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Oracle Fusion Development

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Mobile Development with ADF Mobile

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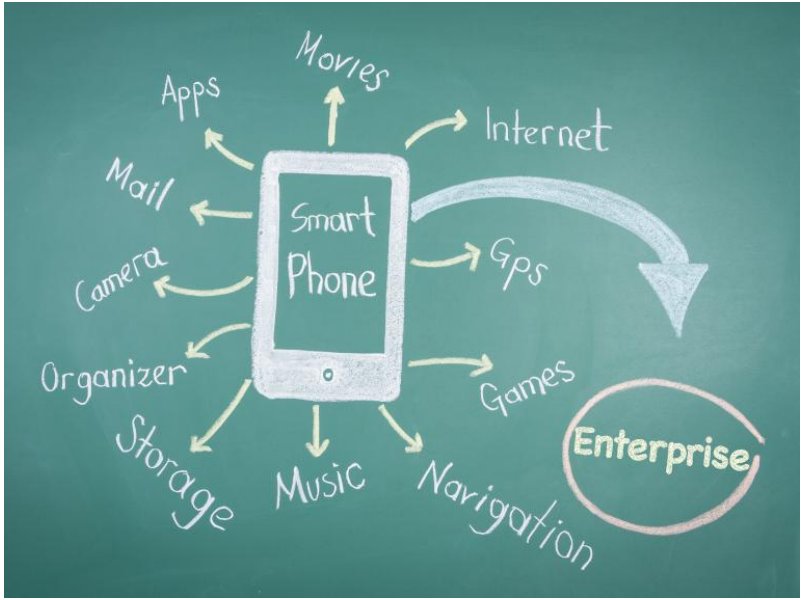
Mobile Enterprise Challenges

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

Things You Should Consider

Different meanings of mobile access

- Which Device
  - Tablet, Smart Phone, Feature Phone, Laptop
- What type of network
  - Wi-Fi, 4GL, 3GL, offline
- Device services needs
  - Calendar, SMS, GPS, Camera

A Variety of Application Types

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

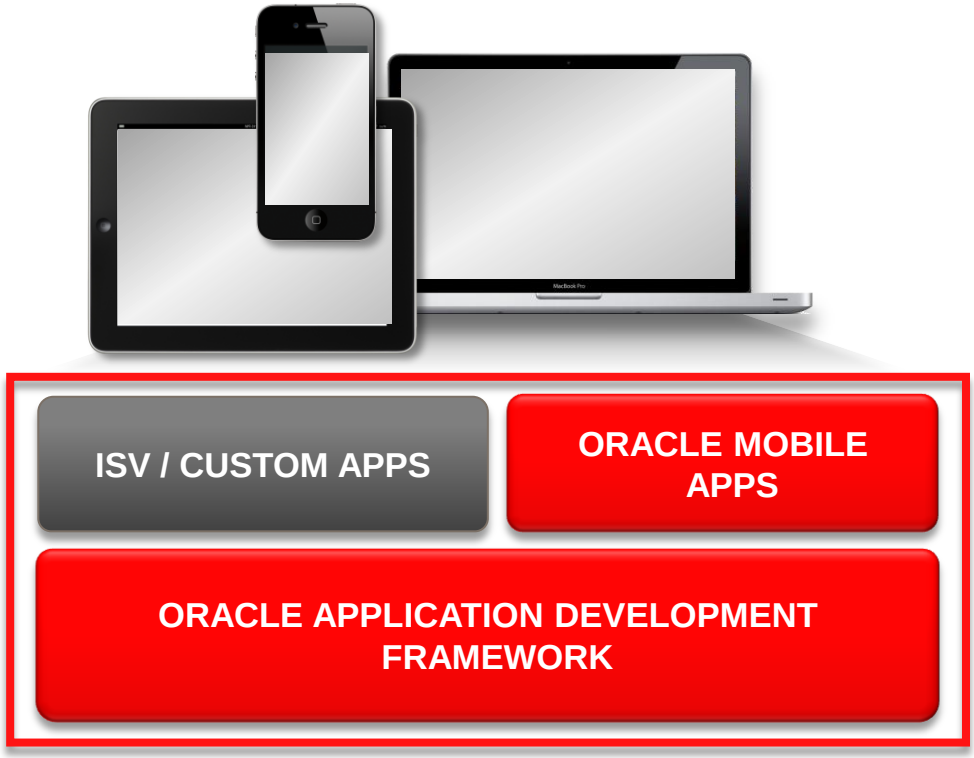
Hybrid Mobile Apps

- 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)

