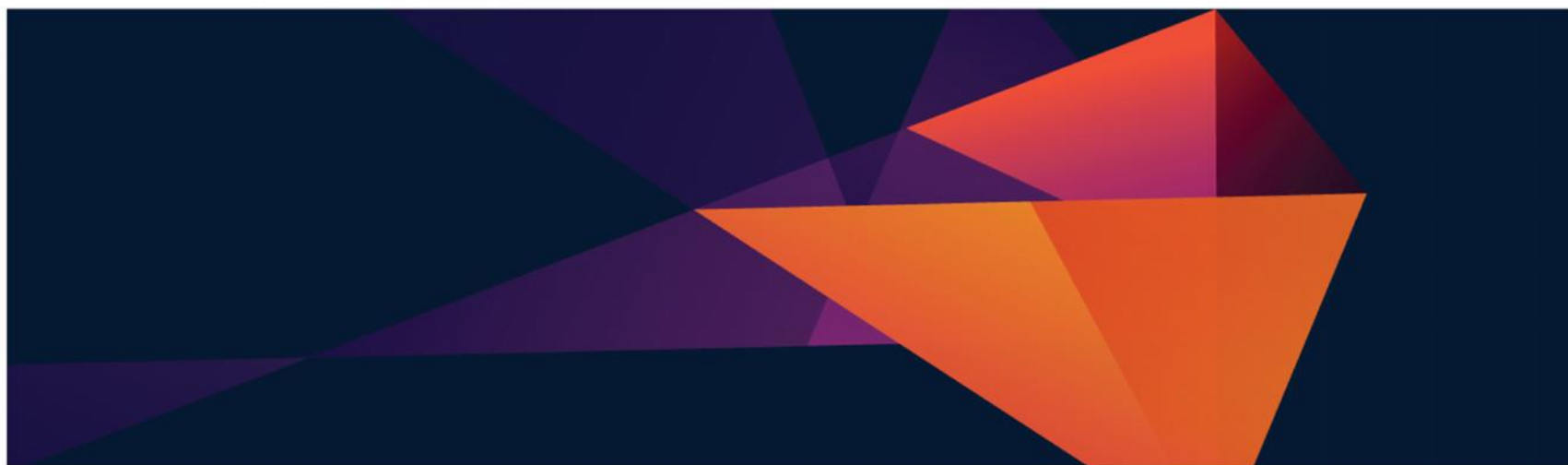




# Client Use Cases and Getting Started with Mobile and z Systems

Track 3: Extending the mainframe to the mobile enterprise



## Where we are in today's agenda

- Mobilizing the mainframe
- Modernizing mainframe applications for mobile and more
- Exposing mainframe applications and services to mobile
- Developing an IBM MobileFirst platform application for z Systems
- Optimizing applications and data for mobile workloads
- Client Use Cases and Getting Started with Mobile and z Systems

## Agenda

- Apple + IBM Partnership
- Mobile Maturity Model – z Systems perspective
- IBM Workshops
- Mobile Reference Architecture - Overview
- Mobile Workload Pricing
- Mainframe Mobile App Throwdown
- References



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# iPhone and iPad in Enterprise

# Enterprise Solutions for iOS

IBM MobileFirst  
for iOS  
Solutions

IBM MobileFirst  
for iOS  
Software  
Services

IBM MobileFirst  
Supply,  
Activate, and  
Manage



# IBM MobileFirst for iOS Solutions



Designed to transform enterprise mobility

Made for iPhone and iPad

Driven by big data and analytics

Unique apps only Apple and IBM can deliver

# IBM MobileFirst for iOS Solutions





# MobileFirst for iOS Software Services

IBM MobileFirst  
for iOS  
Software  
Services

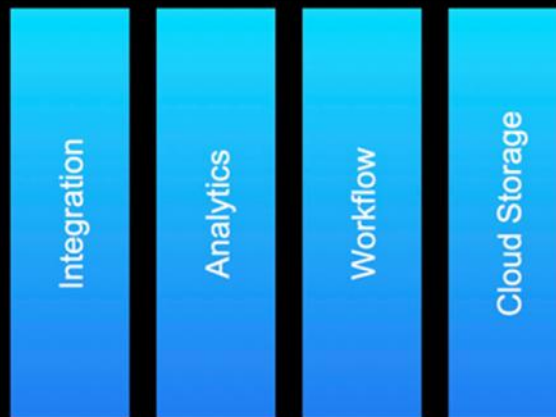
Application platform with analytics,  
workflow, data, and mobile integration

Enterprise mobile management for  
security, application and device  
management, enterprise distribution

