Lucas Jellema – AMIS Services, The Netherlands

FORMS TO FUTURE – HISTORY, EVOLUTION, ARCHITECTURE AND FUTURE

AMIS – 15th of May 2012 – Nieuwegein, The Netherlands

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OVERVIEW

- **History**
- **What says Oracle?**
  - Statement of Direction and explanation
- **Why?**
- **What?**
- **How?**
- **When?**
- **Key elements of the Future**
  - Vision
  - Trends and evolution
  - Continuous preparation
  - People, people, people
- **Take aways**

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20 YEAR HISTORY OF FORMS

- 1981/83

- 1987

- 1990

- 1993

- 1994

- 1996

- 2002/2005

- 2009

- 2011

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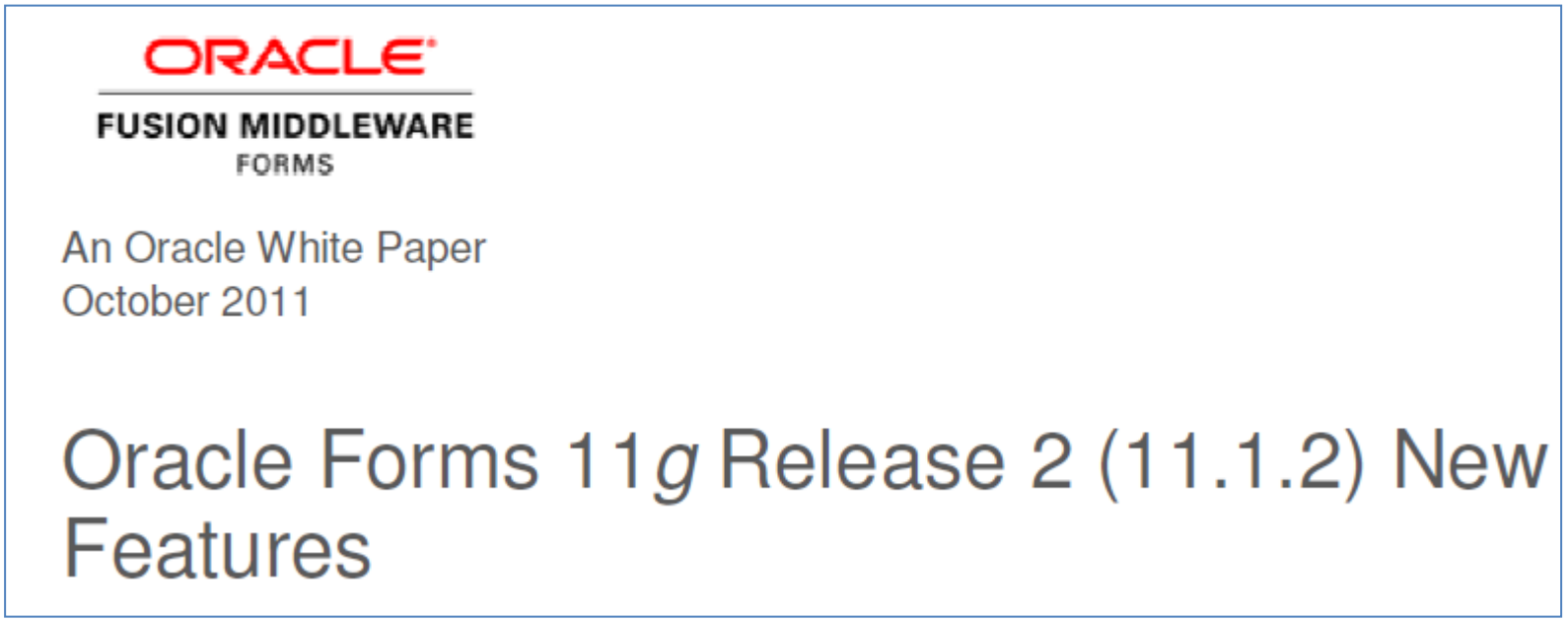
MODERN FORMS

- **Forms 11gR2 was released recently (October 2011)**



- **Note: 12c has been announced. The story may continue beyond that.**

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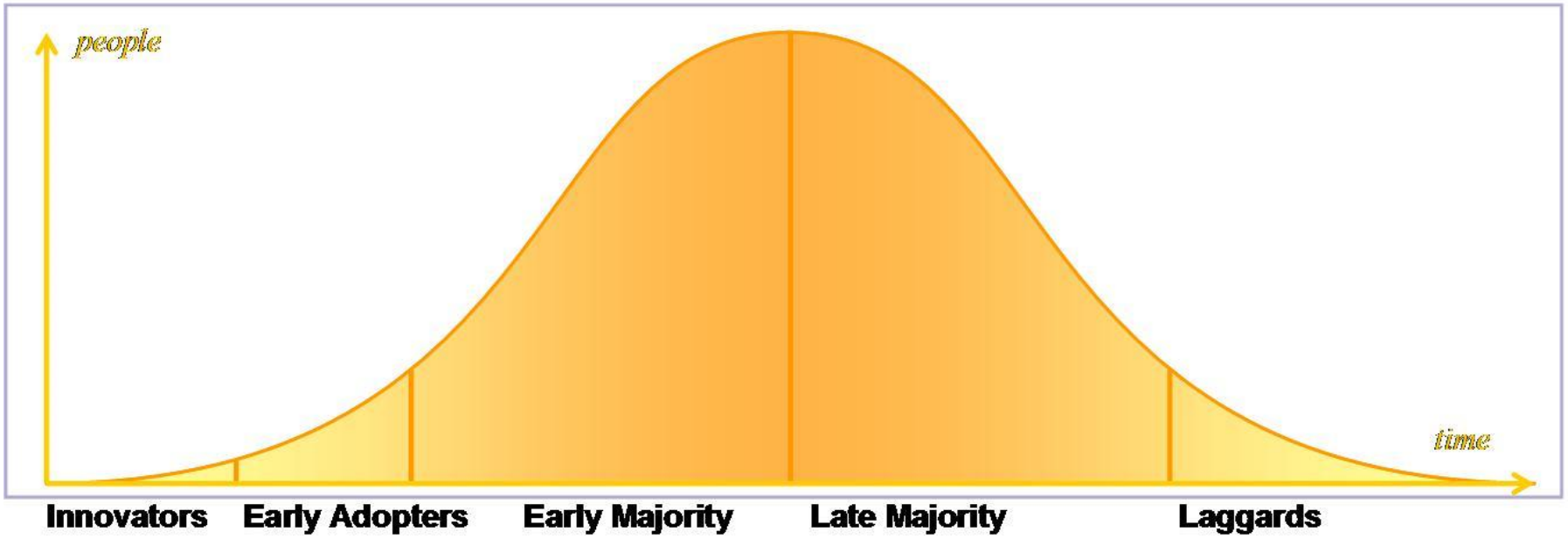
WHAT IS HISTORY FOR ONE, MAY STILL BE FUTURE FOR ANOTHER…



- GUI (Graphical User Interface)
- Web
- Extranet, Internet, Self Service
- SOA, Integration, B2B
- Mobile
- BPM and Workflow Management

