



# The Mobile Enterprise

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IBM Software Group



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



91%

Mobile users keep their device within arm's reach 100% of the time

75%

Mobile shoppers take action after receiving a location based message

96%

Year to year increase in mobile cyber Monday sales between 2012 and 2011

90%

Users use multiple screens as channels come together to create integrated experiences

900%

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 <b>transactions</b> to	➔	personalized <b>engagement</b>
<b>Millions</b> of PCs to	➔	<b>billions</b> of mobile devices
<b>Structured</b> data to	➔	massive amounts of <b>unstructured</b> data
<b>Static</b> applications to	➔	<b>dynamic</b> services
<b>Rigid</b> infrastructure to	➔	an <b>elastic</b> cloud infrastructure
<b>Reactive</b> point security	➔	Intelligent, wholistic, <b>proactive</b> 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

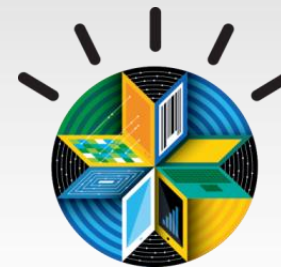




# IBM's Strategic Focus on Mobile



## IBM MobileFirst



**1**

**The Broadest  
Portfolio of  
Mobile  
Solutions**

**2**

**The Deepest  
Set of Services  
Expertise**

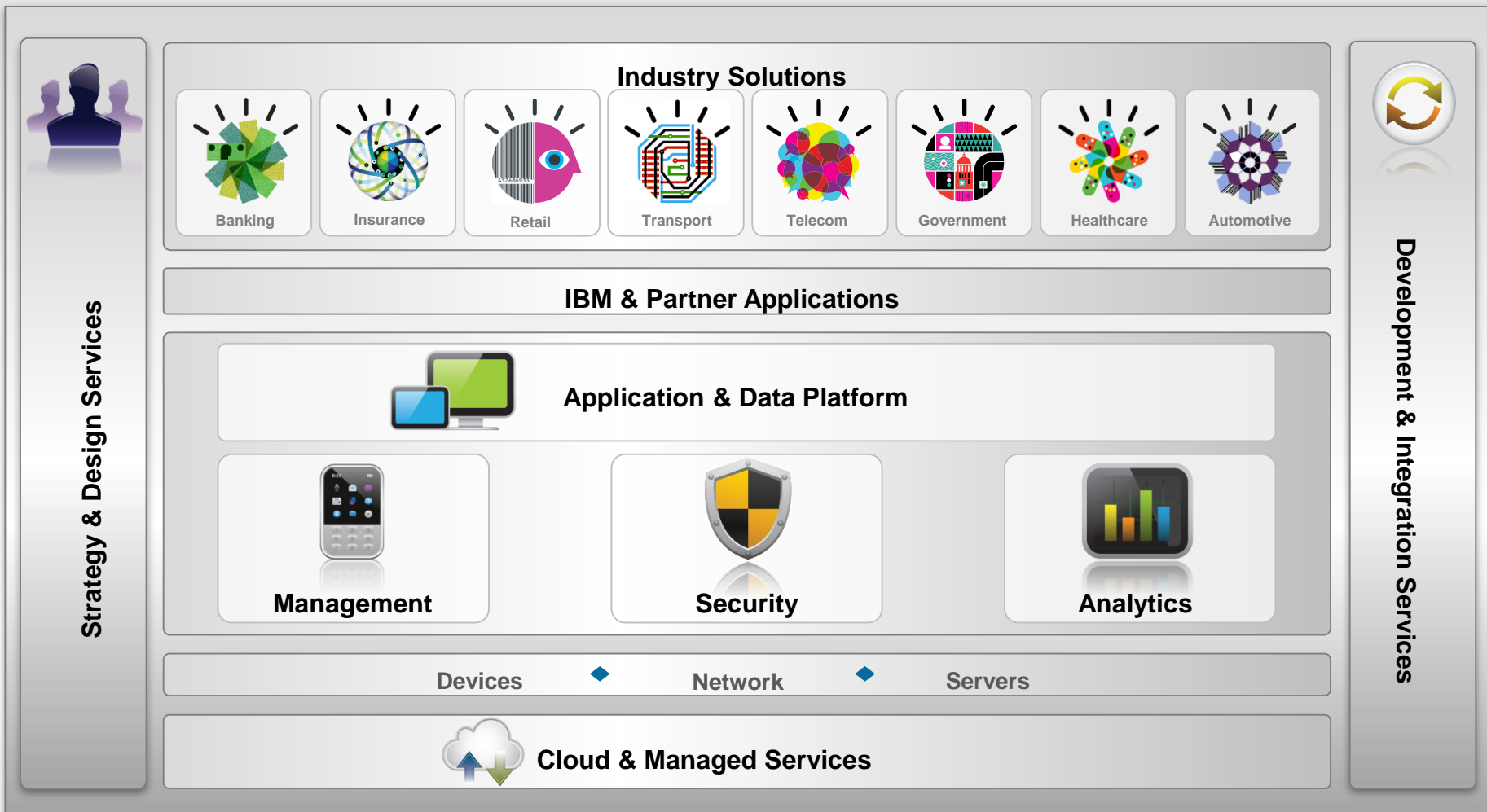
**3**

**New Industry  
Partnerships  
and Resources  
for Developers**





# The MobileFirst marketecture





## 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

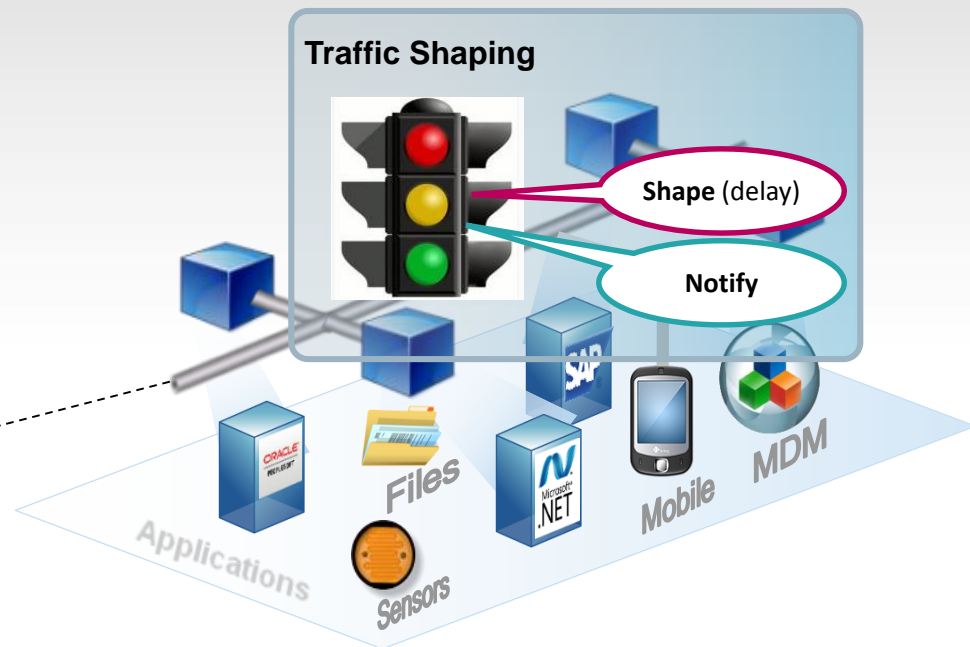
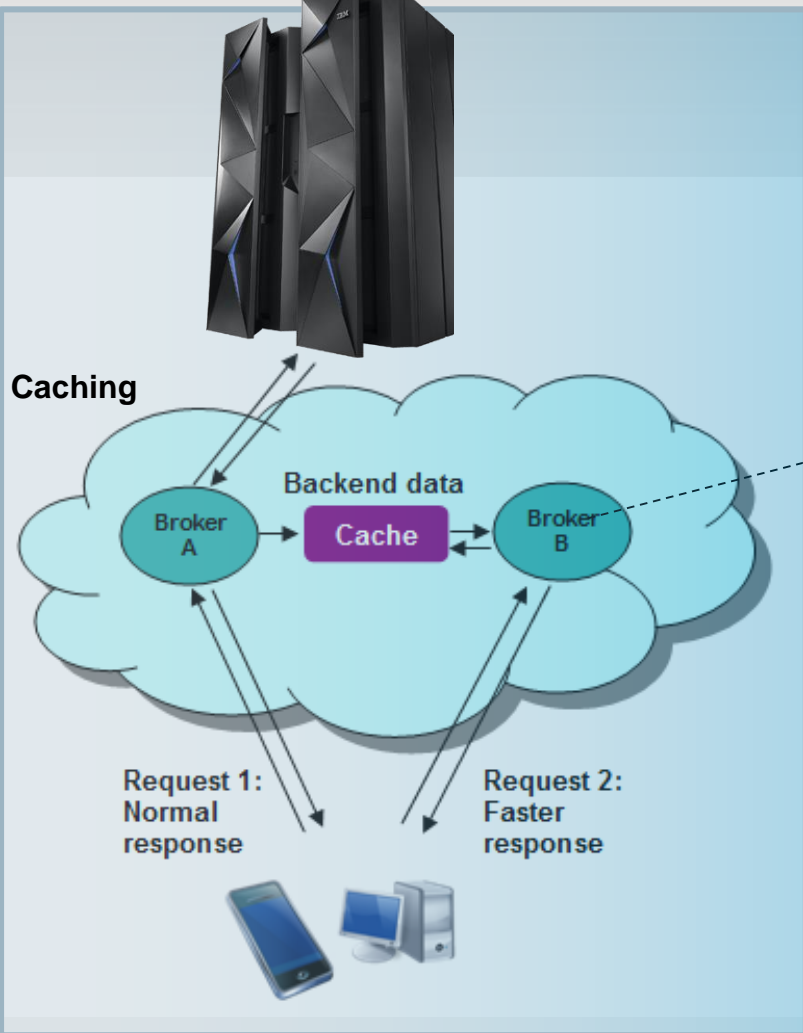