Enterprise-class cloud and on-premise  
deployment optimized for iOS

# MobileFirst for iOS Software Services

## IBM MobileFirst Platform for iOS Development Platform



## IBM MobileFirst Protect for iOS Mobile Device Management



Systems of Record

# IBM MobileFirst Supply, Activate, and Manage

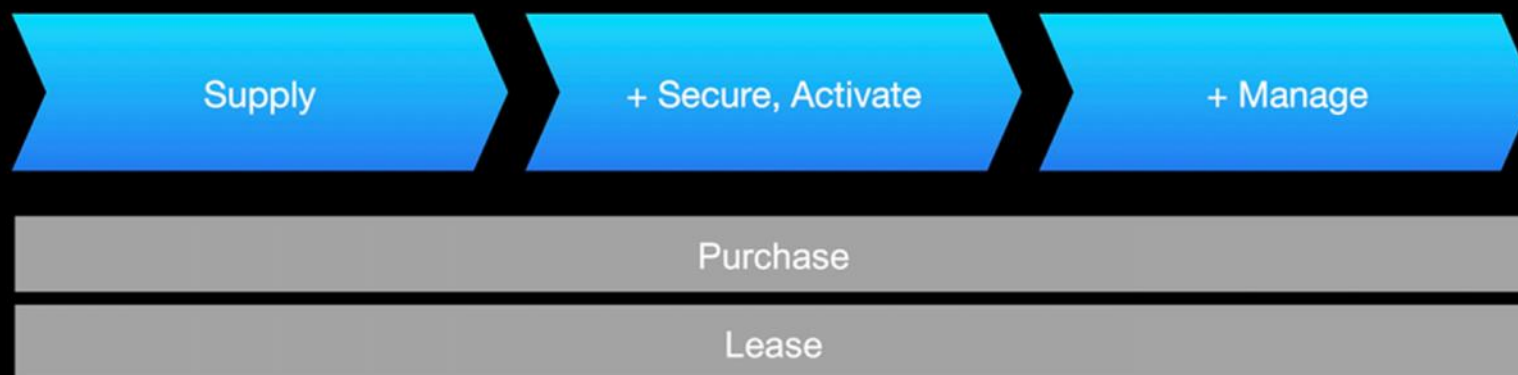
IBM MobileFirst  
Supply,  
Activate, and  
Manage

End-to-end procurement

Device enrollment

Lifecycle management services

# IBM MobileFirst Supply, Activate, and Manage



# Enterprise Service and Support



## Apple

- Comprehensive support for Apple hardware and operating systems
- Coverage for IT departments and end users

## IBM

- Onsite repair or replacement for Apple-enrolled iOS devices

Purchase through IBM or  
Apple Authorized Reseller

# Transformation Starts Now

“We’re scaling the enterprise down into the hands of the individual.”

Ginni Rometty  
Chairman, President, and CEO, IBM

“This is a radical step for enterprise and something that only Apple and IBM can deliver.”

Tim Cook  
CEO, Apple

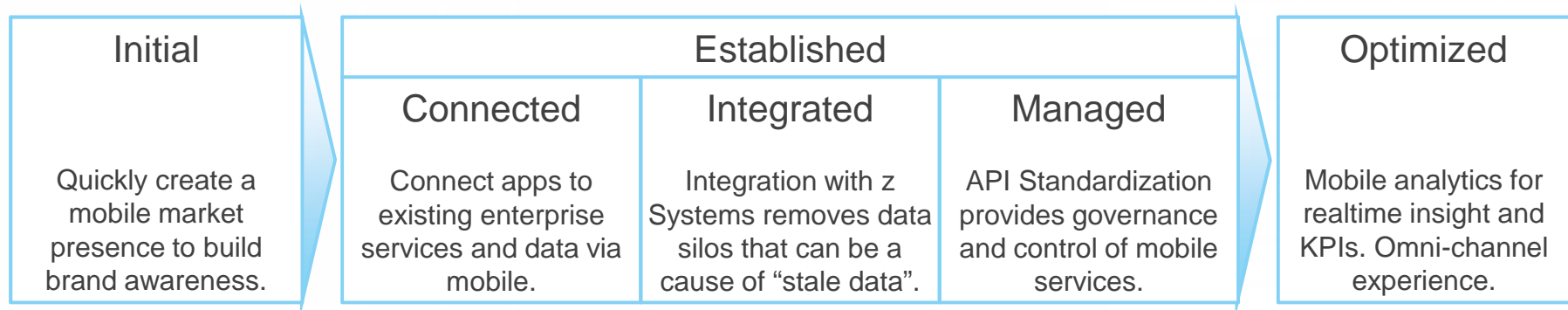




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# Demo

# Mobile Maturity Model: z Systems perspective



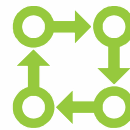
## Time to market

- Rapidly deliver tactical apps
- Reuse existing assets



## Build and reuse

- Connect to proven services on z
- Revitalize aging interfaces



## Service integration

- End-to-end security
- Accurate data for B2C and B2E
- Exploit mobile device capabilities



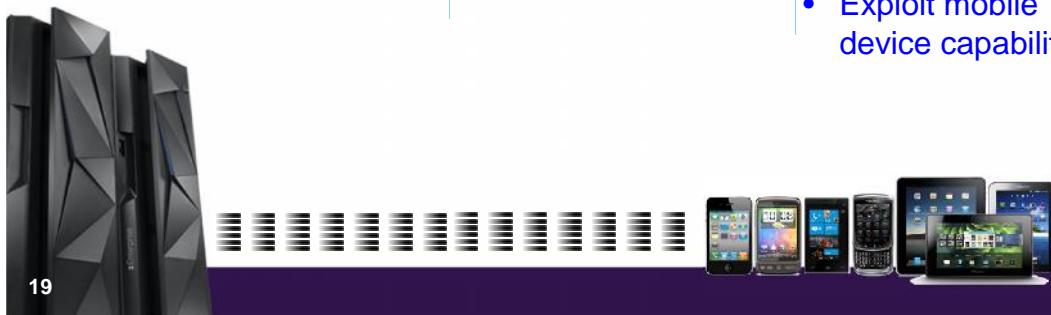
## Scalable services

- Mobile services shared across the enterprise
- Scalable services grow with demand
- Efficiently manage mobile workload



## In-flight analytics

- Insight into in-flight transactions on z
- Mobile processes optimized for B2C and B2E
- Personalized customer experience



*Guiding questions:*

How do you start to build a mobile solution? Is mobile a primary channel for you?

