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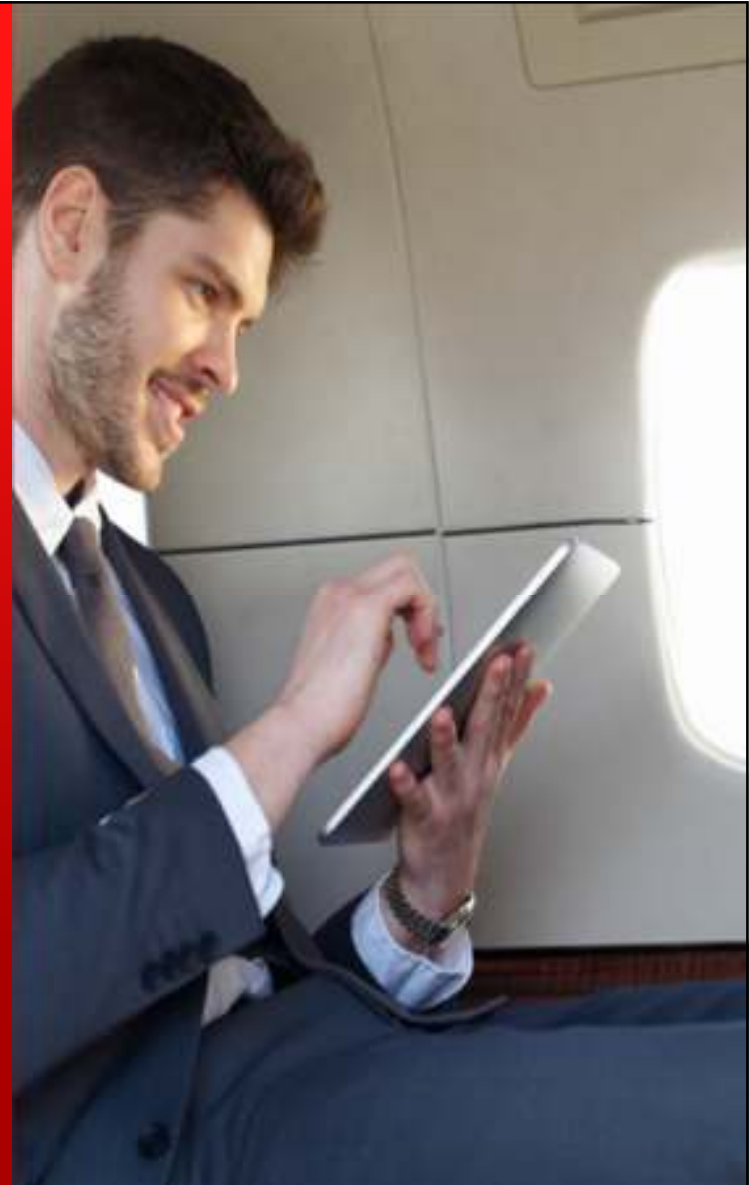
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# Developing iOS and Android Mobile Applications with Oracle ADF Mobile

Shay Shmeltzer

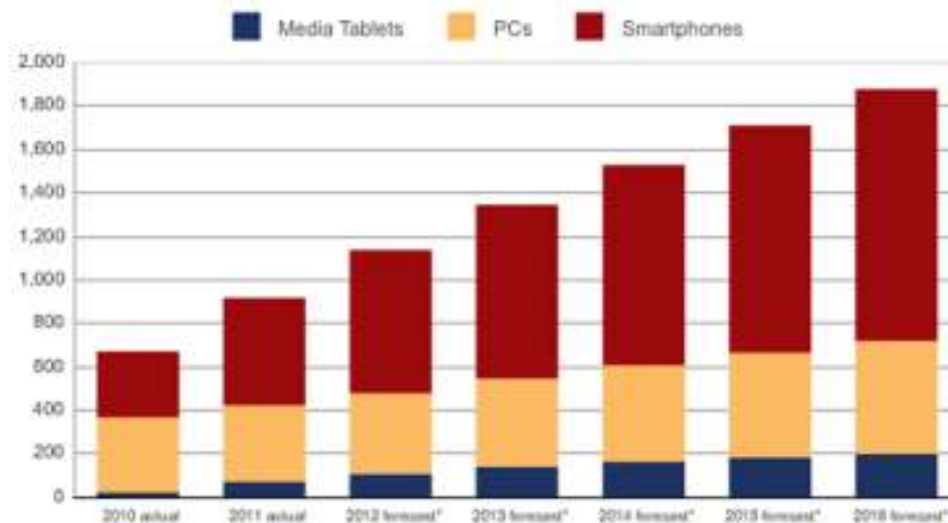
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# Why You Should Be In This Session?