# Connectivity, traffic control & caching



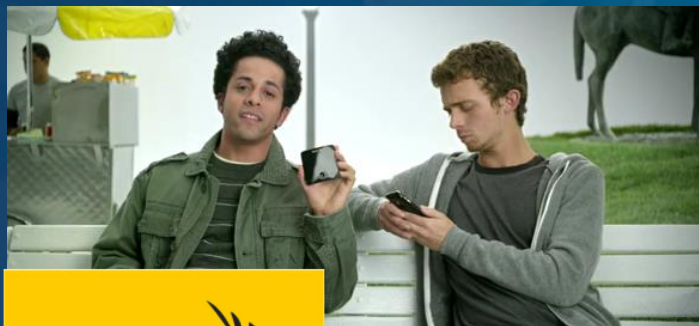
*Extend your Enterprise Service Bus to support mobile by leveraging existing capabilities*



- 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

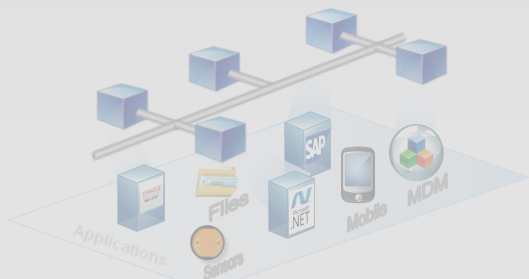
- Grow its revenue while protecting customer privacy, improving efficiency and cutting costs with a scalable application infrastructure.
- WebSphere® DataPower® devices (XI52 and XC10) to enhance security, provide an integration gateway and improve responsiveness for customers