What existing assets do you have that can quickly be repurposed for mobile?

Getting started

Identify mobile needs

- Creating a clear vision of you mobile needs helps to build a roadmap to success

Identify existing assets

- Web Assets/Channels enable you to quickly create a mobile presence
- Tools portfolio helps to identify reusable assets for mobile solutions

Employee or consumer?

- Employee facing apps allow you to develop mobile best-practice in-house

Free Mobile Workshop

- Identify how to progress and build a roadmap for mobile success



*Common Characteristics:*

**Rapidly deliver tactical apps:**

Mobile apps deployed rapidly to achieve time to market goals.

3<sup>rd</sup> party providers might not have experience with enterprise systems.

**Reuse existing assets:**

Common to find mobile apps reusing web channel assets

Guiding questions:

Does the architecture consider enterprise scalability, security, integration, and reuse?

Are the services and interactions tailored to a mobile form-factor?

Getting connected

Enterprise connectivity

- Revitalize core applications with a new mobile interface (Eg. 3270)
- Reuse enterprise applications with a proven track record of scale and stability
- Connect to z Systems using mobile friendly RESTful/JSON APIs

Mobile lifecycle tools

- Dev. tools integrated with z Systems
- Build native and hybrid apps with ease
- Dev. tools facilitate agile development
- CICS & PD Tools optimize mobile services

Realtime visibility of data

- Connectivity with z Systems brings accurate enterprise data to mobile

Free Mobile Workshop

- Identify how to progress and build a roadmap for mobile success



Connected



Connect apps to existing enterprise services and data via mobile.

Common Characteristics:

Drive transactions on z:

JSON/REST/web services enable mobile applications to easily connect to and reuse proven z Systems services

New workload patterns:

Connectivity to enterprise systems allows for reuse leading to new patterns in workload.

Basic security:

Basic authentication between mobile and z Systems

Guiding questions:

How do you manage multiple devices and mobile specific capabilities?

Can you identify and manage workload originating on mobile devices?

Becoming integrated

Mobile Platform

- Exploit push-notification to minimize read-only queries against z Systems
- Support all major mobile form factors
- Support BYOD across the enterprise
- Point of control for mobile workload

End-to-end Security

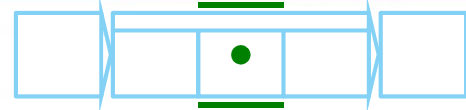
- User/Role/Device level security
- Integration with z Systems security

Co-located Architecture

- Consolidate distributed components to zLinux for improved response times
- Easily scale to meet mobile demand
- Reduce architectural complexity

Free Mobile Workshop

- Identify how to progress and build a roadmap for mobile success



Integrated



Integration with z Systems removes data silos that can be a cause of “stale data”.

Common Characteristics:

Designed for mobile:

Broad range of mobile devices supported and device specific features exploited

Integrated security:

Mobile and z Systems security is integrated

Accurate data for B2C and B2E:

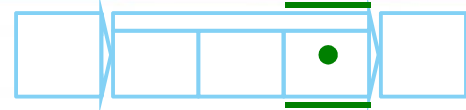
Push notifications minimizes repeat queries, and data silos are eliminated avoiding potential “stale data” issues.

*Guiding questions:*

*How can the LOB define and deploy new services for mobile that are available outside the organization?*

*How can the LOB monitor usage, control access, and understand user interactions to make improvements?*

**Becoming managed**



**Managed**



API Standardization provides governance and control of mobile services.

*Common Characteristics:*

**Controlled growth to meet demand**

Quickly define and deploy new mobile services that scale to meet user demand.

**Mobile workload identified**

Mobile workload identified at point of origin; automatically tracked and managed.

**Mobile services shared across enterprise**

Self-service registration, quotas, and usage monitoring across the enterprise.

**Single Interface to z**

- Standardized access to z System sub-systems and services
- Simplify identification of mobile workload on z Systems

**API Self-Service**

- Create, deploy, and socialize APIs to internal and external Dev. Community
- Rapidly provision new service offerings
- API analytics provide insight into mobile application usage patterns

**Managed Mobile Lifecycle**

- Automated deployment of new mobile applications
- Tools, process, and services support continuous delivery for mobile solutions

**Free Mobile Workshop**

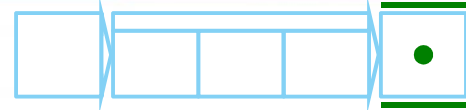
- Identify how to progress and build a roadmap for mobile success

Guiding questions:

*How do you capture insight from in-flight transactions to drive the most effective business process decisions?*

*How do you create an omni-channel experience combining apps, systems, and data for personalized interactions?*

Becoming optimized



Optimized



Mobile analytics for realtime insight and KPIs. Omni-channel experience.

Common Characteristics:

Insight into in-flight transactions

Business events generated by in-flight transactions used to drive efficient business process decisions.

Mobile processes optimized for B2C and B2E

Transaction analytics, API usage, and App usage patterns optimize processes.

Personalized customer experience

Channel integration and analytic insights provide unique user experience.