Worldwide Smart Connected Device Shipments,  
2010-2016 (Unit Millions)



Source: IDC

# Mobile Enterprise Challenges

## In Pursuit of Productivity and Connectivity



- **Technology evolving at Consumer pace**
  - iOS, Android, ...
  - Different tools, languages, platforms, etc.
- **User expectations are high**
  - Biased by Consumer experiences
- **IT optimized for web**
  - Technology expertise, headcount, processes
  - Now must address demand for mobile
    - Multiple platforms and form factors

# Understand Your Mobile Requirement

- Which device are you targeting?
- What network are you using?
- Which device feature do you leverage?
- What is your end-users profile?



# 3 Types of Mobile Application

## Mobile Web Apps

- Online application accessed through mobile device browser
- Browser governs access to local storage and device services (camera, GPS, etc.)
- Highly reusable code
- Highly portable

## Native Mobile Apps

- Application installed & runs on device
- Optimized for specific mobile platform and form factor
- Direct access to local storage and device services
- Code reuse can be complex
- Portability requires work

## Hybrid Mobile Apps

- Application installed & runs on device with HTML5 UI
- Optimized for specific mobile platform & form factor
- Direct access to local storage and device services
- Code reuse simplified
- Portability simplified

Mobile Web App  
(Viewed in Safari)



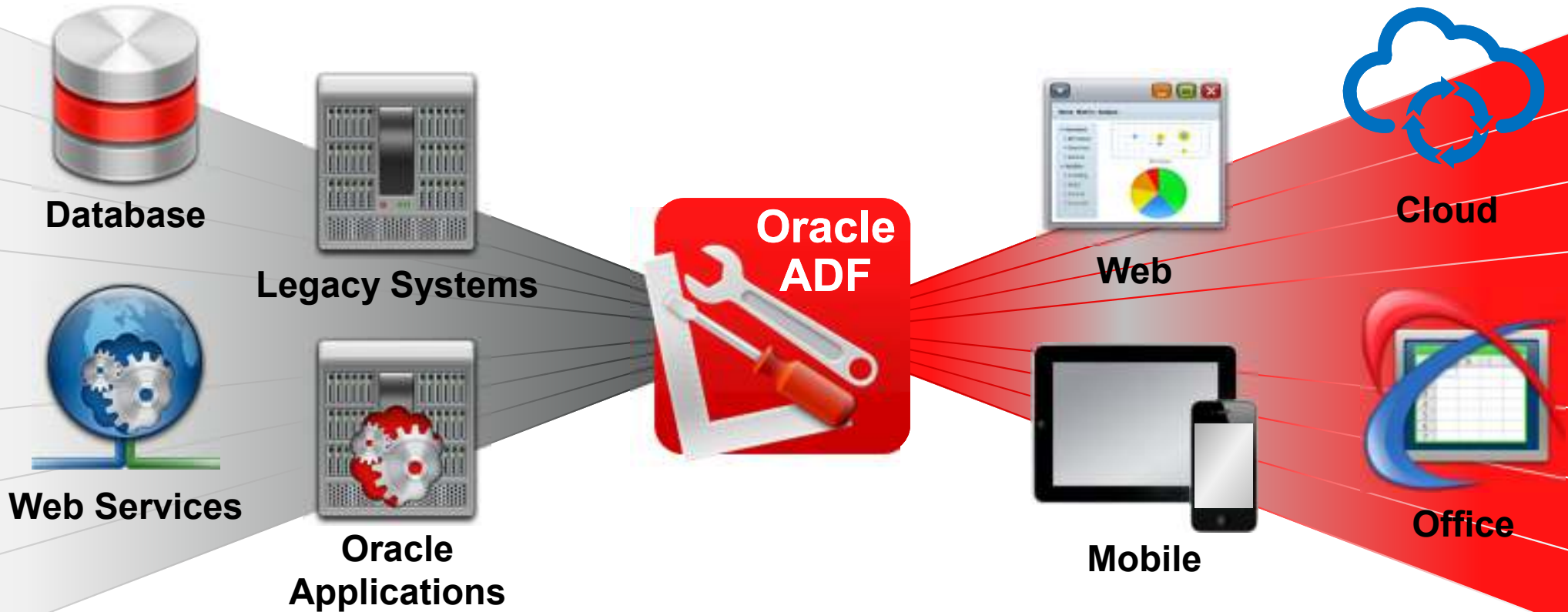
Native App  
(iOS)



