mobile Web Apps

Unified Push Notifications

Operations Console

Enterprise App Store

Worklight reduces mobile app costs

Forrester Consulting finds Five-Year ROI of IBM Worklight to be >300%!

Native Versus Worklight 4-Platform Complex App Total Costs Comparison (Non-Risk Adjusted)
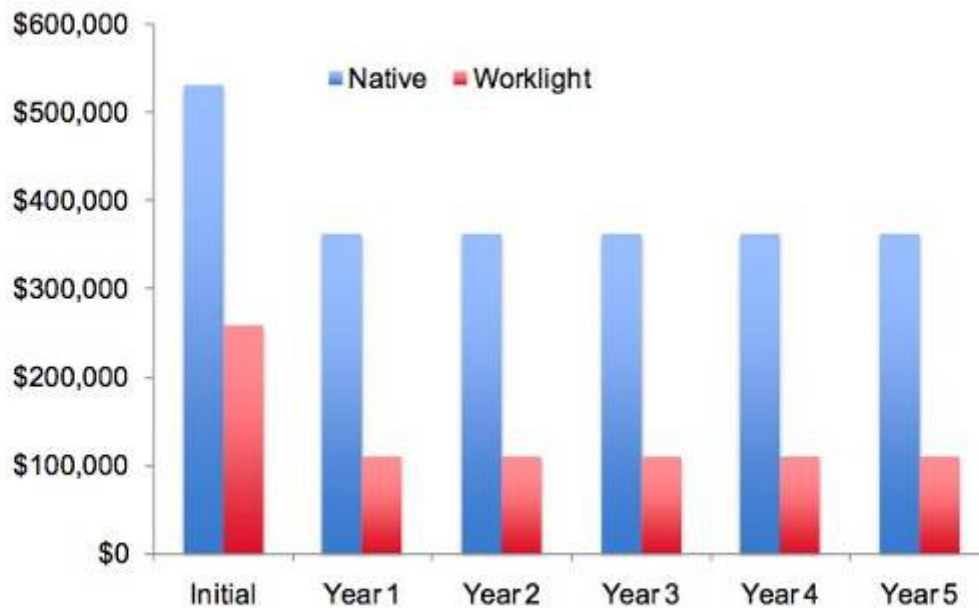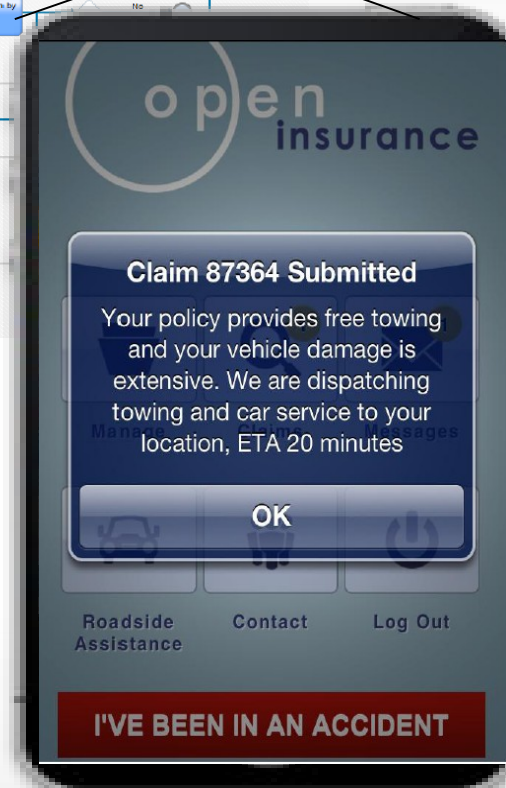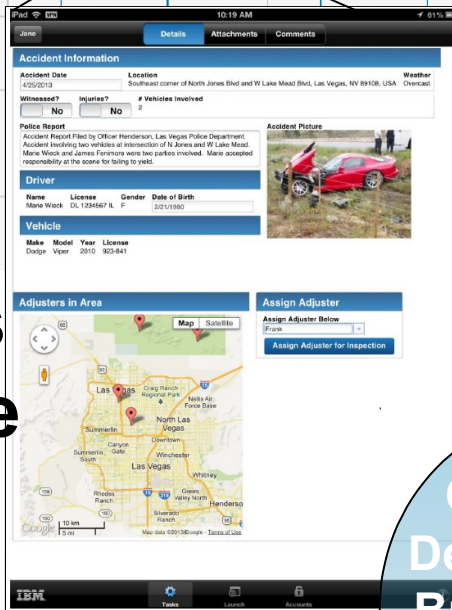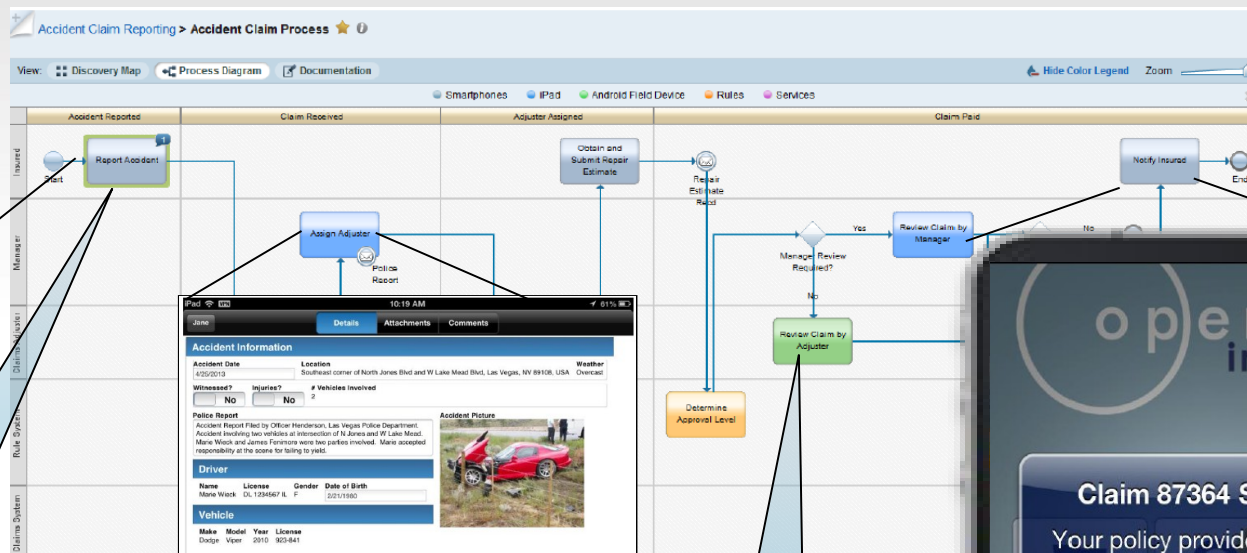
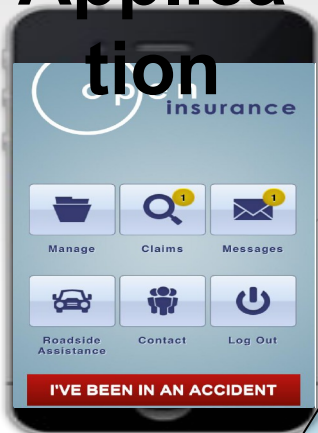Source: Forrester Research, Inc.