Oracle's Mobile Approach



- Deliver one common platform for both desktop-based and mobile enterprise apps
- Reuse your development skills and tools – Java and Web-based Development Skills
- Minimize development cycle and cost
  - Extend enterprise apps and data to mobile clients
  - Support multiple channels and platforms

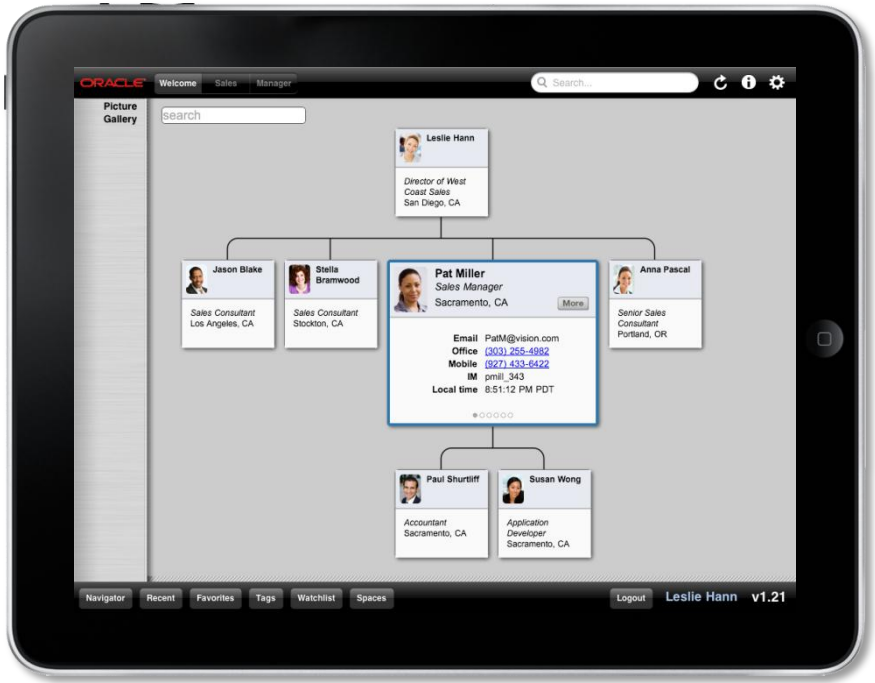
Mobile Development With Oracle ADF

	Description	Benefits	Scenario
ADF Faces Rich Client Components	For desktop browser apps that are fully functional in iPad and Android tablet browsers	• Single codebase • Simplest rollout, maintenance, portability	Laptop/Desktop Replacement
ADF Mobile Browser	For web pages that adapt to the mobile browser on both smart and feature phones	Supports broad range of mobile browsers (smartphones and feature phones)	Mobile Approval and Search
ADF Mobile	For mobile apps that install and run on iOS and Android devices	• Access to local storage and device services (camera, contacts, etc.) • Reuse existing ADF development skills • Minimizes development cycle for supporting new mobile platforms	Mobile Worker Mobile Approval and Search

Oracle ADF Faces

Web-Based Applications

- Develop for desktop browser apps that are fully functional in iPad and other tablet browsers
- Single codebase
- Simple rollout, maintenance, portability



Oracle ADF Faces Features

For Web Apps Accessed On Both Laptops and Tablets

- OS Touch Gesture Support
  - Drag and drop, multi-select, hover, context menu, chart/graph interactivity, etc.
- Adaptive User Interface
  - Flowing layout support
  - HTML5 implementation instead of Flash for visualization components
  - Simple table component
  - Touch region optimization
  - CSS 3 support
- Performance optimizations

Oracle ADF Mobile Browser

Compatible with almost all mobile browsers

- Used for feature-phones and slower networks
- Browser accessed application
- Uses Trinidad components + DVT
- Adaptive UI rendering
- Optimized Skinning for mobile
- Supports touch gestures
- Regular ADF development process