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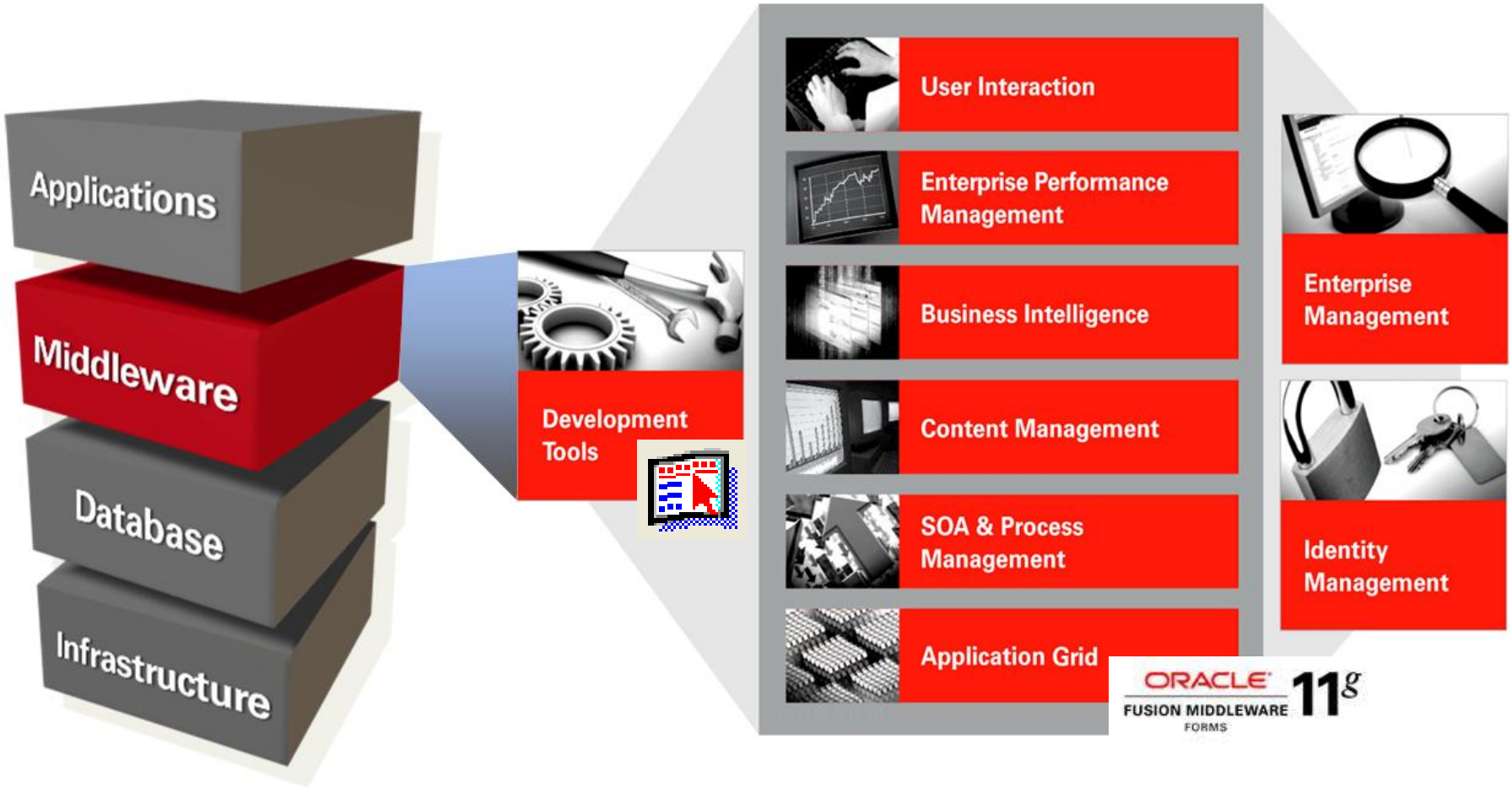
FORMS 11G IS PART OF FUSION MIDDLEWARE – *PLATFORM FOR INNOVATION*



Review of Oracle Forms Strategy

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300% JAVA

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WHY?

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THE WRONG REASONS

- Forms is not Web 2.0
- Forms is no longer/will no longer be supported
- Forms is old
- Development productivity with Forms is not high enough
- Our infrastructure cannot run Forms
- Forms is not Open Source
- Forms does not fit into our enterprise architecture
- My end users complain about their productivity
- We cannot provide the functionality required of us using Forms

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END USERS ON STRIKE

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THE END USER – BACK THEN

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THE END USER - NOW

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RIGHT REASONS

- We (soon) can no longer find (enough) resource willing and able to work on Forms technology
- Forms applications do not have the visual appeal we need to be competitive as an ISV
- We want to start servicing new (external) user groups who we cannot formally train on using the application
- We want to start supporting new channels in addition to intranet/extranet (internet, web service, mobile)

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NEW USERS GROUPS AND NEW CHANNELS

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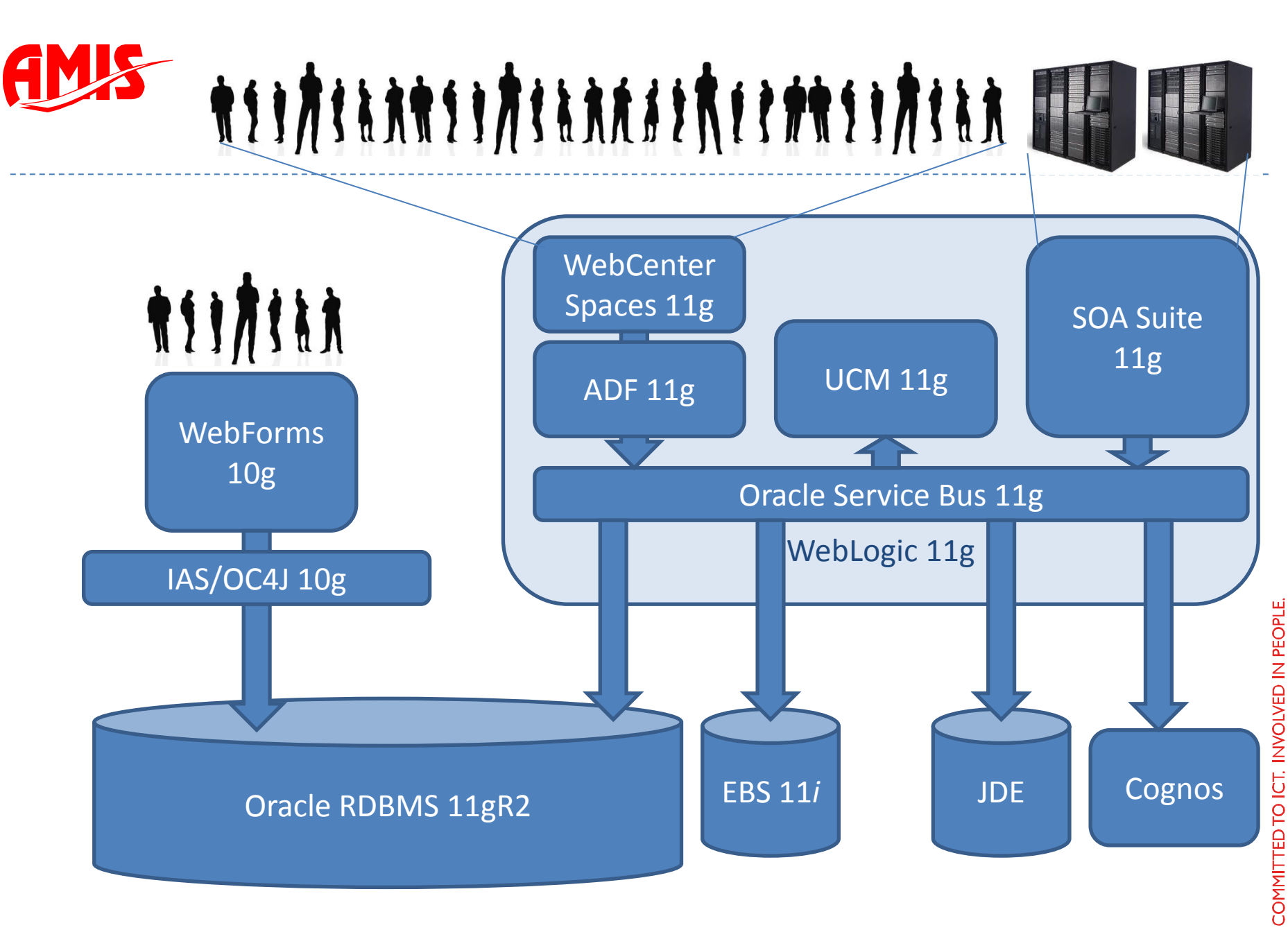