## Key Features & Outcomes

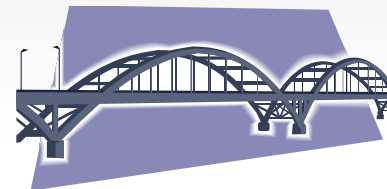
- Helps Sprint process approximately 51 billion transactions per month
- Delivers a response to customers checking eligibility for rebates within milliseconds, as opposed to 0.2 seconds
- Provides an extra layer of security between internal systems and external systems, such as Sprint partner applications



## Infrastructure Impact: Extend Your Enterprise Service Bus to Embrace Mobile



## Integrating Mobile: What's old is new



## Security: Mobile is different



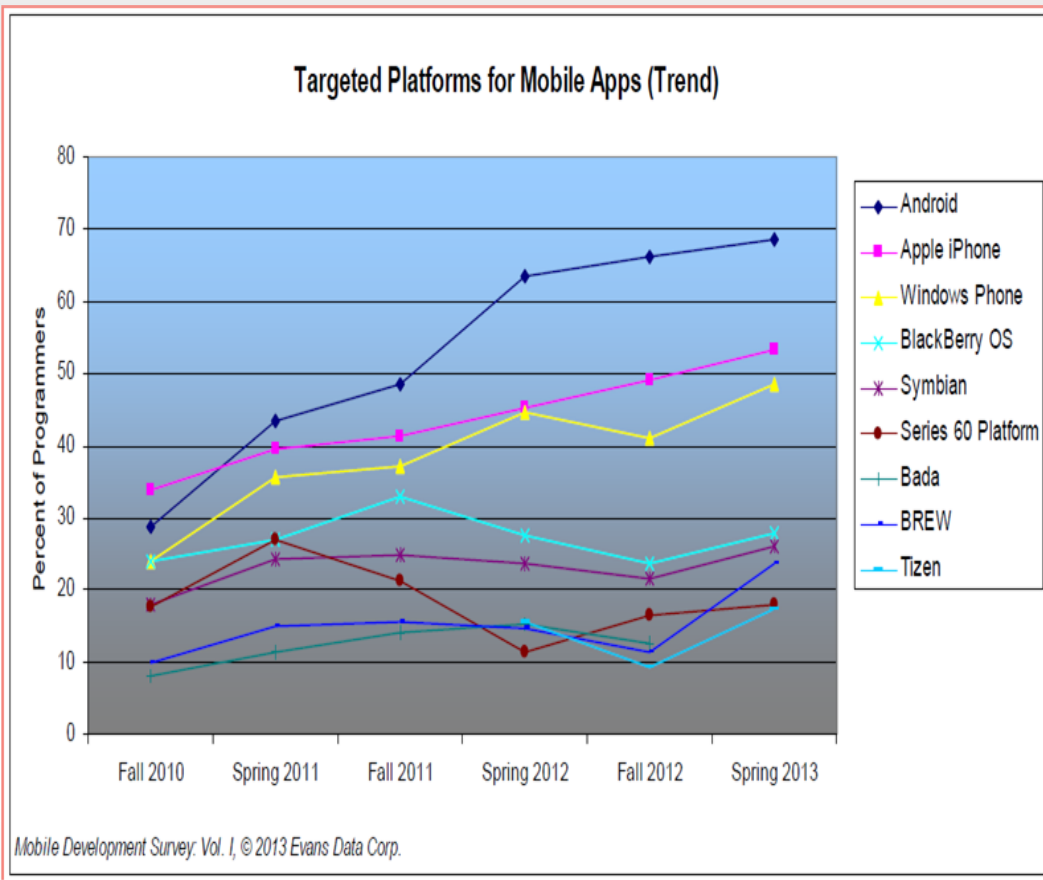
## Public Exposure: Introducing your services and a new business model

Mobile Consumer





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



## On device applications development

- **30% reusing web technology** for mobile applications
- **30% are writing device specific applications** to exploit device capabilities (camera, mic, GPS, etc.)
- **24% using both approaches** (hybrid)