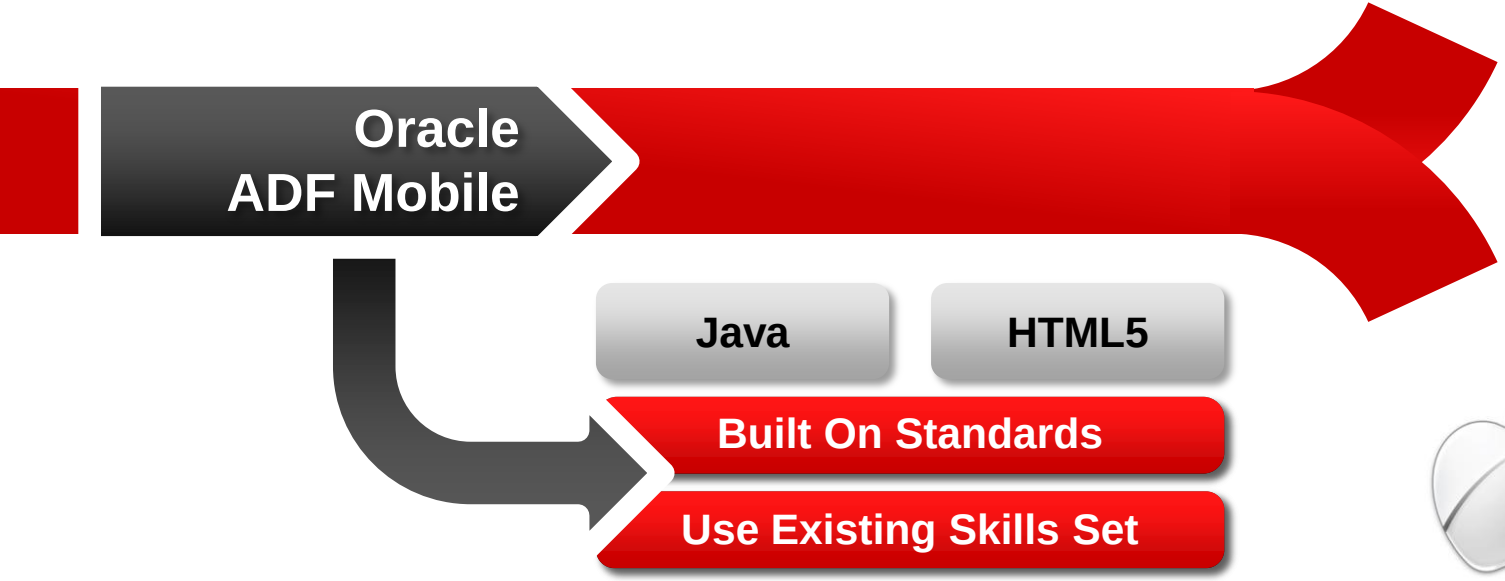
Oracle ADF Mobile

Hybrid Mobile Applications

- Develop once & deploy to multiple platforms (iOS and Android)
- Build on proven technology standards (ADF, Java technology, CSS3, JavaScript)
- Protect against mobile platform shifts – framework adapts for you
- Secure with Authentication, Access Control and Encryption

