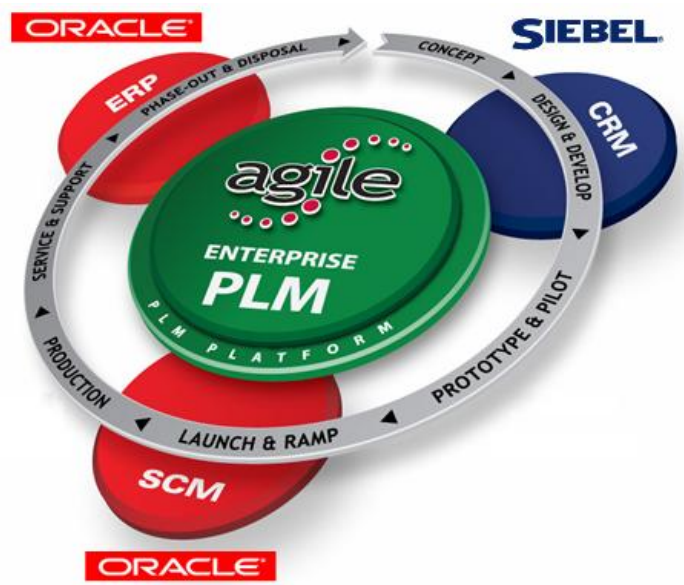

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Leveraging Oracle Fusion Middleware in Agile PLM

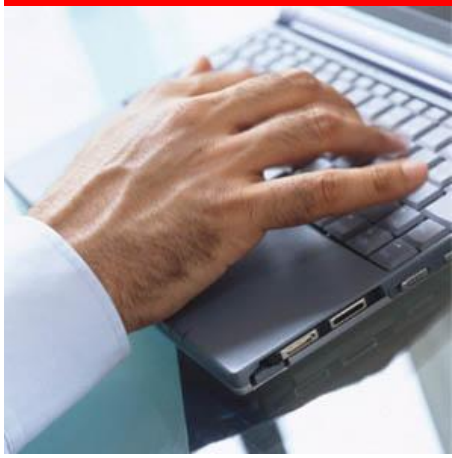
Gnani Palanikumar
Product Management Director

Safe Harbor Statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions.
The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

Agenda

- Fusion Middleware Overview
- Fusion Middleware Integration
- Solutions
- Benefits



Agile PLM

Oracle Fusion Middleware Best Practice Center

Agile is a leading provider of PLM applications that enable companies to accelerate product innovation and maximize product profitability by managing the product information throughout their lifecycles

Next generation Oracle Middleware built using best-of-breed standard based middleware technology, which is in use by 90,000 customers worldwide

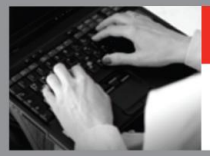
Our focus here is <u>what customers and partners can build today using Fusion Middleware</u> to extend Agile PLM Applications A9 and e6

Oracle Fusion Middleware

Overview

Development Tools

Unified SOA Development Tool & Framework



User Interaction

Web 2.0 Portal, Rich Internet Apps, Mobile, Search, Desktop, Presence, VoIP

Business Intelligence

Data Integration, Query & Analysis, OLAP, Dashboards, Reports, Alerts, Real-Time

Content Management

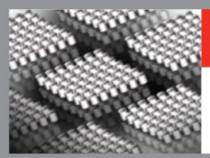
Web Content, Documents, Digital Assets, Imaging, Records, Information Rights