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

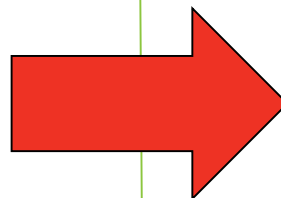
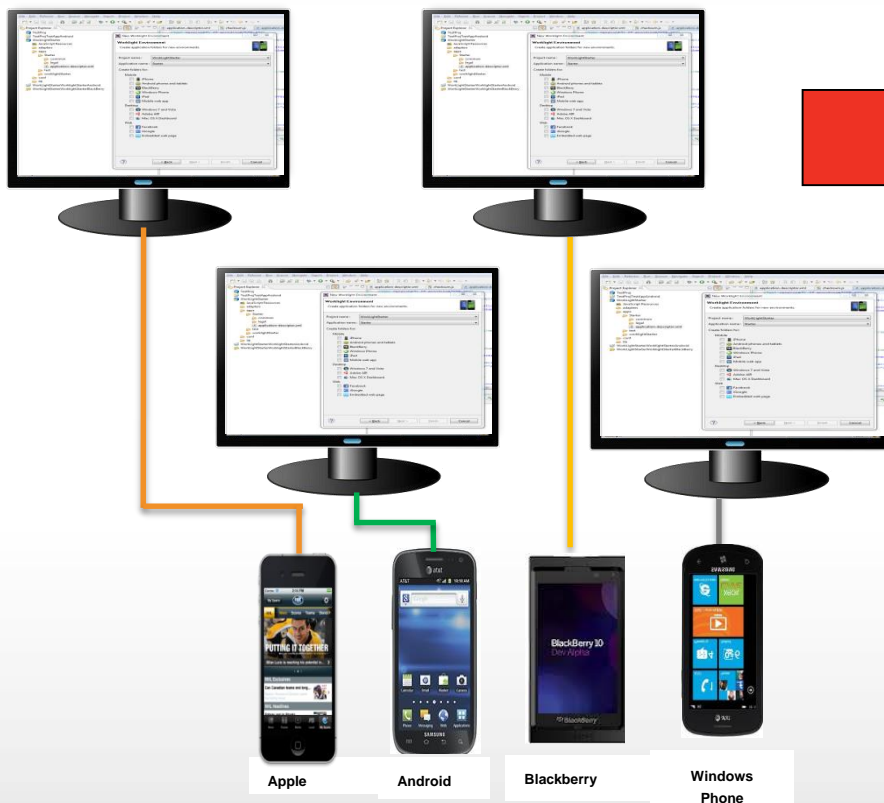


## From the complexity of many...

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

## To the simplicity of one

- One development environment
- One codebase to develop and maintain





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



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



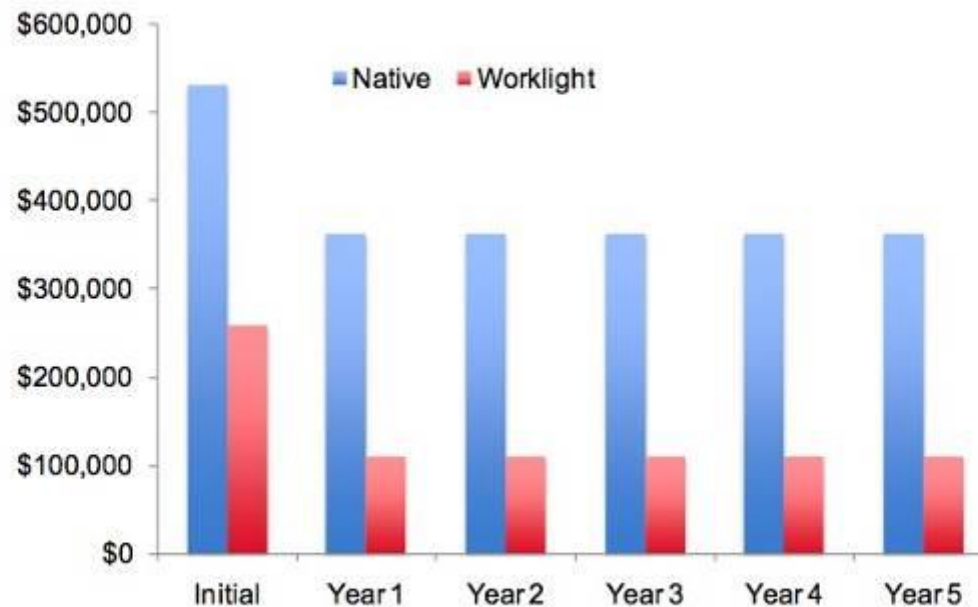


# Worklight reduces mobile app costs



*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.