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ALWAYS GOOD REASONS …

- **For *investigating* new options for application development**
- **For updating people skills**
- **For constantly evolving the vision for business, architecture and application**
- **For applying modern software engineering methods and tools**
- **For constantly modernizing your applications (in baby steps)**
  - Note: there is hardly ever a *business* case for a migration for *technical* (or FUD) reasons only
- **For applying the right tool for the right job**

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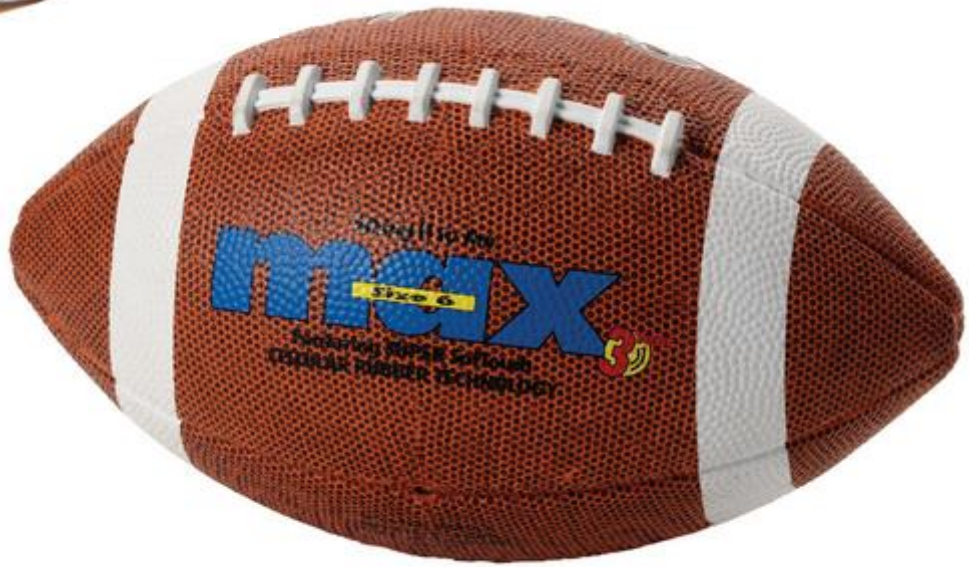

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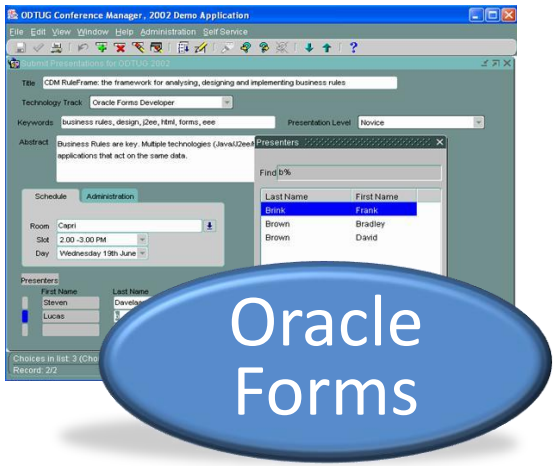