Oracle ADF Mobile

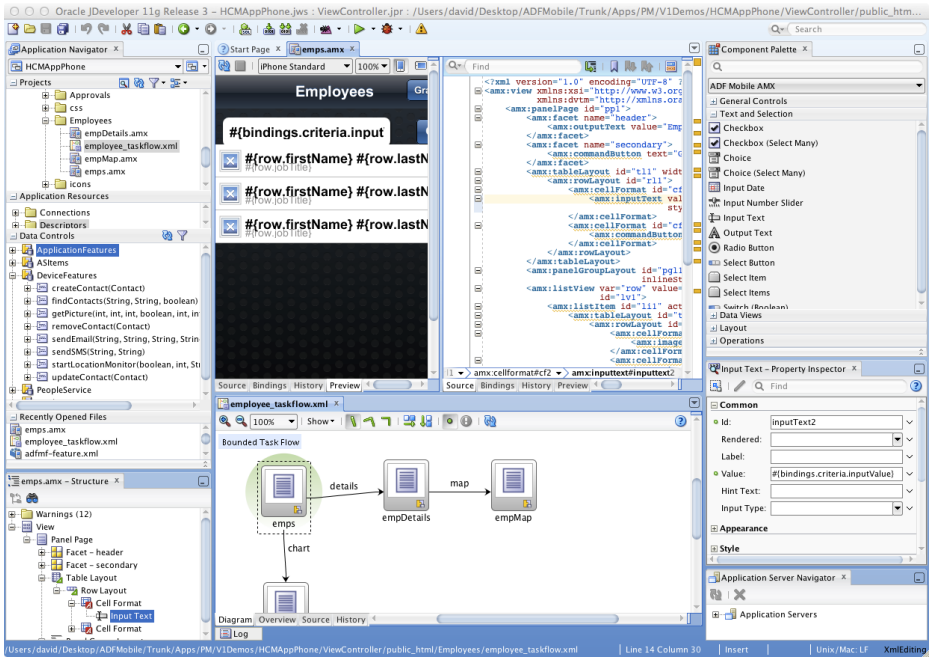
Write Once, Deploy to Many



Integrated Development Environment

Focused on Productivity

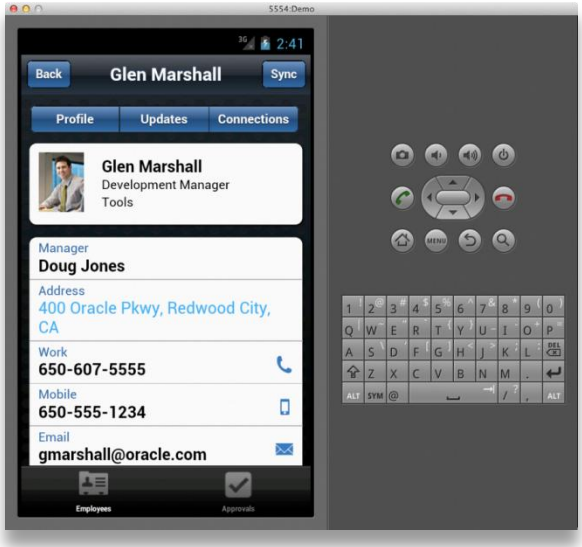
- Declarative and visual development
- Integration with Apple Xcode and Android SDK
- Consistent tooling
  - Component based UI
  - Task Flows
  - Data Controls
  - Packaging
  - Deployment
  - Debugging



Oracle ADF Mobile - Overview

- Thin Native Framework on each platform
  - Allows for native application install
  - Allows for device interaction
- HTML/JavaScript frontend
- PhoneGap integration
- Java technology
- SQLite integration
  - Encryption Extension
- Access Control and Security