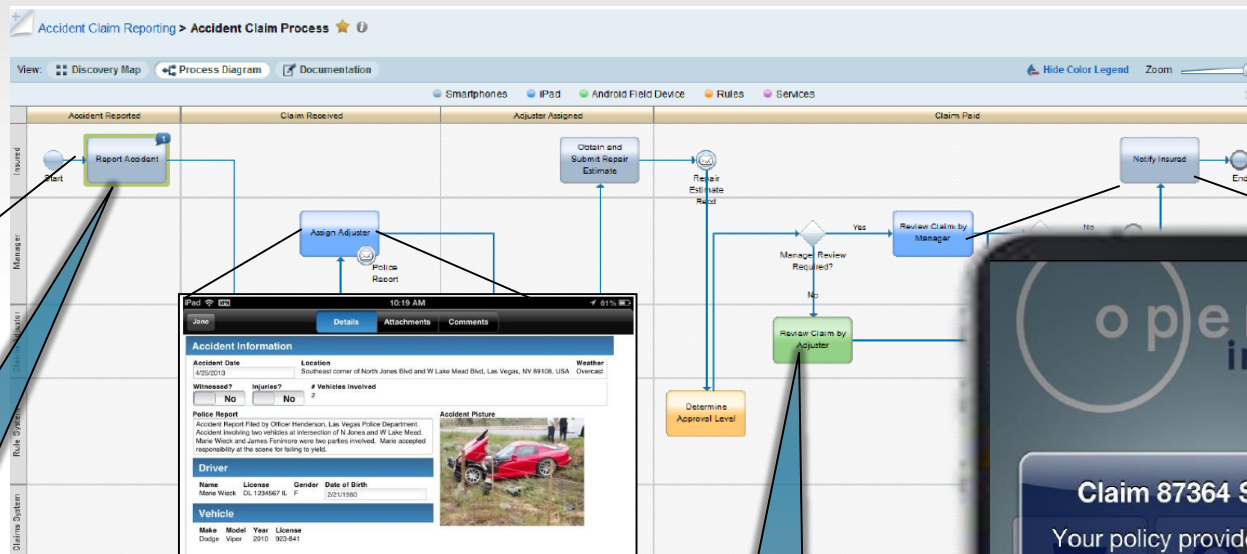
Study available at [ibm.com/mobilefirst/worklight-forrester](http://ibm.com/mobilefirst/worklight-forrester)



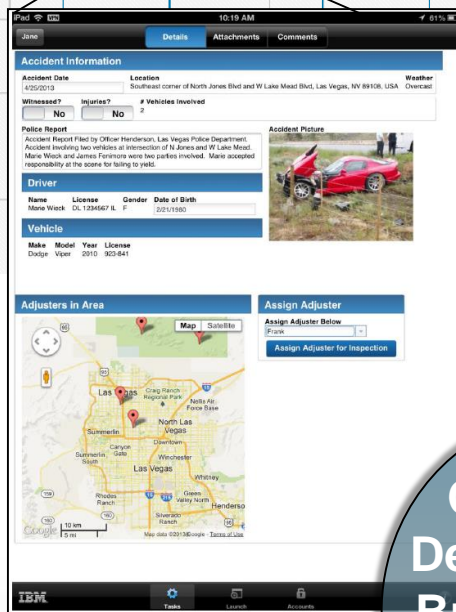
# Integrating mobile with your enterprise: Insurance Example