Transactional insight

- Business events provide immediate insight into business transactions on z Systems
- Optimize decisions and processes based on actual behavior in real-time

Decision management

- Consolidate business rules on z Systems near the data, apps, and transactions
- Intelligent and predictive insight for repeatable decision processing

Omni-channel

- Integrated offer management, marketing, business process, channel interactions, and user experience
- Personalization of business services

Free Mobile Workshop

- Identify how to progress and build a roadmap for mobile success

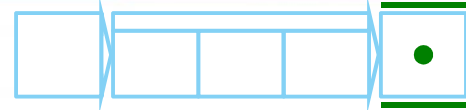


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Free Mobile Workshop

- Identify how to progress and build a roadmap for mobile success

## IBM Workshops – 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

## IBM Workshops – Enterprise Mobile Test Drive

- **Partner with IBM resources to work on Mobile Test Drive of your choice:**
  - Focus on one entry point option that could include building a mobile front end for an existing 3270 application, composing new Bluemix mobile app connected to back end system of record, integrating an industry starter app into existing back end, leveraging API enablement using API Management, and others
- **Benefits:**
  - A chance to work hand in hand with IBM mobile specialists to review your existing mobile projects, priorities and requirements
  - Leverage best practices and subject matter expertise for consultative input into your enterprise mobile infrastructure strategy and enterprise mobile roadmap
  - Learn what others are doing to accelerate time to value with mobile projects by integrating their high value back enterprise data and transactions from their systems of record and to differentiate their business by providing a richer client experience via mobile
- **Who should be interested?**
  - Clients that are looking to leverage their existing z Systems data and applications via mobile channels to help drive more value from their mobile initiatives
- **What is the commitment?**
  - 1-2 days Discovery that IBM mobile experts facilitate with your mobile business and technical team, followed by deeper dive into the Mobile Test Drive, for up to a two weeks no-cost engagement
- **How much will it cost?**
  - We will provide no-cost technical expertise and access to resources during the Proof-of-Concept

**For further information please contact Nathan Brice ([nbrice@uk.ibm.com](mailto:nbrice@uk.ibm.com))**

## IMS Wildfire Workshop

- Scheduled to roll out in Q3 and Q4 of 2015
- IMS Hands-on workshop
- A full day of multiple hands-on labs that let you test drive:
  - **IMS Mobile Solution**
    - Model, assemble, publish, and test IMS transactions as REST/JSON services.
  - IMS Explorer for Development and SQL access IMS data
    - Eclipse-based graphical tool that simplifies IMS application development tasks.
  - IMS Explorer for Development and Analytics via QMF