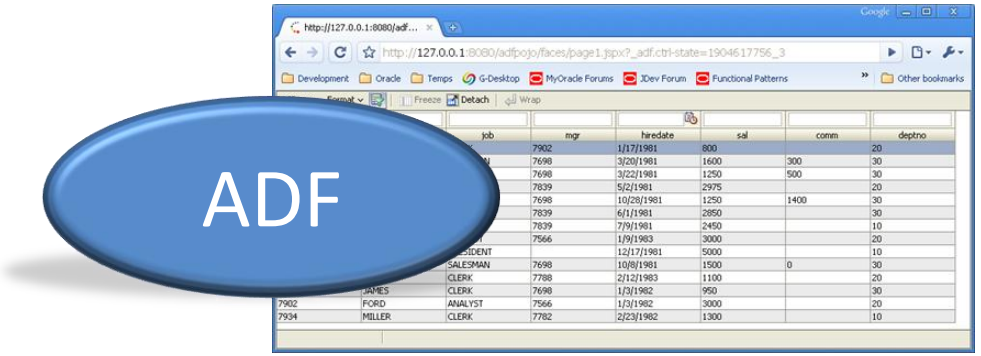

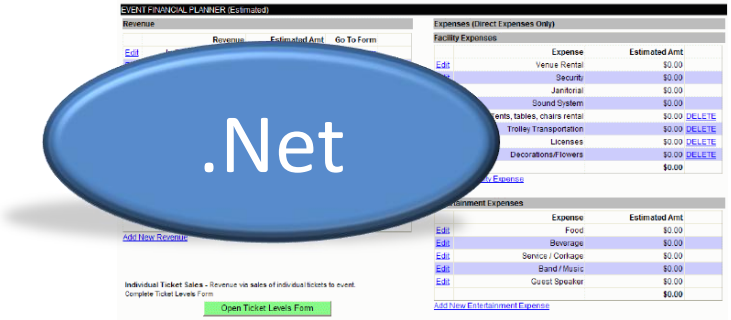

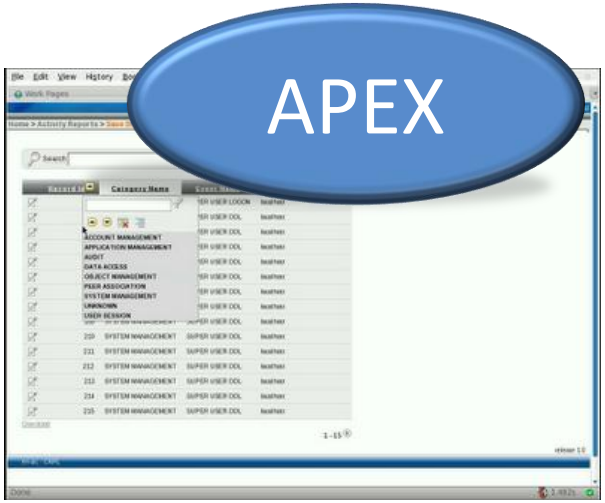

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2011

VISION FOR ISV

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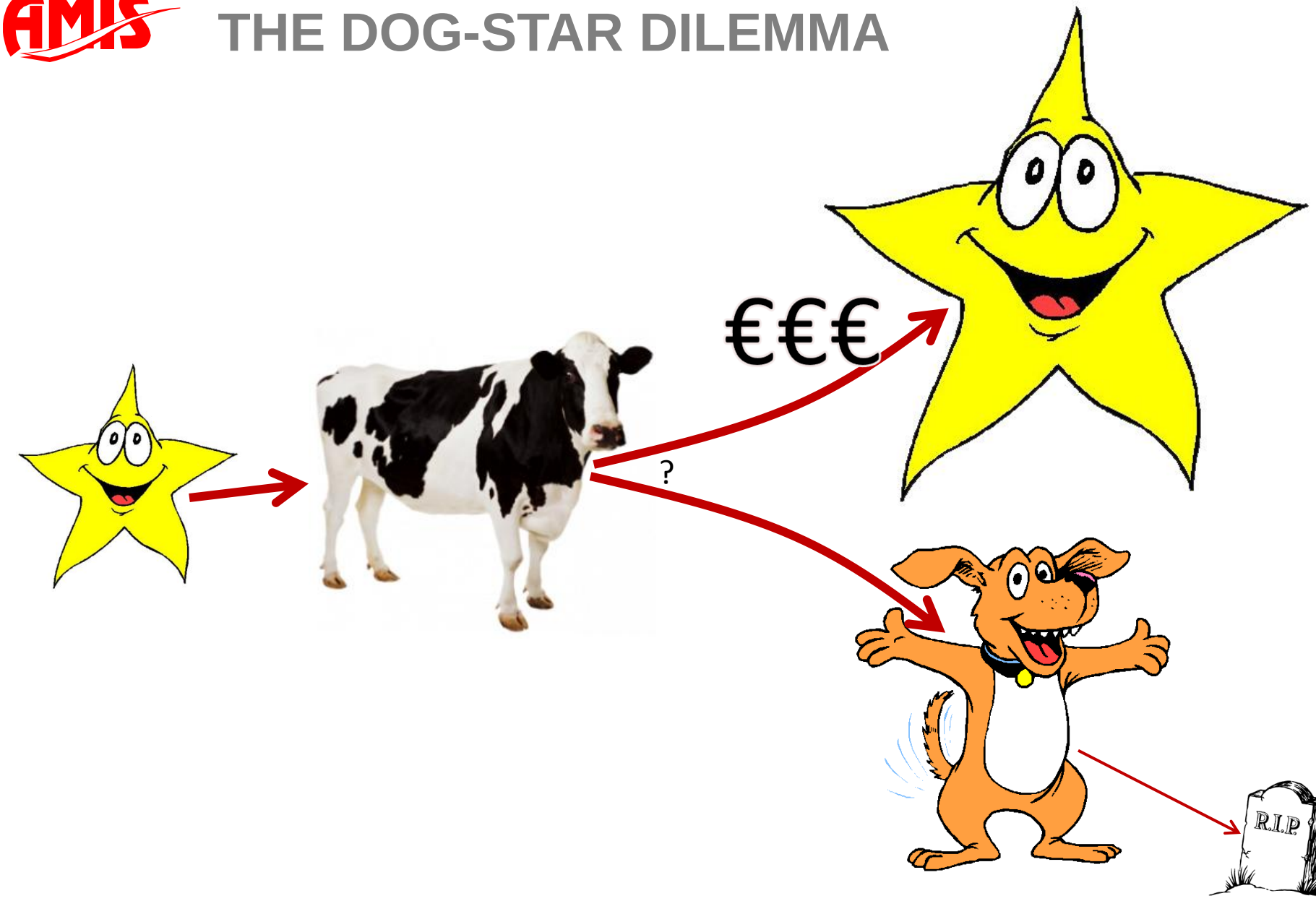
THE DOG-STAR DILEMMA



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ACCOUNTING

- **Any application represents a substantial investment**
  - The actual lines of code themselves (and the functionality they provide)
  - The acceptance and skills of end users & other parties
  - The expertise of the development team
    - As well as architects, analysts, testers, administrators, …
- **Any replacement will require a similar investment**
  - Note that the original investment has been made over a period of 5 years, 10 years or even longer!
- **The applications and their underlying technology stack warrant a solid depreciation scheme**
  - For building up the budget to keep evolving

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THERE IS NO BUSINESS CASE…

- **For a 1:1 rebuild (or even automated migration) of your existing Forms application**
- **If it looks like Forms, works like Forms, feels like Forms…**
- **… it might as well be Forms**
- **Business cases revolve around:**
  - New users/customers or channels
  - New functionality
  - Retention of customers with improved X, Y and Z
  - Lower costs for existing functionality

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WHAT YOU SHOULD ALWAYS BE DOING

- **Work on your vision**
  - Strategy for the application and its architecture – derived from the strategy for the company
- **Stay on top of features of your current tool stack**
  - To at least pick the low hanging fruit

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FORMS FUTURE SCENARIOS

- ***Evolve/improve/"pimp'*** **existing Forms, continue to run as Forms but with a much more modern look and feel**
- ***Integrate in SOA environment*** **- hook up to push-mechanisms, queuing interaction and workflows**
- ***Embed in Web 2.0*** **(UI integration with ADF, .NET or other 'modern' web technologies)**
- ***Wrap as web service*** **(publish business logic from Forms & reuse with new User Interfaces or WebServices on top)**
- ***Render to new platforms*** **(render Forms as they are to new platforms like HTML browsers and mobile devices)**
- ***Migrate to new technology stack and architecture*** **(semi)-automagically *migrate/convert* Forms to new technology**
- ***Migrate to new technology stack and architecture: rebuild*** **functionality in new technology stack - leveraging functionality and experience from current Forms**

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MODERN FORMS – KEY PROOF POINTS

- **Runs on WebLogic – same platform as strategic middleware products including ADF/WebCenter, SOA Suite, BPM Suite, UCM, OBIEE and IdM**
- **Managed from Enterprise Manager 11g**
- **Integration with Oracle 11g Access Manager**
- **Support for Database Proxy Users**
- **(Client Side) Pluggable Java Components to add custom functionality and interaction elements to UI**
- **Integration with AQ – to allow for Server-to-Client push**
- **Java Importer – extend Form with middle tier Java**
- **JavaScript bridge**
  - from JavaScript to Form: pass information and events from web page to Form
  - from Form to JavaScript: pass data and event from Form to web page

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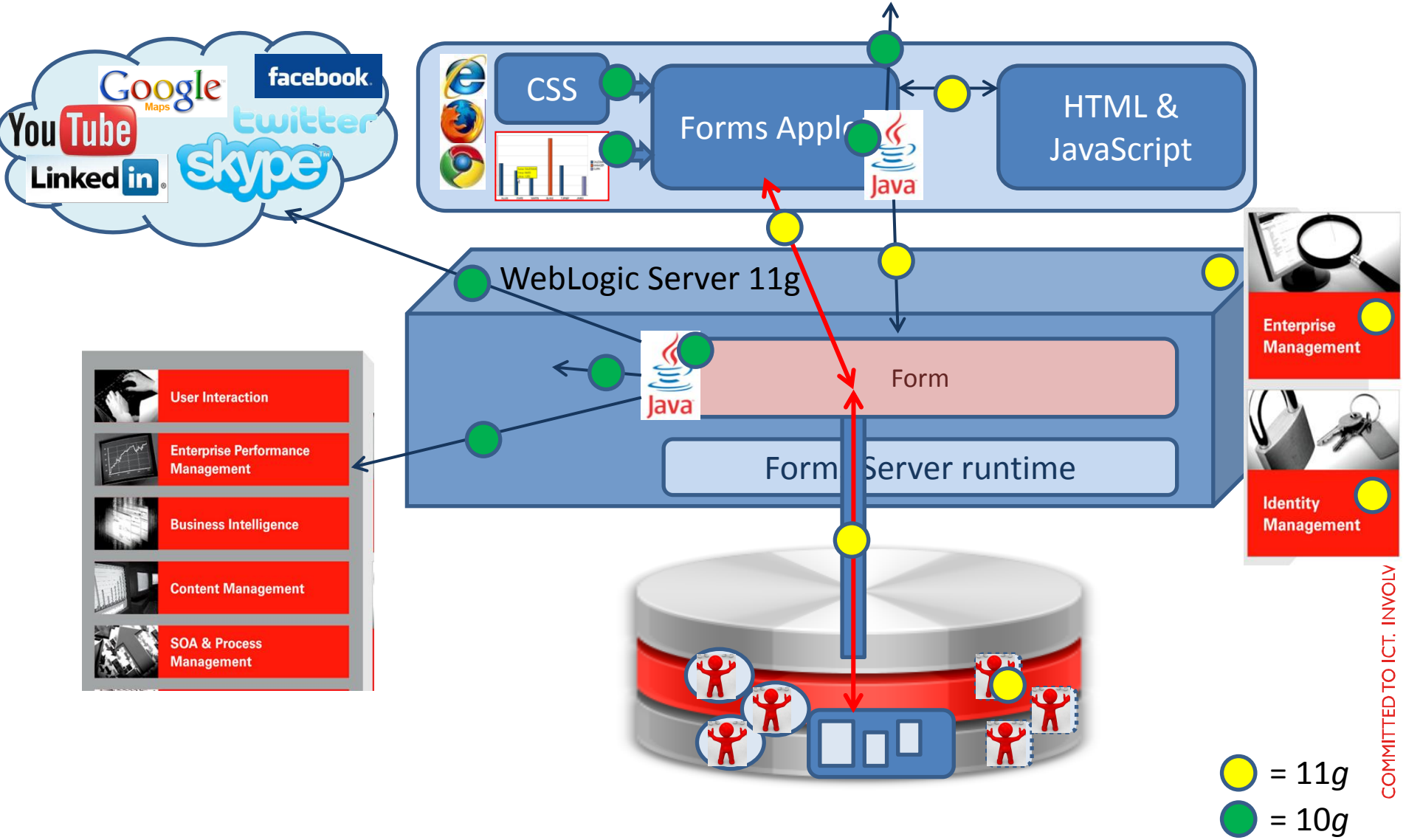
FORMS 11G ARCHITECTURE