# Mobile Development with Oracle ADF Mobile

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# Oracle ADF – Multi Channel Framework



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# Mobile Web Applications with Oracle ADF

## Two Options

- Oracle ADF Faces
  - Targeting tablets
  - Good network
- Oracle ADF Mobile Browser
  - From feature phones to smart phones
  - Slower network

# Oracle ADF Faces

## Mobile Optimizations

- Touch gesture
- HTML5 rendering
- Flow layout
- Smart table
- More...



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# Oracle ADF Mobile Browser

## Mobile Optimizations

- Supports feature phones
- Adapts to Browser Capabilities
- 60+ components
- Mobile optimized css



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# Introducing Oracle ADF Mobile

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# Oracle ADF Mobile

New Hybrid Mobile Solution



Oracle  
ADF Mobile

Java

HTML5

Built On Standards

Use Existing Skills Set



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# ADF Mobile Overview

- Thin Native container on each platform
  - Allows for native application install
  - Allows for device interaction
- HTML5/JavaScript based Frontend
- Java Backend



# UI Development

- Device native user experience
- Spring board and tab bar for feature navigation
- Advanced HTML5-based UI
  - Full animation, gesture, and touch interaction support
- Interactive Data Visualization Components



# Business Services Development

- Code logic with Java
- Lightweight JVM
- Native library on device
- Easy access to remote services
  - SOAP
  - REST (JSON/XML)

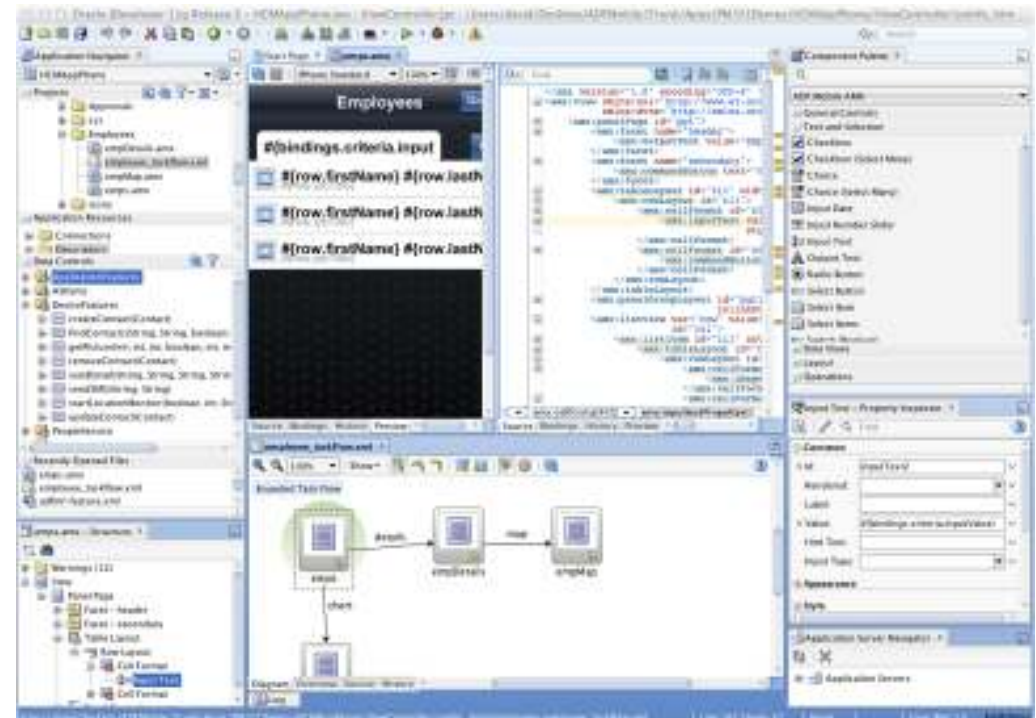




# Integrated Development Environment

## Focused on Productivity

- Oracle JDeveloper Extension
- Declarative and visual development
- Integration with Apple Xcode and Android SDK
- Consistent tooling
  - Component based UI construction
  - Task Flows
  - Data Controls
  - Packaging
  - Deployment
  - Debugging