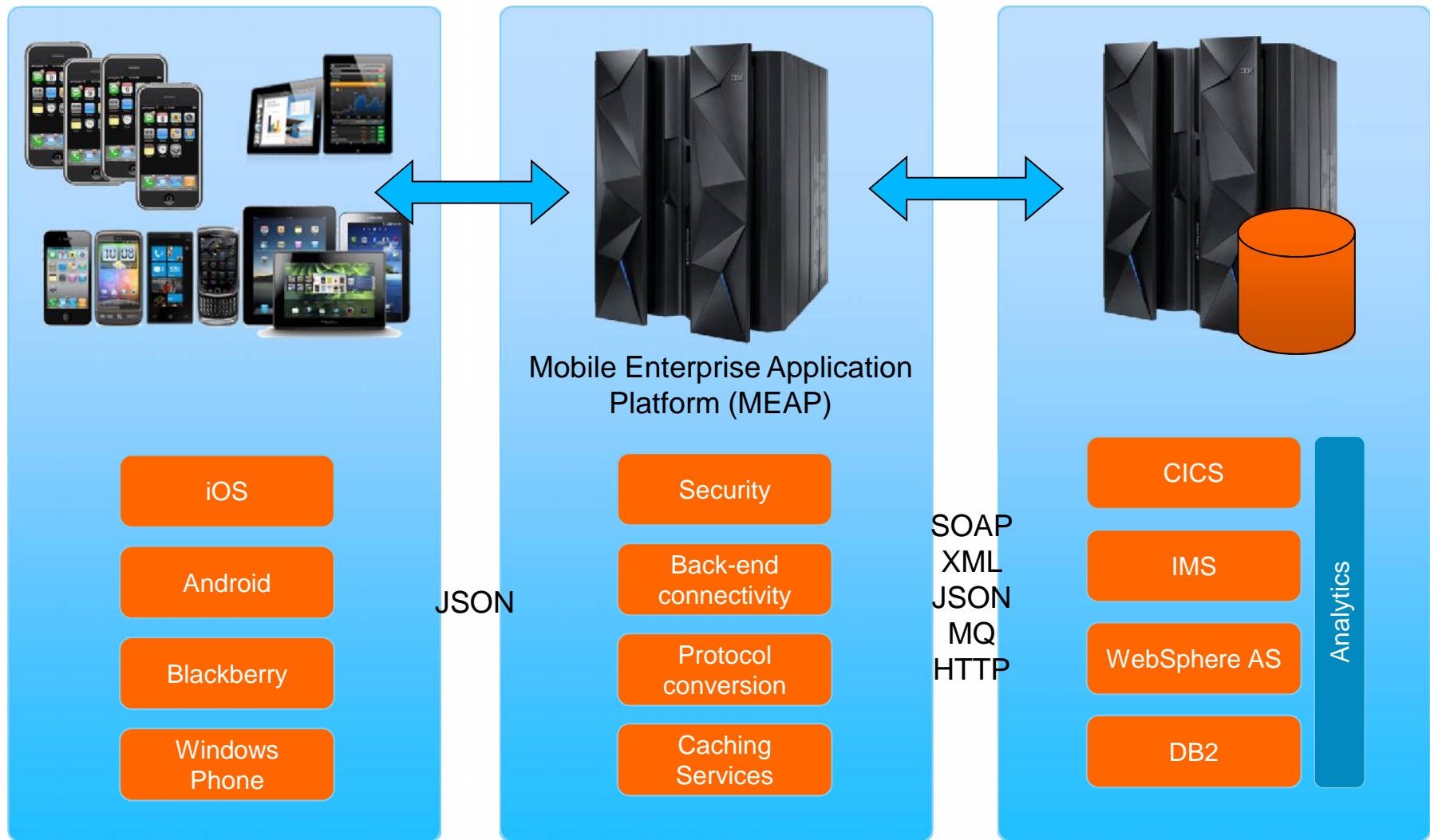


# Mobile Reference Architecture - Overview

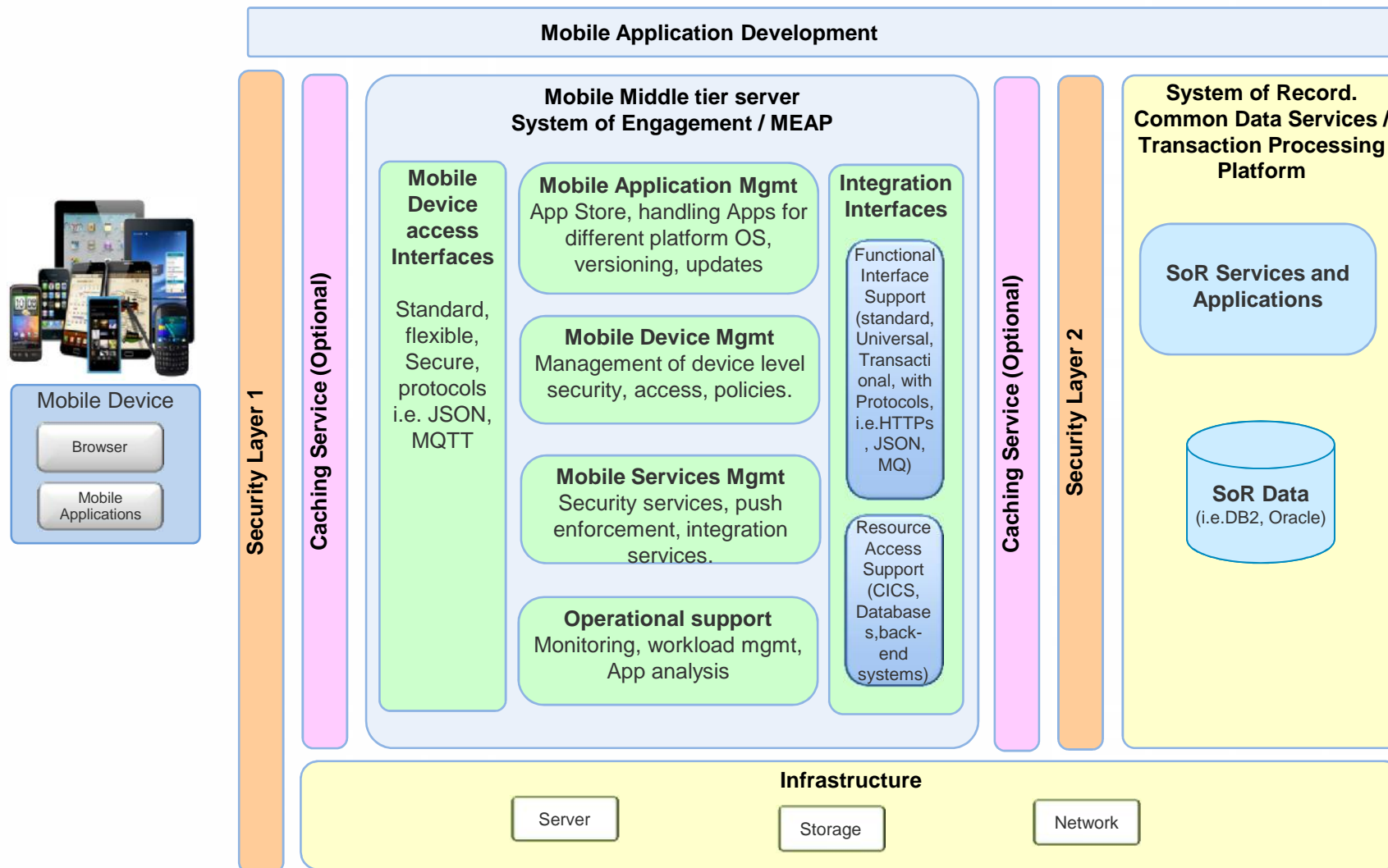
## Mobile Devices

## Systems of Engagement

## Systems of Record



# A Complete Mobile Environment Consists of



## The Mobile Middle Tier adds these components, that are not present in typical web applications

### ▪ **Mobile Device Access Interfaces**

- Mobile devices can interact with the Mobile Middle Tier (Runtime Servers) using open source protocol standards for mobile devices like JSON or MQTT. The interfaces supported by the Middle tier server qualify it for universality and flexibility.