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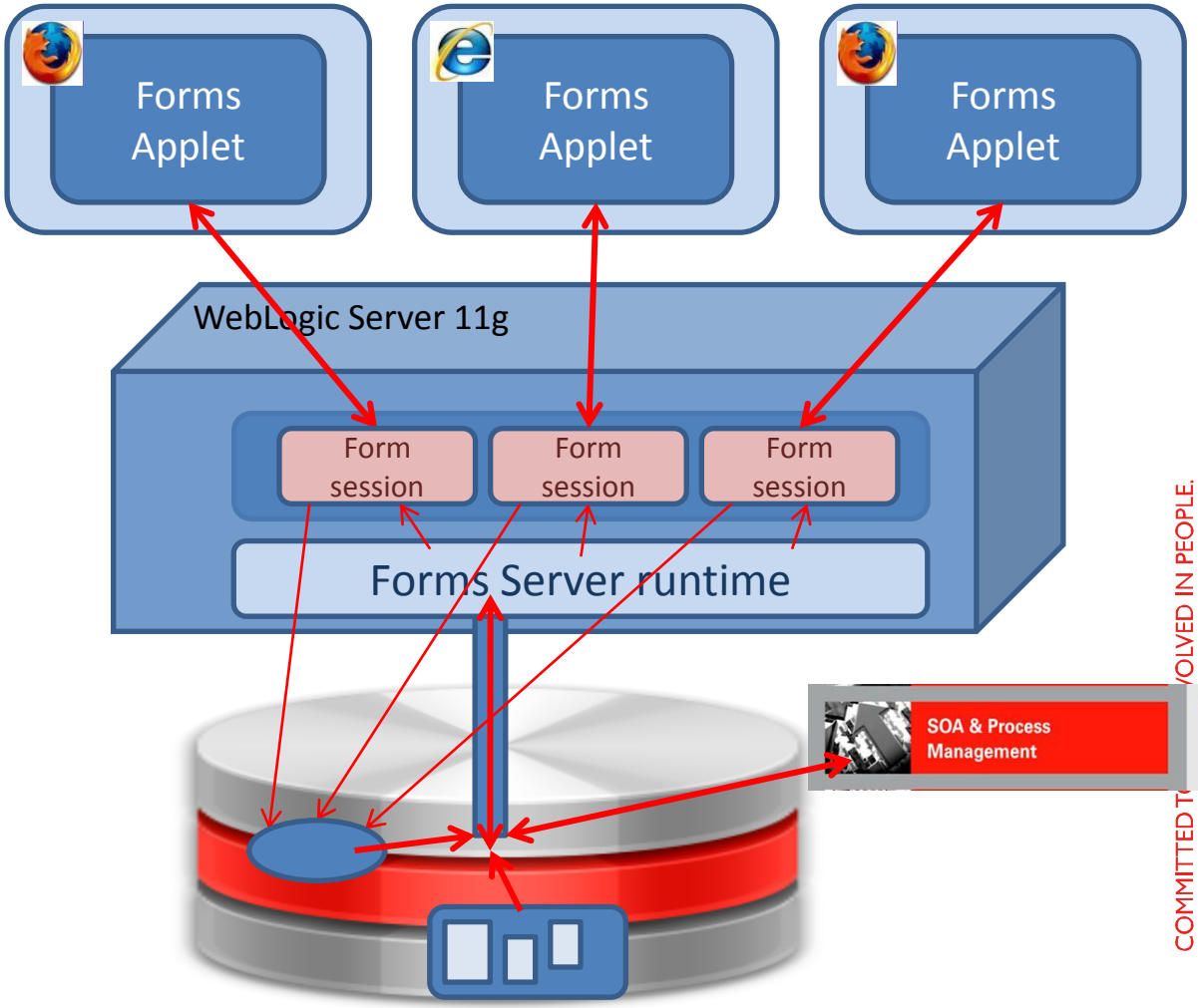
SERVER PUSH BASED ON AQ INTEGRATION

- **Form can subscribe on Advanced Queue**
- **WHEN-EVENT-RAISED trigger deals with event**
  - In Forms Server
- **Event can be pushed from Server to client**
- **Form can call PL/SQL procedure to publish events on AQ**
  - This enables Form2Form push



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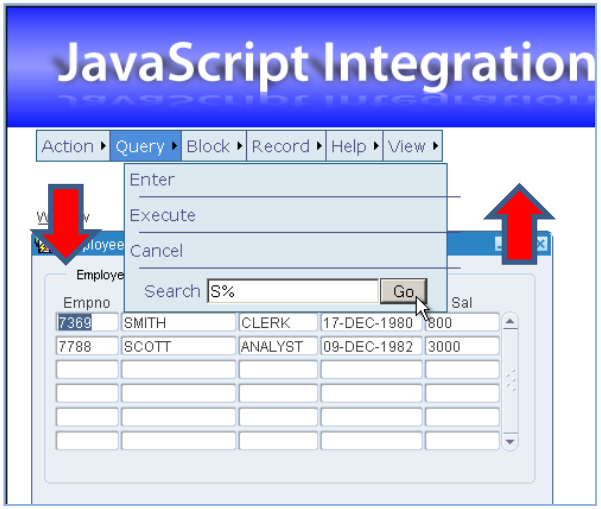
TWO-WAY JAVASCRIPT API IN FORMS APPLET TO INTERACT WITH WEB PAGE

- **JavaScript in web page can send information into Form**
  - HTML page uses raiseEvent JavaScript method on Applet Object to pass event with payload to the Form
  - Form receives and processes the event with WHEN-CUSTOM-JAVASCRIPT-EVENT triggers
- **Form can execute JavaScript snippet in the containing HTML page**
- **This allows for mutual synchronization, opening the door for embedding, merging of technologies**
  - For example Forms and .NET, APEX, any Java Web framework, ADF