# UI Content options

- Local AMX File
  - JSF-like file built visually in JDeveloper
  - Generated into HTML/JS on device at RT
- Remote URL
  - Any server-side HTML
  - ADF Mobile Browser Apps
  - ADF Faces Apps
- Local HTML File
  - Coded with any third-party HTML5 frameworks



# ADF Mobile XML Components (AMX)

- XML format built visually in JDeveloper
- 50+ Components
- Declarative data binding
- Rendered into HTML5 on device at RT



# Rich Component Set

- Basic Components



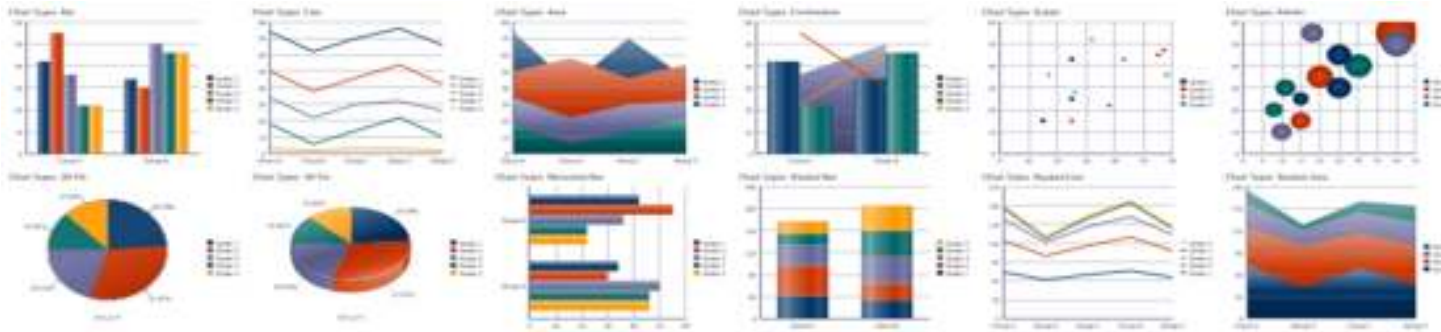
- ListView



- Forms



- Charts



- Gauge



- T-Maps



- Carousel

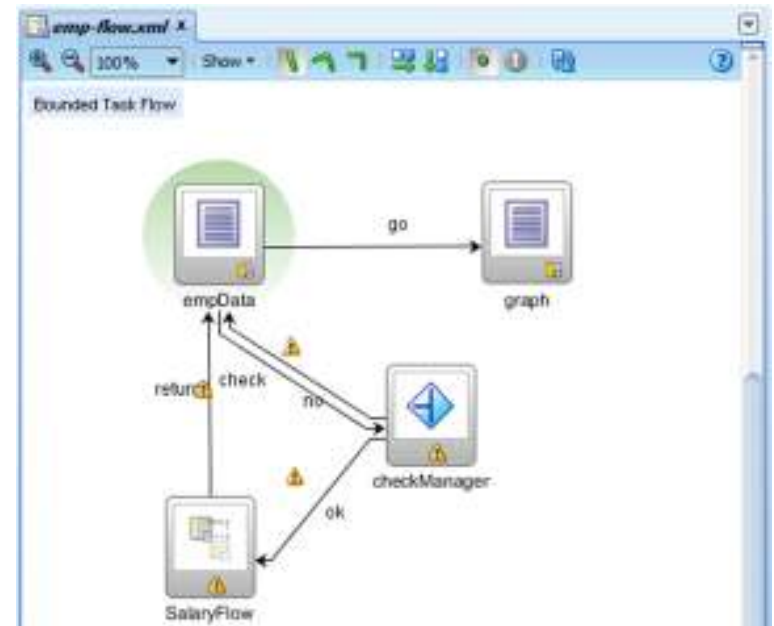


- GeoMap



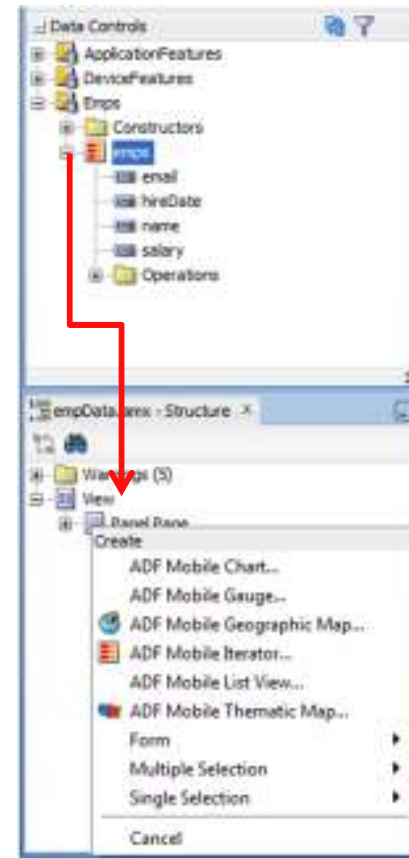