### ▪ **Mobile Application Management. (MAM)**

- The ability to manage –multiple– applications with respect to versions, device specifics and OSes

### ▪ **Mobile Device Management (MDM)**

- Management of device level security, access, policies.
- The mobile device management is responsible to support multiple mobile devices and deliver an ease of use management for new devices and the process to keep existing ones current with the PUSH notification

### ▪ **Mobile Services Management (MSM)**

- A variety of mechanisms to help control and manage mobile apps regardless of their type and OS, for example
  - Application versions (to block faulty or out-of-date version and seamlessly direct people to the (enterprise) app store
  - Authentication and access control
  - Push Services Management
  - Usage reports and analytics

### ▪ **Mobile Operational Support**

- Mobile applications behave different than traditional applications, and have a much shorter life cycle management and change behavior, are more dynamic and have to respond very fast to customer requirements.
- The behavior of the Mobile Server has to be monitored and (automatic) actions have to be taken to avoid unplanned outages.

### ▪ **Integration Interfaces**

- The interfaces to access and interact with data services and transactional services, enable an integration of back-end systems such as transactional environments with CICS and Data Services from different Databases and platforms.

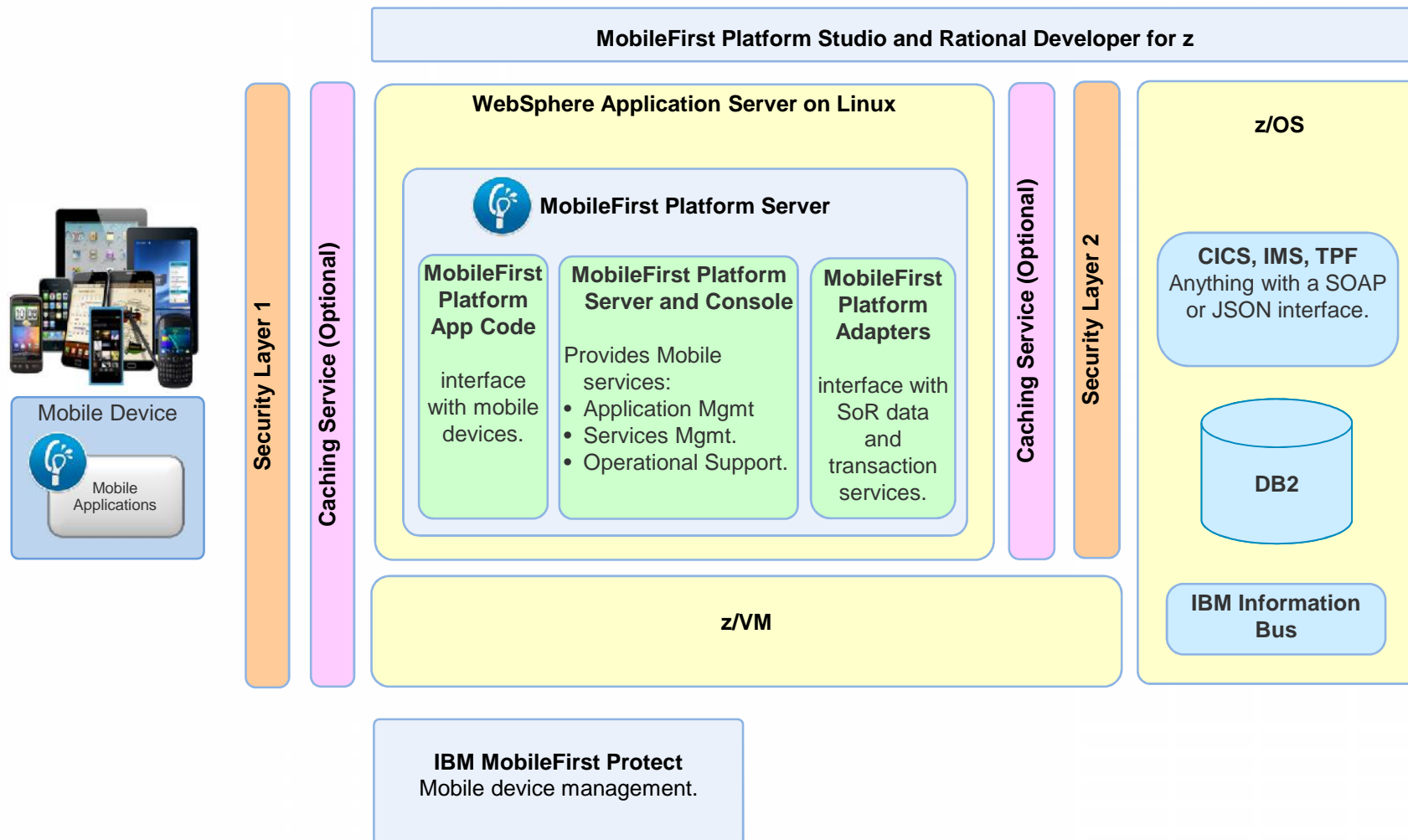
## Other Mobile Terminology

### ▪ **Mobile Enterprise Application Platform (MEAP)**

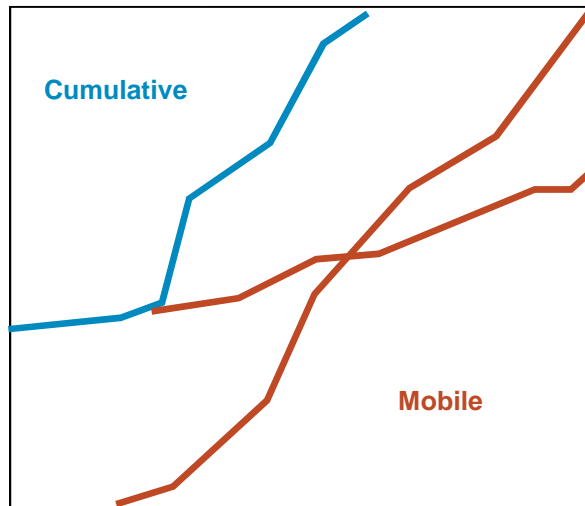
- MEAP is a comprehensive suite of products and services that enable development of mobile applications for Enterprises
- MEAPs address the difficulties of developing mobile software by managing the diversity of devices, networks and user groups at the time of deployment and throughout the mobile solution's lifecycle. Unlike standalone apps, a MEAP provides a comprehensive, long-term approach to deploying mobility. Cross-platform considerations are one big driver behind using MEAPs
- IBM MobileFirst Platform is an example of a MEAP.