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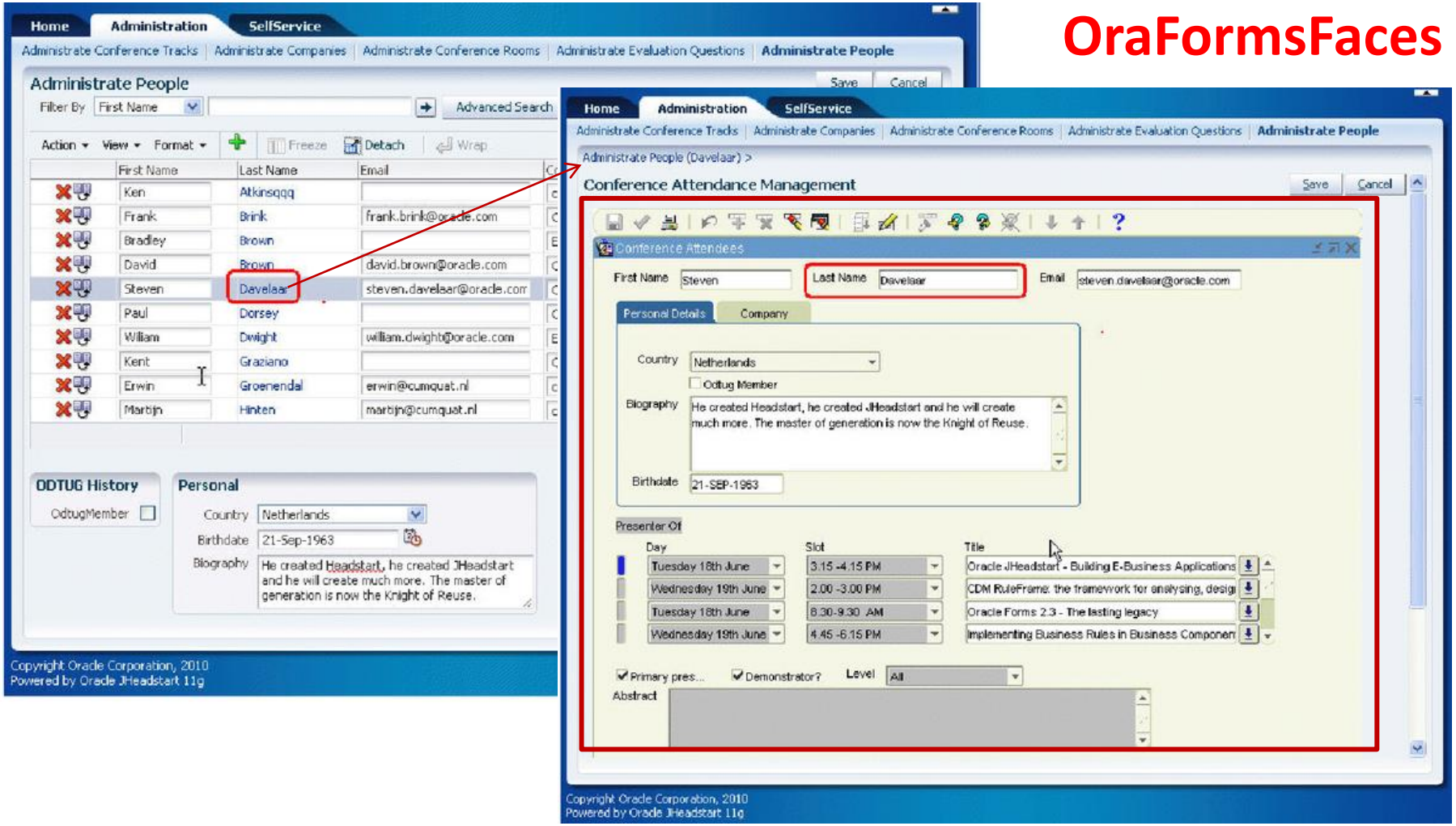
FORM EMBEDDED IN WEB APPLICATION (ADF, APEX, OSS JAVA)



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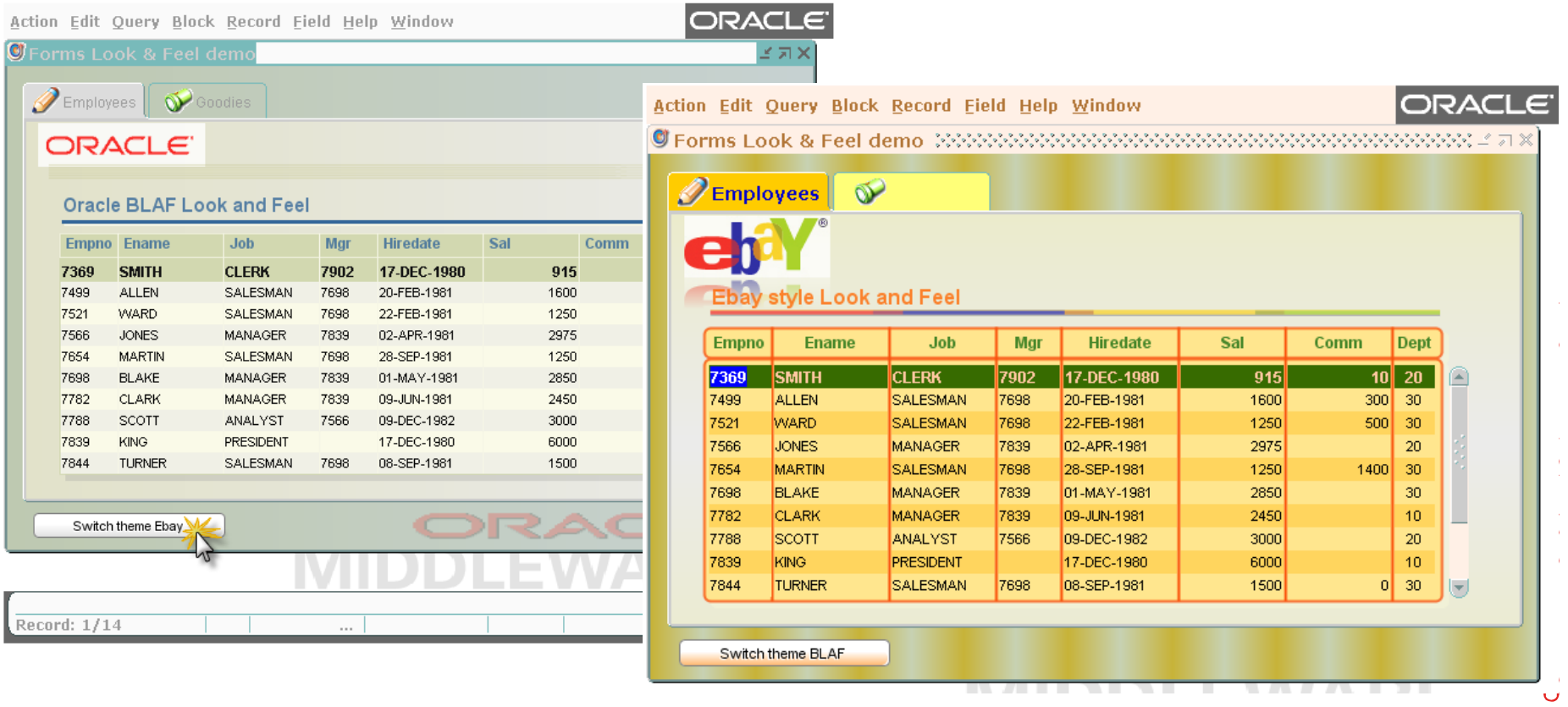
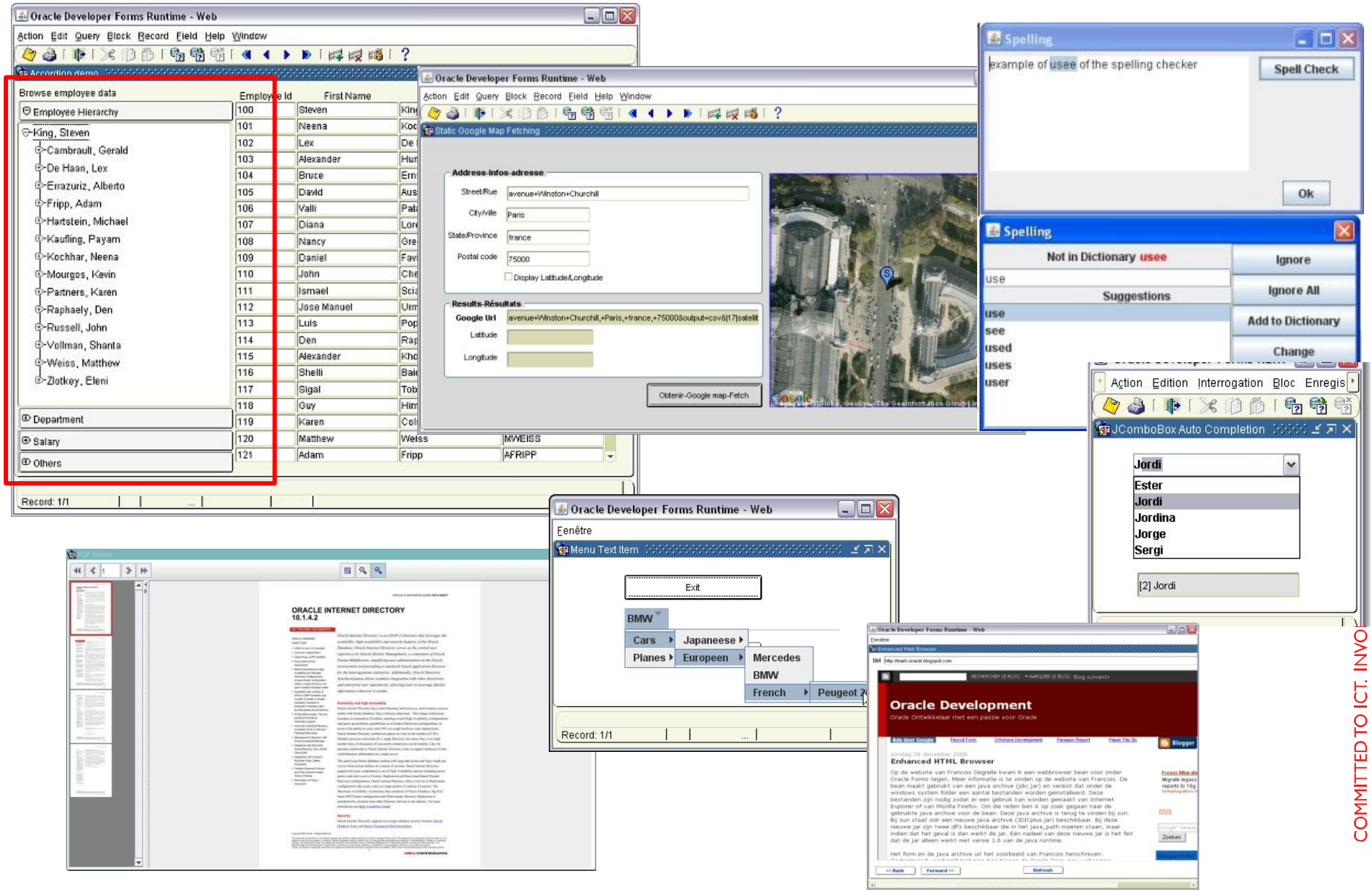
WEB 2.0 LOOK & FEEL – DRIVEN BY CSS