iOS Simulator



Android Emulator

Oracle ADF Mobile – UI Development

Device-Native User Experiences

- 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

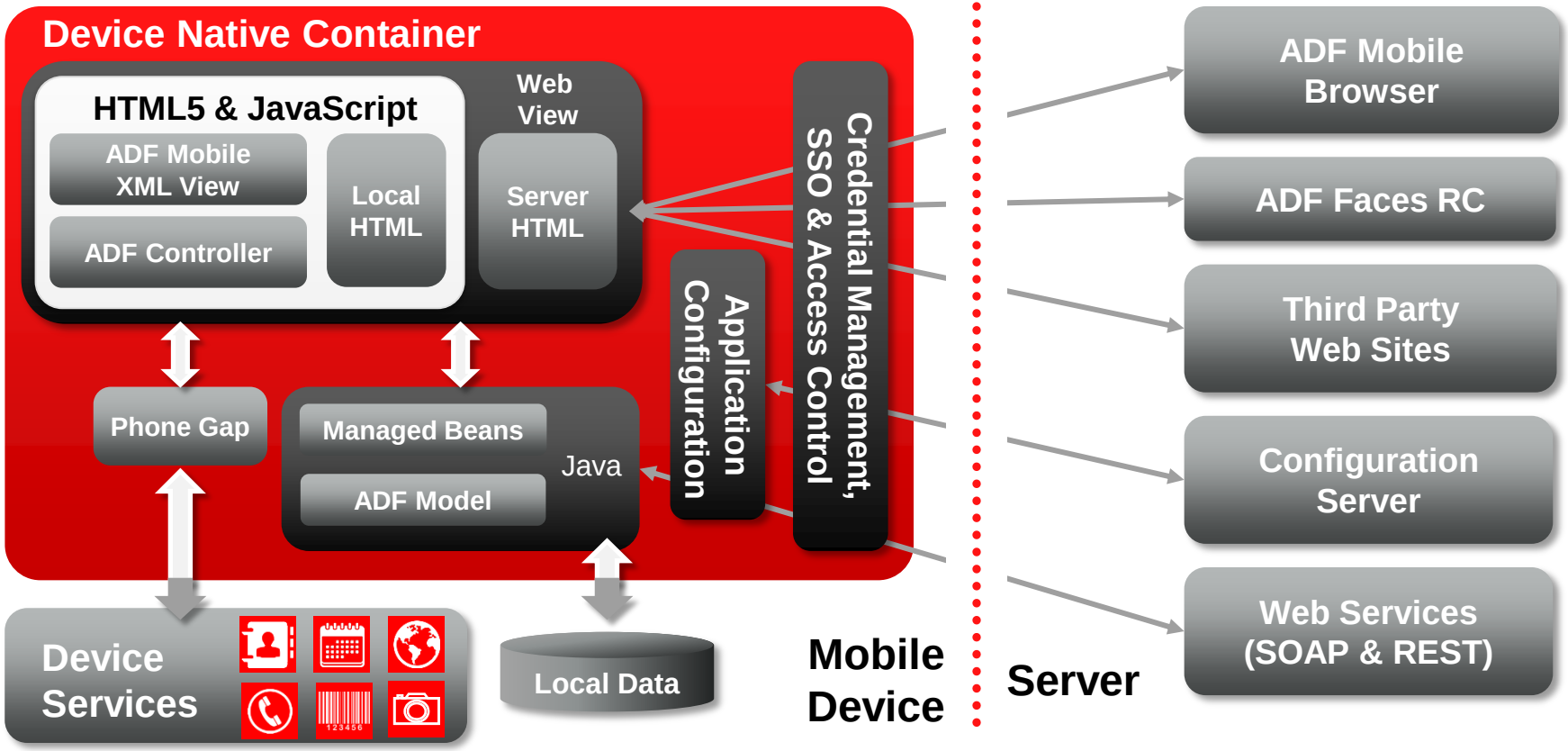
UI Content options

- Local AMX File
  - JSF-like file built visually in JDeveloper
  - Generated into HTML/JS on device at RT
- Remote URL
  - ADF Trinidad for Smartphones
  - ADF Faces on Tablets
  - Any third-party site
- Local HTML File
  - Coded with any third-party HTML5 frameworks

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

How It Works?



ORACLE ADF MOBILE

Development Demonstration

Difference Between Server-based ADF App and ADF Mobile

	ADF Mobile	Server-based ADF
View Layer	• Locally rendered AMX or custom HTML5 pages • HTML pages rendered on the server also supported	• Server-rendered only • Primarily support ADF Faces RC/Trinidad JSF components
Controller	For AMX: • Subset of ADF Task Flow components supported • Logic resides on mobile device	• Full ADF Task Flow support

Difference Between Server-based ADF App and ADF Mobile

	ADF Mobile	Server-based ADF
ADF Model Layer	• Supports SOAP, REST-XML, and REST-JSON data sources and data controls • Subset of model-layer Java support (e.g. no Java WS Proxy Support) • JDBC Support	• Supports full complement of data sources and data controls
Java Support	JavaME CDC and Java 1.4	JavaEE with latest Java support

Getting Started – What Do You Need

- Oracle JDeveloper 11.1.2.3
- Oracle ADF Mobile Extension
- For Android
  - Android SDK
- For iOS
  - Mac
  - Apple Xcode
- Actual mobile devices - recommended

Oracle ADF Mobile Resources

- Oracle ADF Mobile page on OTN
- Tutorial + Setup instructions
- Oracle ADF Mobile Developer Guide
- Sample applications
- ADF discussion forum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