# On z Systems, this looks like



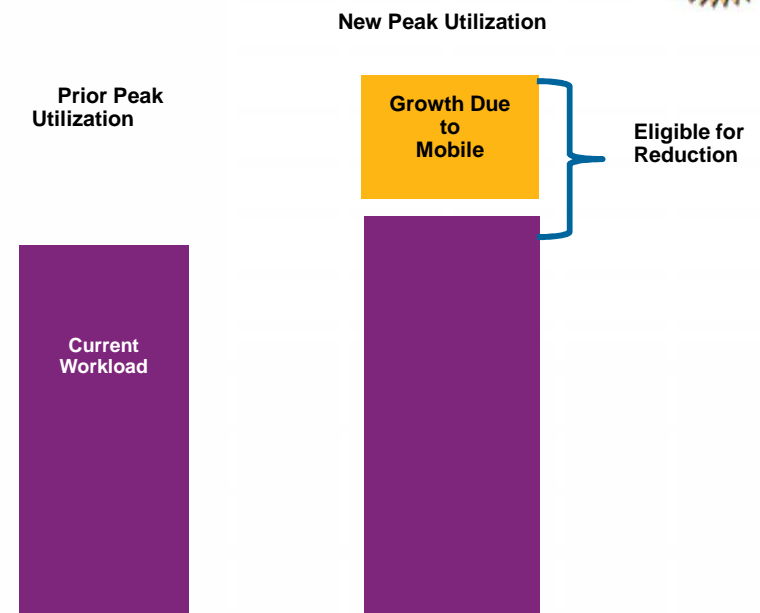
# Grow mobile transactions on z/OS with z Systems Mobile Workload Pricing



Large European bank

Increased mobile transaction volumes by **40%** from 2011 to 2013

## Mobile Workload Pricing



*Industry first for pricing mobile workloads provides up to a **60% reduction** on the processor capacity reported for mobile transactions*

*Serving mobile data directly from z/OS is **38% less expensive** than exporting to a System of Engagement*

# References

## Banca Carige

*Providing superior customer service by launching innovative mobile services on a secure platform*

### 24/7 mobile banking

Meets customer demands for more flexible services

### Secure transactions

Help strengthen customer trust

### Five 9s availability

Supports always-on banking services

#### Solution components

##### Software

- IBM® Campaign
- IBM CICS® solutions
- IBM DB2® solutions
- IBM SPSS® Modeler
- IBM WebSphere® solutions
- IBM MobileFirst Platform Foundation®

##### Hardware

- IBM zEnterprise® EC12



**The transformation:** To stay ahead of growing competition, Banca Carige wanted to develop a customer-centric approach to delivering services, but first needed a deeper understanding of consumer behavior. Deploying new analytics and mobile capabilities on the tried-and-tested IBM mainframe enabled the bank to transform its services without jeopardizing customer trust.

*“The IBM zEnterprise stack, both hardware and software, is central to our banking activities.” – Daniele Cericola, ICT Governance Manager, Banca Carige Group*



## Providing superior customer service at **Banca Carige** by launching innovative mobile services and analytics



### Challenges


Banca Carige needed to develop an improved understanding of consumer behavior through analytics, and launch new mobile services that engage and retain customers through great service.

### Solution

Banca Carige built an analytics environment and a new mobile banking service using IBM software on IBM zEnterprise EC12 mainframes, which provide round-the-clock availability and high security.

### Benefits

Launching new services meets changing customer demands, while the proven underlying technology accelerates deployment and reduces risk; consolidating to a single platform cuts cost and complexity.



**ABK Systeme GmbH**  
Processing a surging tide of mobile payments  
quickly and securely

# ABK-Systeme

*Bringing innovative mobile applications to the financial services industry*

## Business need

Payment logistics specialist ABK-Systeme saw an opportunity to bring mobile applications to the financial services industry. To seize the advantage, the company needed to move fast.

## Solution

ABK-Systeme built a comprehensive software development platform with IBM® Worklight® Foundation running on an IBM zEnterprise® BC12 server

## Benefits

ABK-Systeme is ideally placed to move into the mobile applications space, gaining a head start against the competition in bringing secure, reliable mobile applications to customers faster.