- **Community Project *Forms Look and Feel***
- **PJC based mechanism to style Forms using CSS**



COLLECTION OF PJC BASED EXTENSIONS



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Common Theme in Forms Evolution:

INTEGRATION

BASED ON STANDARDS – WITH TECHNOLOGIES ON EVERY TIER

CATERING FOR HYBRID-AND-INTEGRATED APPLICATION ARCHITECTURE

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MODERN FORMS SCENARIOS – FORMS IMPLEMENTING SOAP WEB SERVICE

Forms Applet

Forms Applet

Forms Applet

WebLogic Server 11g

Form session

Form session

Form session

Forms Server runtime

WebService

SOA Suite

M

AQ

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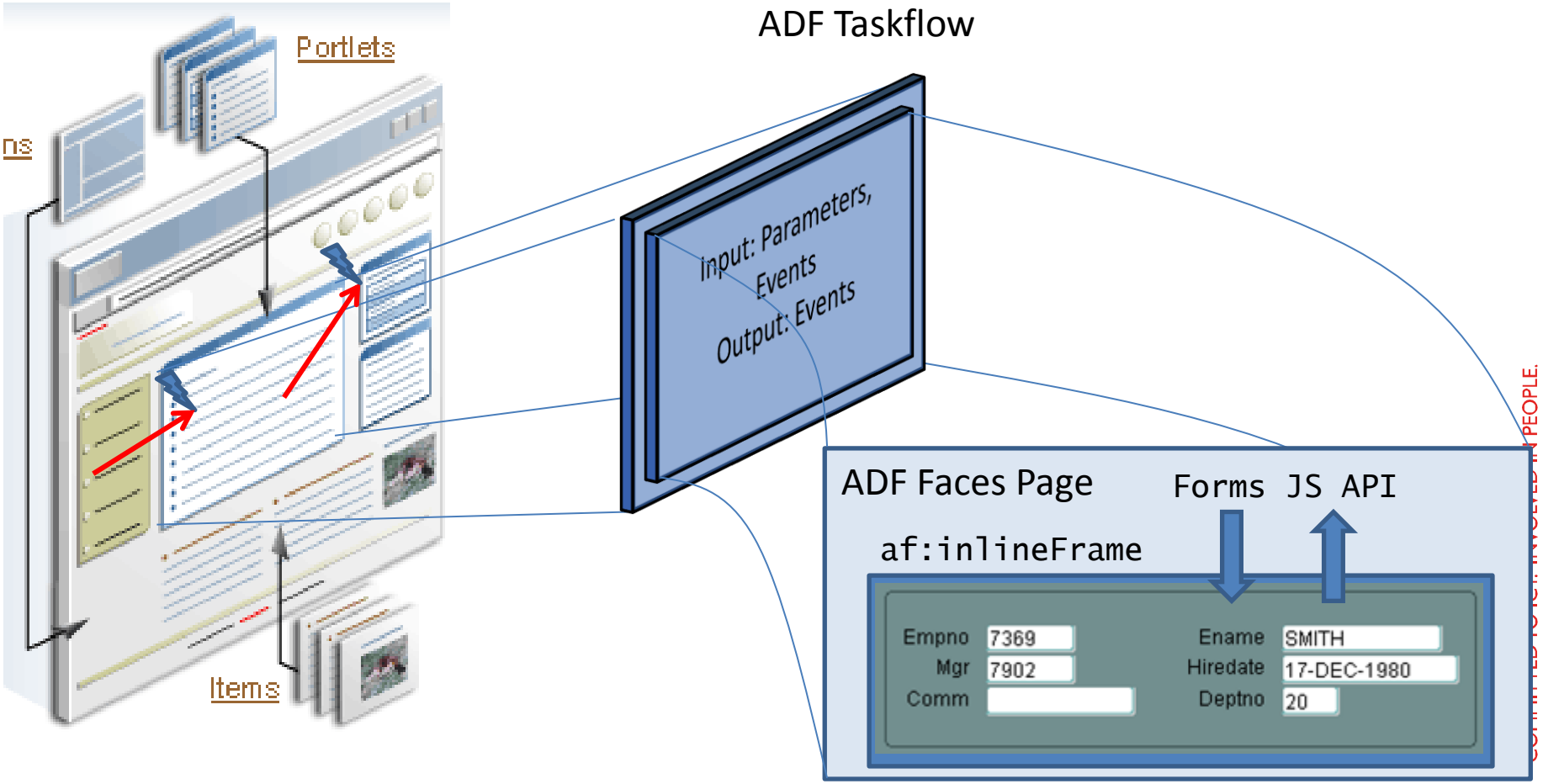
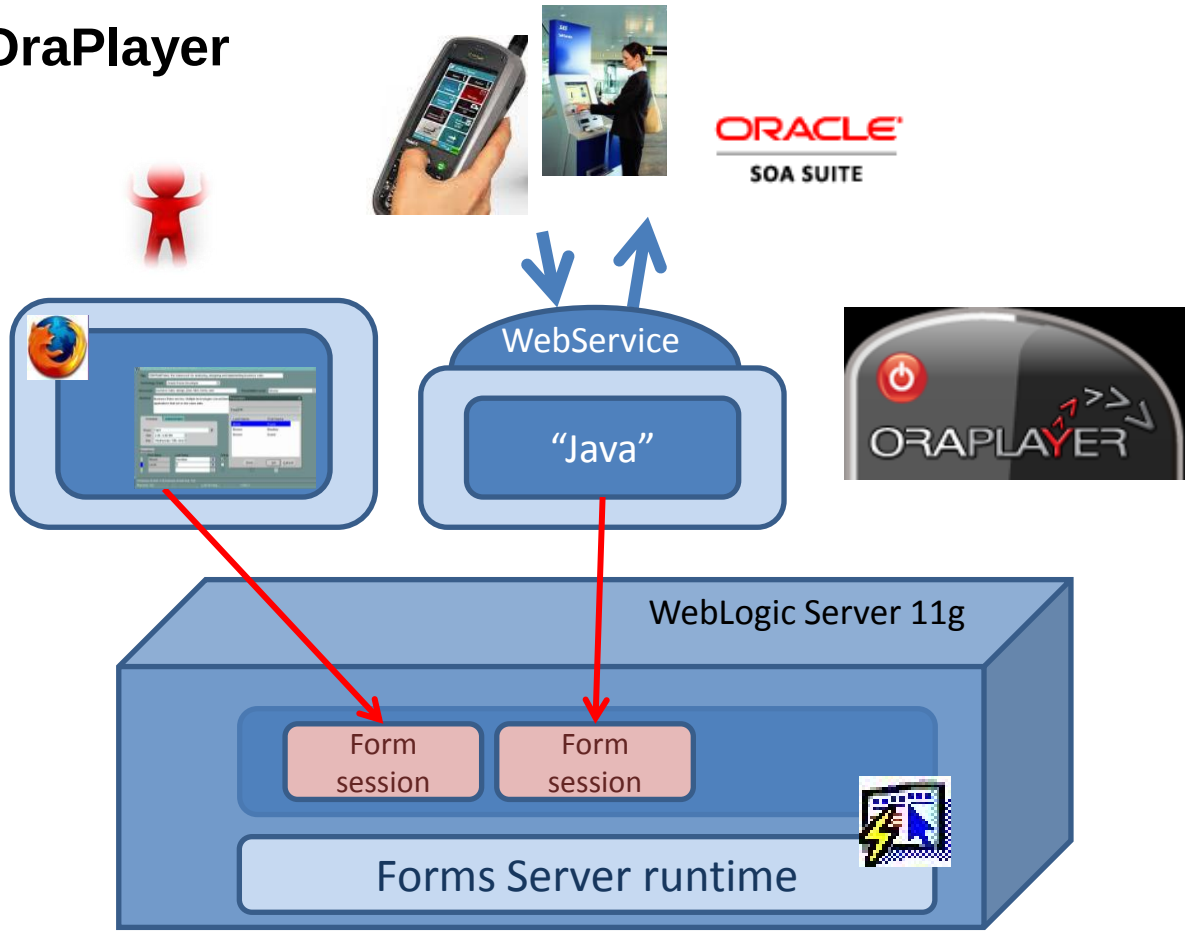
MODERN FORMS SCENARIOS – FORMS IN JEE / WSRP WEB PORTAL