Study available at ibm.com/mobilefirst/worklight-forrester

Integrating mobile with your enterprise: Insurance Example

Client Application

Claims Adjuster App

JSON interface to CICS accessing policy info, claim history, etc

Operational Decision Mgmt Business Rule – determine client tier

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Integrating mobile with your enterprise

IBM

Company Overview:

- Major metropolitan police force with more than 4,000 officers serving more than 8 million citizens

- More than 11 million emergency calls per year

Challenge & Solution

- Needed to improve dispatching of 911 calls while maintaining 24x7 availability

- Created mobile application that speeds notification plus provides better data (GPS info, severity of emergency)

- Uses Worklight, MQ, and DB2 on z/Linux

Key Features & Outcomes

- **Speeds emergency response** - leverages high speed data network

- **Provides exact coordinates of caller** - shows location of 911 call on map (with latitude and longitude)

- **Allows prioritization of emergencies** - when multiple, concurrence situations are occurring by providing an indication of severity of the incident
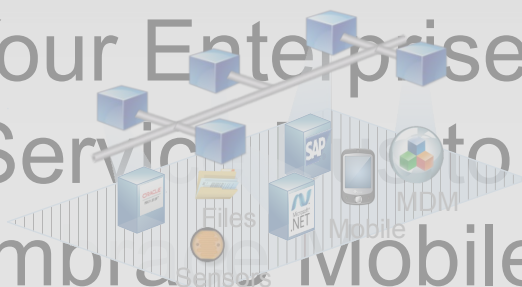
System z considerations for mobile

Infrastructure Impact: Extend Your Enterprise Services to Embrace Mobile
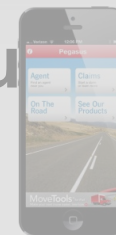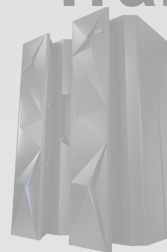
Integrating Mobile: App development, Transactions, Business Processes and Rules

Security: Mobile is different

Public Exposure: Introducing your services and a new business model

Mobile Consumer

Mobile security – more than just the device

At the Device

Manage device

Set appropriate security policies • Register • Compliance • Wipe • Lock

Secure Data

Data separation •

Le...
Encryp...