SOA & Process Management

ESB, BPEL PM, Workflow, BAM, Rules, B2B, MDM, Registry, SOA Governance

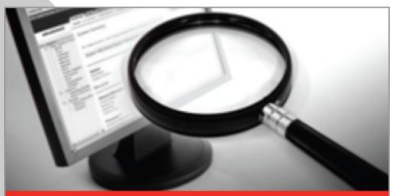
Application Server

Java EE, Web Services, Complex Event Processing, XTP, RFID & Sensors, SIP



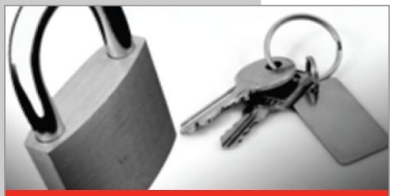
Grid Infrastructure

Application Clusters, In-Memory Data Grid, Common Metadata Services



Enterprise Management

Provisioning, Diagnostics, Tuning, Configuration Management



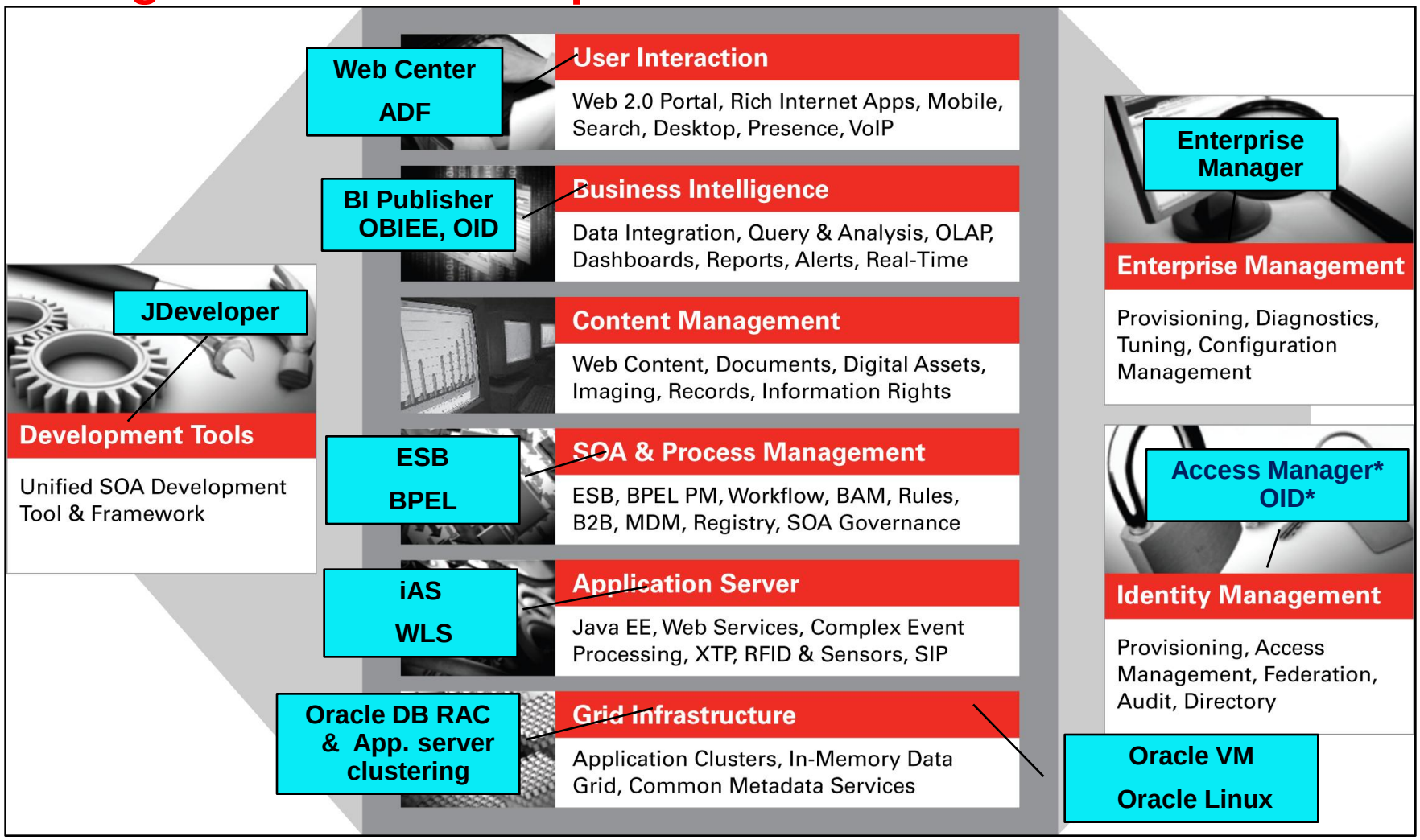
Identity Management

Provisioning, Access Management, Federation, Audit, Directory

Oracle Fusion Middleware

Agile Certified Components

ORACLE
Agile



* Agile 9.3.1 (CY2010)

Agile PLM

Solutions Leveraging Fusion Middleware

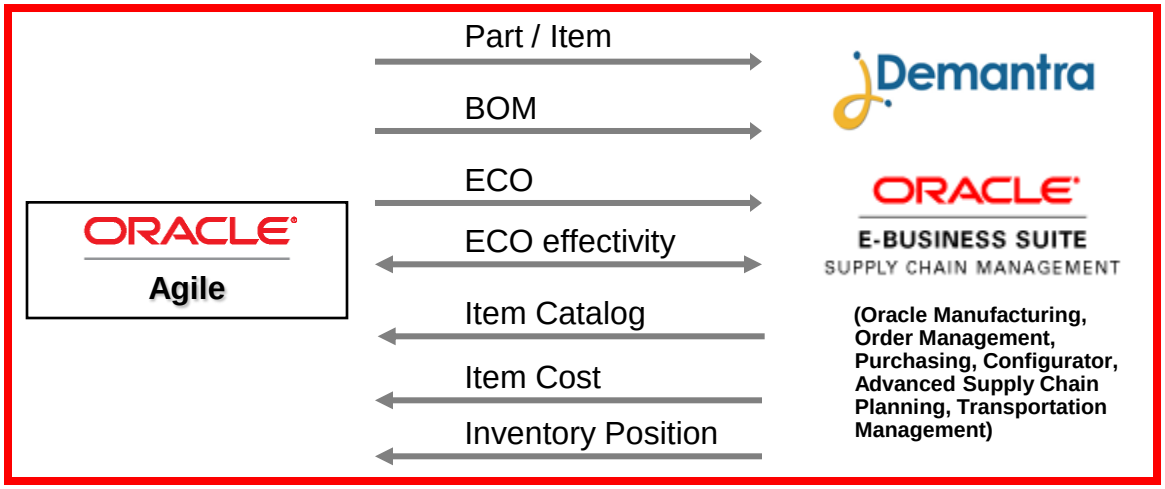
Leveraging OFM: Where do we start?