WRAP FORMS AS WEB SERVICE AND CREATE NEW USER INTERFACES

- **Reuse existing Forms – running on Form Server, unchanged, leveraging all existing business logic, interaction scenarios wrapped as Web Service**
- **OraPlayer**



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RENDER EXISTING FORMS TO DIFFERENT (NEW) PLATFORMS

- **Reuse existing Forms –render as pure HTML to any HTML browser –including on Mobile devices**
- **Yo!Forms and Yo!Server**

Yo!Forms

Yo!Server

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MIGRATE OR REBUILD SELECTED PIECES FOR NEW USER GROUPS OR CHANNELS

- **Rebuild: using your technology of choice**
  - .NET
  - Some Java Open Source Framework
  - 3rd Party 4GL like technology
  - ADF (Oracle's own strategic application development framework)

- **Or: Migrate (even convert) using tools on offer**
  - Pitss, Ciphersoft, Qafe, JHeadstart, ASP Solutions

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BUILD ON NEW TECHNOLOGY STACKS USING EXISTING DEVELOPER SKILLS

- **APEX**
  - Comes even with (basic) migration tool

- **Formspider**

formspider™

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formspider™

www.theformspider.com

Yalım K. Gerger

- 100% PL/SQL
- No Java, No JavaScript Needed.
- Applications work 100% AJAX DTHML/JavaScript
- All Applications work in All Browsers by Default
- Formspider is cross platform like Oracle Forms
- Formspider Development is Very Much Like Oracle Forms
- Downloaded over 2000 Oracle Customers. It is the new hot tool. :-)
- Formspider is the tool Oracle should have built for PL/SQL Developers

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formspider™ References

- U.S. Air Force

Recruiting System. 3000 users.

- ING Insurance&Retirement Fund

Agency Portal.

- New York State

OASAS Drug and Alcohol Abuse Treatment Program Budget Management Applications. The Application manages about a billion dollars. 250 users.

- OK International

Leading global supplier of soldering tools.

- Rotometrics

World's largest Rotary Die Manufacturer. Ordering System.1000 users.

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HYBRID RESULT

- **Differences across**
  - User groups
  - Channels and devices
  - Functional requirements
  - ‘Service Level’ demands
- **.. *will* require various, different technological solutions.**
- **Moderns IT architectures, standards and technologies make hybrid and integrated solutions possible.**
- **This should be your objective too!**

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WHAT YOU SHOULD ALWAYS BE DOING

- **Work on your vision**
  - Strategy for the application and its architecture – derived from the strategy for the company
- **Stay on top of features of your current tool stack**
  - To at least pick the low hanging fruit
- **Prepare for a future with a hybrid environment**
- **Continue to evolve skills of the people involved**
  - You need to have at least some Java, XML, Web Service skills on the team
  - Continue to upgrade SQL, PLSQL and Forms skills
- **Design and implement following 'decoupling' as architecture principle**

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PEOPLE

threat
Java-nono
opportunity
fear
critical
Classic training
open
conservative
inquisitive
uncertainty
overwhelmed
doubt
reluctant

Introduction & Demonstration & Inspiration

Training

Collaboration

Coaching

Remote Support

QA/Audit

Consult – on new trends & experience

confident
opportunity
productive
initiative
move ahead
critical
fun
at home in Java
independent
enthusiasm
stepping stone
participate
personal growth

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CHERISH & INVOLVE *ALL* STAKEHOLDERS

- **Make project visible**
- **Involve *everyone***
- **Frequent communication**
- **Search for added value in various dimensions**
  - Functionality, Quality, Cost, Satisfaction for both end users and the IT team

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TAKE AWAYS

- **Plan based on a vision with the application (and perhaps the enterprise on the whole)**
- **Decide using valid, rational arguments**
- **Reckon with a prolonged (continuous) evolution rather than a big bang switch over**
- **Do *not even* consider fully automated migration from Forms to <something else>**
- **Hybrid environments and mutually complementary approaches are likely the way to go**
- **Decoupling will help with building the hybrid architecture and helps low-impact optimization**
  - Move data-oriented business logic out of Forms to DB
- **Moving to Forms 11g (more specifically: to WebLogic Server) is a smart move to a solid foundation**
- **Forms 11g is more modern than many people realize**
- **People are the key to success**

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THE FUTURE OF FORMS IS….

A LANDSCAPE IN WHICH **FORMS** WILL PROBABLY PLAY AN IMPORTANT ROLE FOR QUITE SOME TIME TO COME – ALONG WITH NEW TECHNOLOGIES TO CATER FOR NEW USER GROUPS, NEW CHANNELS AND NEW FUNCTIONAL REQUIREMENTS

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NEXT UP …

9.15-9.45	Reception
9.45	Welcome, Introduction on program and speakers
10.00	Forms to Future - history, evolution, architecture and future - Lucas Jellema
10.45	Modernizing Forms using Pluggable Java Components and the Forms Look and Feel project - François Degrelle
11.15	Short break
11.30	To infinity and beyond: Extend the life of your Oracle Forms application by running your existing Forms from next generation technologies/platforms without migration - Mia Urman
12.00	Forms 11g, ADF and APEX: Co-existence in Enterprise Applications - Madi Serban
12.30	Lunch

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