Application

Over the Network and Enterprise

Secure Access

Properly identify mobile users and devices • Allow or deny access • Connectivity

Monitor & Protect

Ide...
mob...
Log network access, events,

For the Mobile App

Secure Application

Utilize secure coding practices • Identify application vulnerabilities • Update applications

In... Secure

Secure connectivity to

Internet

Enterprise Intranet

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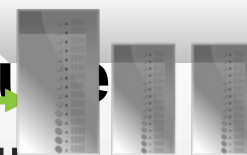
Mobile security – more than just the device

At the Device

Over the Network and Enterprise

For the Mobile App

Manage **Endpoint Manager for Mobile**

Set appropriate

Compliance •

Trusteer

WorkLight

Secure Data

Data separation •

Le

Encryption

Application

Secure Access Manager for Mobile

mobile users and devices • Allow

or

zSecure & QRadar

Monitor & Protect

Ide

mob

Log network access, events,

Secure Access Manager for Mobile*

Secure App

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coding practices •

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Update applications

AppScan for Mobile

WorkLight

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Secure connectivity to

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Enterprise Intranet

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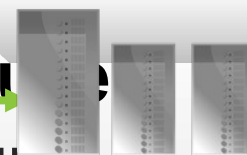
Integrating mobile with your enterprise

Company Overview:

- Major European Bank, more than 225 years old

- Manages over 400 billion euros in assets

Challenge & Solution

- Reduce complexity and cost to secure mobile applications

- End-to-end authentication mechanism based on **IBM Security Access Manager for Mobile** enabling the bank to guarantee the security of its customers while delivering critical data & services to mobile devices.

Key Features & Outcomes

- Validates incoming mobile identities

- Full integration with RACF

- Secure round trip access from mobile device to all originating data sources

- Clear visibility into who/what is accessing System z at all times

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System z considerations for mobile

Infrastructure Impact: Extend Your Enterprise Service Bus to Embrace Mobile

Integrating Mobile: App Development, Transactions, Business Processes and Rules

Security: Holistic, Proactive Approach

Public Exposure:
Introducing your services and a new business model

Mobile Consumer

Enterprise API's for mobile
A New Revenue Source or Control Point for LOB

Socialize your APIs through a branded developer portal

- Define the API
- Assemble the API
- Secure the API

- Quick exploration of API
- Easy developer sign ups
- Feature the developer apps

Out of the box business analytics and operation

- Business Analytics for both API provider and application developer:
  - Top traffic producing API ,
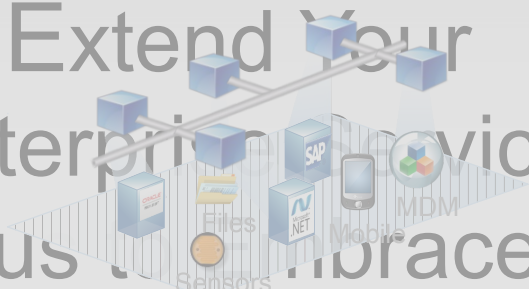 - Top APP producing

create · manage · socialize · secure

System z Considerations for Mobile

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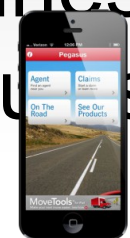
Security: Holistic, Proactive Approach

Public Exposure: Leveraging technology assets for new business

Mobile Consumer

Mobile Agenda Workshop

One day interactive workshop with an IBM Mobile expert to help enterprises plan and develop a customized roadmap for success (one day, no-cost interactive workshop)

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

Highlights

• Interactive discussion to
  understand client business
  drivers, pains and requirements

• Overview of IBM MobileFirst
  Strategy, technology ROI's

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

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Connecting mobile & your enterprise

- ✓ Do you know what your overall enterprise mobile strategy is?

- ✓ Are you adapting your System z infrastructure to support mobile?

- ✓ Are you designing and developing applications to take advantage of your existing investments?

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