# ADF Controller

- Define the flow of your application
- Navigate between pages
- Similar to ADF Web Controller



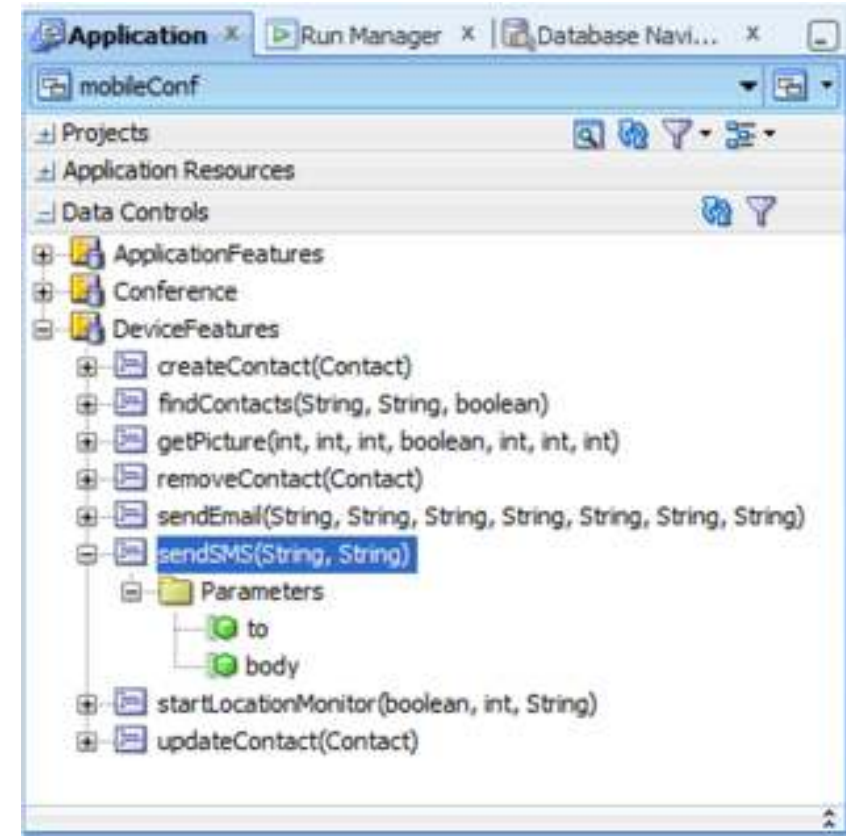
# ADF Binding – Simplify UI Creation

- Drag and drop service components to create UI components
- Drag data or methods
- Drop as various UI components



# Device Features Interaction

- Drag and drop to use
  - Email
  - SMS
  - Contacts
  - GPS
  - Camera
- Or access programmatically



# Access and Security

- Authentication:
  - Out of the box integration with Oracle IDM
  - Offline authentication
  - Single login across Features
- Access Control:
  - Role based access
- Encryption:
  - Credential store
  - Local data
  - Communication channels