## Solution components

### Software

- IBM DB2® for Linux, UNIX & Windows
- IBM WebSphere® Application Server
- IBM MobileFirst Platform Foundation®

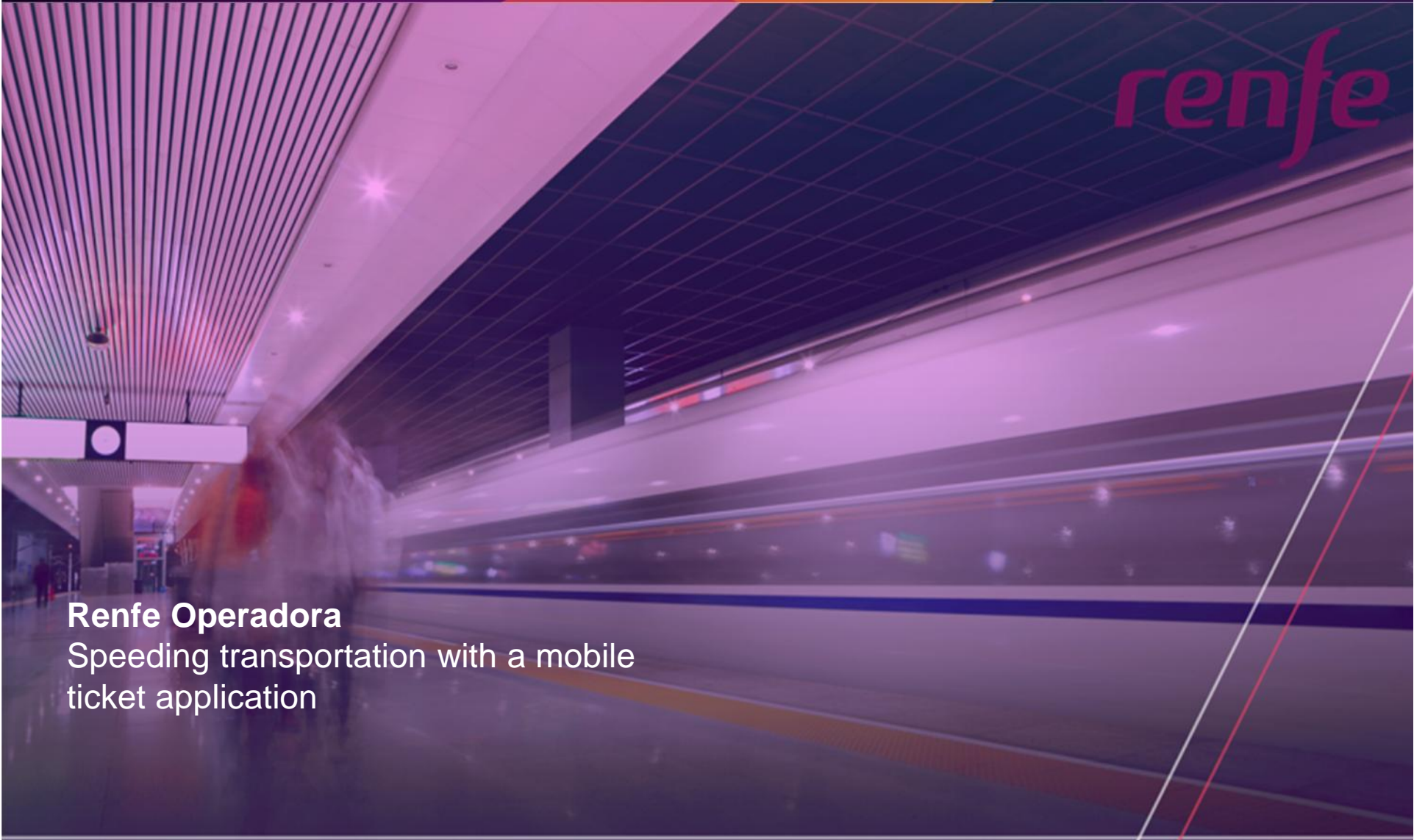
### Hardware

- IBM zEnterprise® EC12

*“Developing cross-platform mobile apps with IBM Worklight reduces our software maintenance costs. By helping us work more efficiently, the solution enables us to focus on developing new features and cutting development cycles”*

Ulrich Buch, CTO, ABK-Systeme



The Renfe logo is displayed in a stylized, lowercase, red font on the right side of the slide, set against a dark blue background with a grid pattern.The background of the slide is a photograph of a train station platform. A high-speed train is blurred in motion, moving from left to right. The platform has a modern design with a ceiling of parallel lines and recessed lighting. A person is blurred in the foreground, suggesting movement. The overall color palette is dominated by purples, blues, and oranges.

**Renfe Operadora**  
Speeding transportation with a mobile  
ticket application



## Renfe Operadora

*Putting exceptional customer service on the fast track with IBM*



### Business need

Liberalization of Spain's rail network has opened up unprecedented competition for Renfe. How could the train operator ensure that it remained travelers' top choice in a newly open market?

### Solution

To improve customer satisfaction and meet demand for always-on mobile and internet services, Renfe enhanced the availability and capacity of key business systems by upgrading its IBM server technology.

### Benefits

Capacity increase of 33 percent allows Renfe to easily support rising transaction volumes; 24/7 system availability reduces downtime, ensuring customers can always access the services they need.



### Solution components

- IBM® PureFlex®
- IBM DS8870
- IBM WebSphere® DataPower®XC10
- IBM zEnterprise® 196
- IBM zEnterprise EC12

*“More of our customers were turning to website and mobile applications to book tickets, and search for travel information. As website traffic and transaction volumes grew, it was becoming harder to ensure fast access to our services around the clock—we needed greater IT capacity and performance.*

*“Thanks to IBM’s powerful platform, we can now manage soaring volumes of mobile transactions in no time. This enables us to unlock brand new business opportunities and maintain our competitive edge”*

Javier González-Marcos, CIO, Renfe

# Thank You