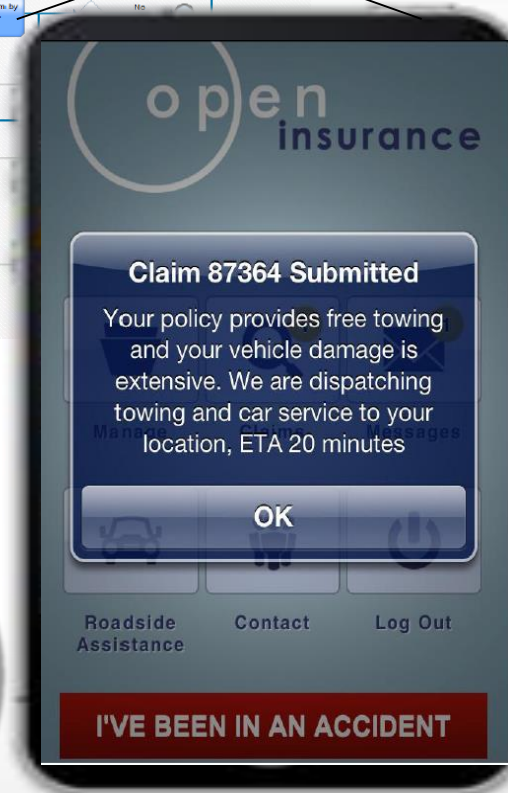
## Client Application



## Claims Adjuster App



Operational Decision Mgmt Business Rule – determine client tier



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



## 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

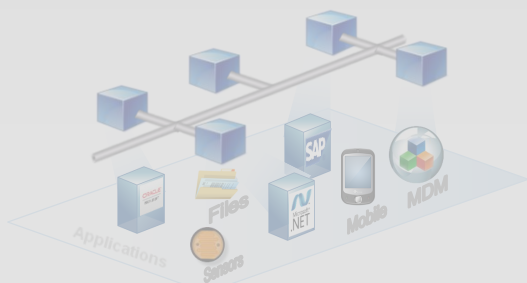
- **Speeds emergency response** - leverages high speed data network
- **Provides exact coordinates of caller** - shows location of 911 call on map (with latitude and longitude)
- **Allows prioritization of emergencies** - when multiple, concurrence situations are occurring by providing an indication of severity of the incident





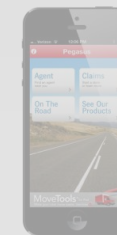
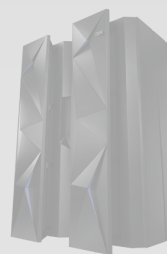
## Infrastructure Impact:

Extend Your Enterprise Service Bus 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 • Leakage • Encryption

### Application Security

Offline authentication • Application level controls

## Over the Network and Enterprise

### Secure Access

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

### Monitor & Protect

Identify and stop mobile threats • Log network access, events, and anomalies

### Secure Connectivity

Secure Connectivity from

## For the Mobile App

### Secure Application

Utilize secure coding practices • Identify application vulnerabilities • Update applications

### Integrate Securely

Secure connectivity to enterprise applications and services

### Manage Applications

Manage applications and enterprise app store





# Mobile security – more than just the device



### At the Device

- Endpoint Manager for Mobile**  
Compliance • wipe • Lock
- Trusteer**  
Leakage protection
- WorkLight**  
Application level controls

### Over the Network and Enterprise

- Secure Access**  
Access Manager for Mobile\*
- Monitor & Protect**  
zSecure & QRadar
- Secure Connectivity**  
Secure Connectivity from

### For the Mobile App

- Secure Application**  
AppScan for Mobile
- Integrate Securely**  
WorkLight
- Manage Applications**  
Manage applications and enterprise app store