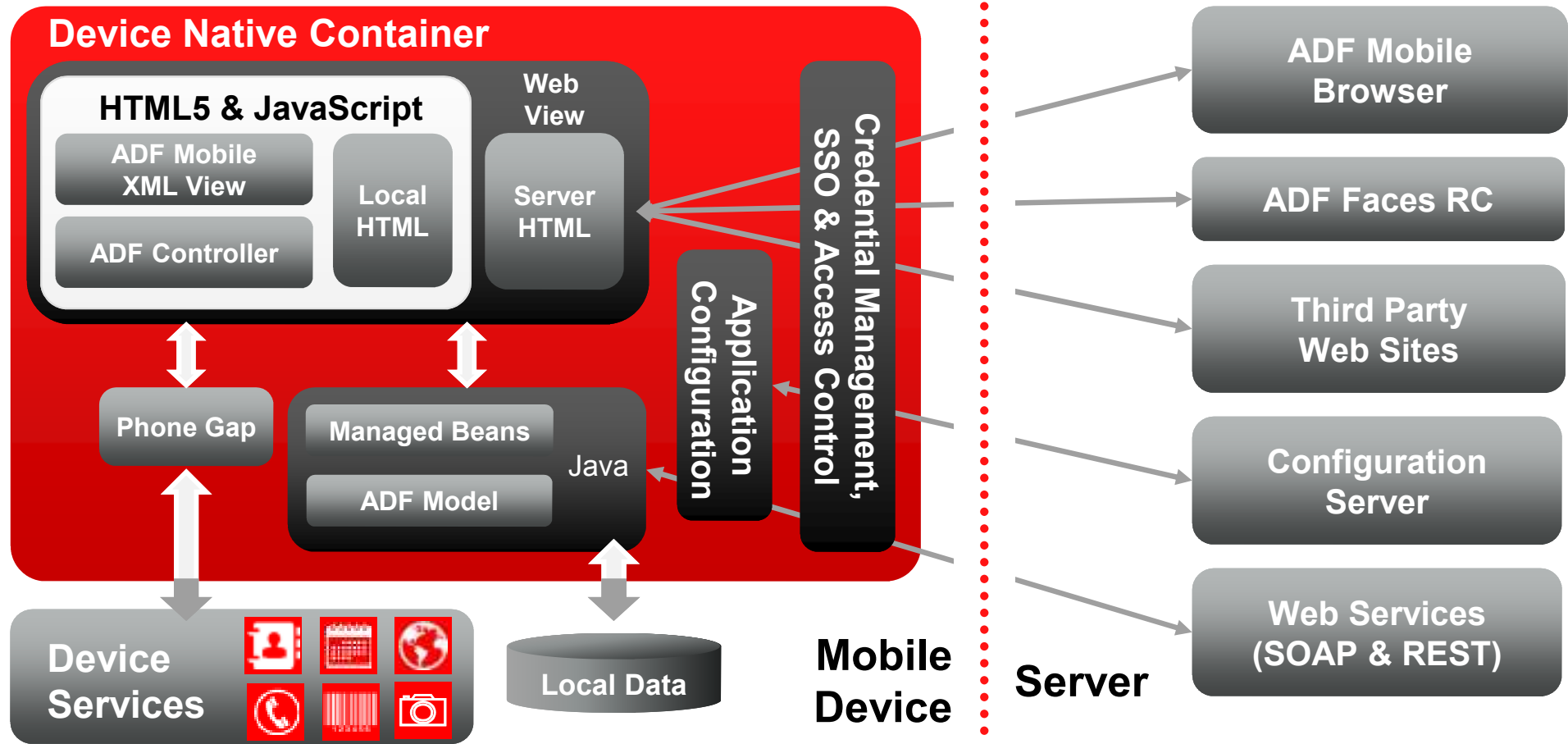


# Reusability Through Features

- Re-usable self contained module of an application
- Has a separate ClassLoader & WebView
- Features can be packaged as feature archive (FAR) for re-use
- Integrated with JDev Resource Catalogue
- Accessed from Springboard or Nav-bar



# Oracle ADF Mobile Architecture



# ORACLE ADF MOBILE

## DEVELOPMENT DEMONSTRATION



# Summary

- Oracle ADF Mobile – On-Device iOS and Android Applications
- Abstract Complexity and Simplify Development
- Reuse your Java and ADF skills
- Learn More: <http://oracle.com/ADF>

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