## 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

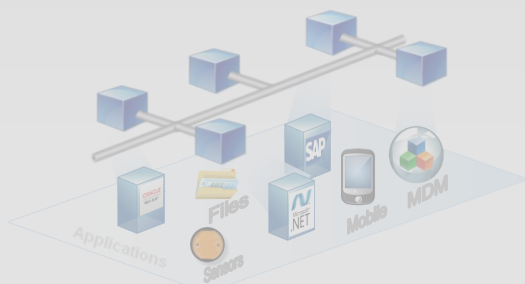


# System z considerations for mobile



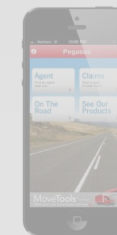
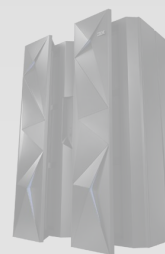
## Infrastructure Impact:

Extend Your Enterprise Service Bus to Embrace Mobile



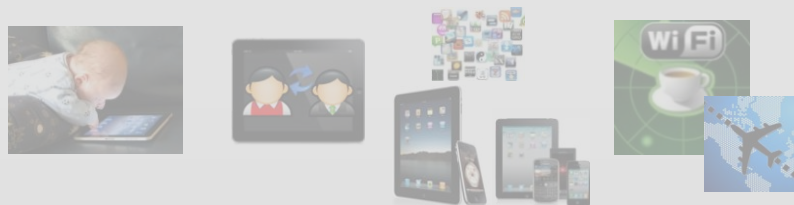
## Integrating Mobile:

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

IBM Cast Iron WEBAPI | APIs | API Users | Operations | Customize User Pages | janejemira@acme.com

All APIs > Acme Orders API

GET /Orders/{order\_id}?query=all&count=50 [Publish]

This is a Proxy

Define the API  
Assemble the API  
Secure the API

Parameters

order_id	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec ullamcorper ante
query	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec ullamcorper ante
count	Lorem ipsum dolor sit amet, consectetur adipiscing elit. Donec ullamcorper ante

Request Headers

HTTP Get  
HTTP Post

### Socialize your APIs through a branded developer portal

- Quick exploration of API
- Easy developer sign ups
- Feature the developer apps
- Hooks into social communities
- Enables developers to manage their applications

ACME Insurance | API Documentation | Sign Up

Welcome to the Acme Insurance developer portal

This developer portal provides access to ACME Insurance business APIs and documentation. It also provides developers with the tools they need to successfully leverage the APIs to build new applications.

Explore API Documentation

About This Pilot  
This Web API portal is a web app pilot for a large insurance company built in conjunction with the help of IBM. The Web API you see on this site leverages services, which we transformed into REST APIs you can use for development purposes only. To learn more about plug & play at ACME go to <http://www.acme.com> or send an email to the address at the bottom of this page.

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acordiformforum This is the way we build it down. Make it a great show for all of you. See you next year in Vegas! #thecloudoff7

### Out of the box business analytics and operation insight

- Business Analytics for both API provider and application developer:
- Top traffic producing API ,
- Top APP producing traffic
- GeoLocation of the traffic
- Structured Filtered Search across analytics for APIs and App







# A complete API management solution



Multiple Protocols Supported (MQ, HTTP, Web Services)

**Secure**



**DataPower**

XG45, XI52

•Physical or VE

•Purchase new or re-use existing appliances

**Create, Manage, Socialize**



**IBM API Management**

•Hypervisor Install

**Create (Assemble)**



**Cast Iron**

•Physical or HVE

•Purchase new or re-use existing appliances

API Appearance to the Intranet or Internet





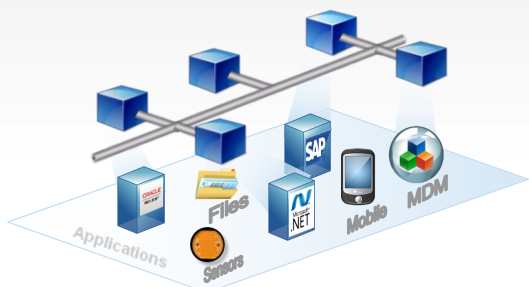


# System z Considerations for Mobile



## 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: 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 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](mailto:ibmmobile@us.ibm.com)



- ✓ 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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