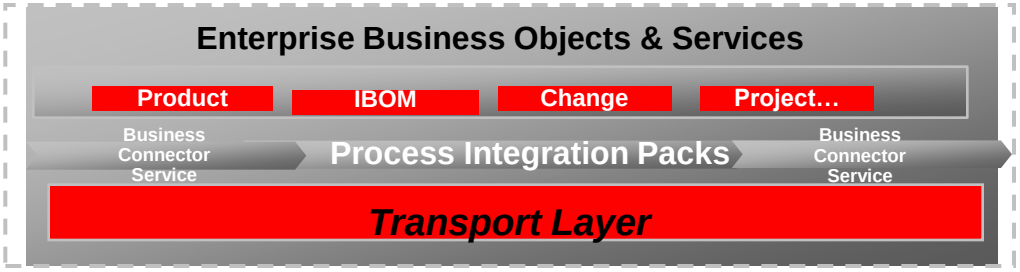
Identify Requirements, Learn Fusion Middleware Component

Requirements	Fusion Middleware Components
Integrating with various applications	• Oracle Application Integration Architecture (AIA) • SOA & Process Management: BPEL Process Manager, Oracle Service Bus
Authoring Tool Integration	• SOA & Web Services
Portal UI, Mobile Applications	• Oracle Web Center, ADF. Mobile ADF
Enterprise Reporting	• BI Publisher
Business Intelligence	• OBIEE, ODI
Enterprise Identity and Access Management	• Identity Management" Oracle Internet Directory,* Oracle Access Manager*
Lower Total Cost of Ownership	• Application Management (Enterprise Management), Application Server (WebLogic, iAS), DB & App clusters, Oracle Linux, Oracle VM
Application Customization	• J2EE Development Environment: JDeveloper, ADF, ADF Mobile

Enterprise Integration and Process Management

Using AIA Process Integration Pack (PIP)





Oracle AIA

Oracle Fusion Middleware

Challenges

- Non-integrated release process yield data inaccuracy and added time to market
- Limited support for Design for Cost and supply chain results in higher costs

Solutions

- AIA: Agile Design to Release PIP to Oracle E-Business Suite
- Fusion Middleware: Oracle BPEL Process Manager
- Applications: Agile, Demantra, E-Business Suite

- PIP enables seamless, real-time data access to 360 Degree View, Item Management, Change Management, and Configurator.

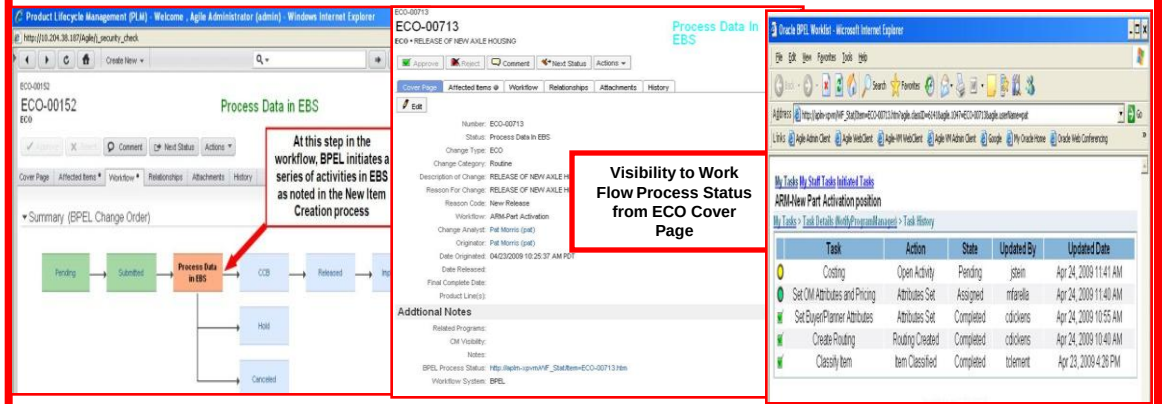
Benefits

- Increased margins with efficient NPI process
- Efficient DFx leading to higher quality, faster time to market and lower total cost of ownership

Activity Based Workflow in Agile PLM

Using BPEL and Agile Web Services

New Part Creation Process with integrated BPEL Workflow



New Part Creation

ORACLE Agile

EBS Activities

BPEL Services

ORACLE E-BUSINESS SUITE SUPPLY CHAIN MANAGEMENT

Oracle BPEL Process Manager

Oracle Fusion Middleware

Challenge

- Creation of cross-application (PLM, ERP) process flows

Solution

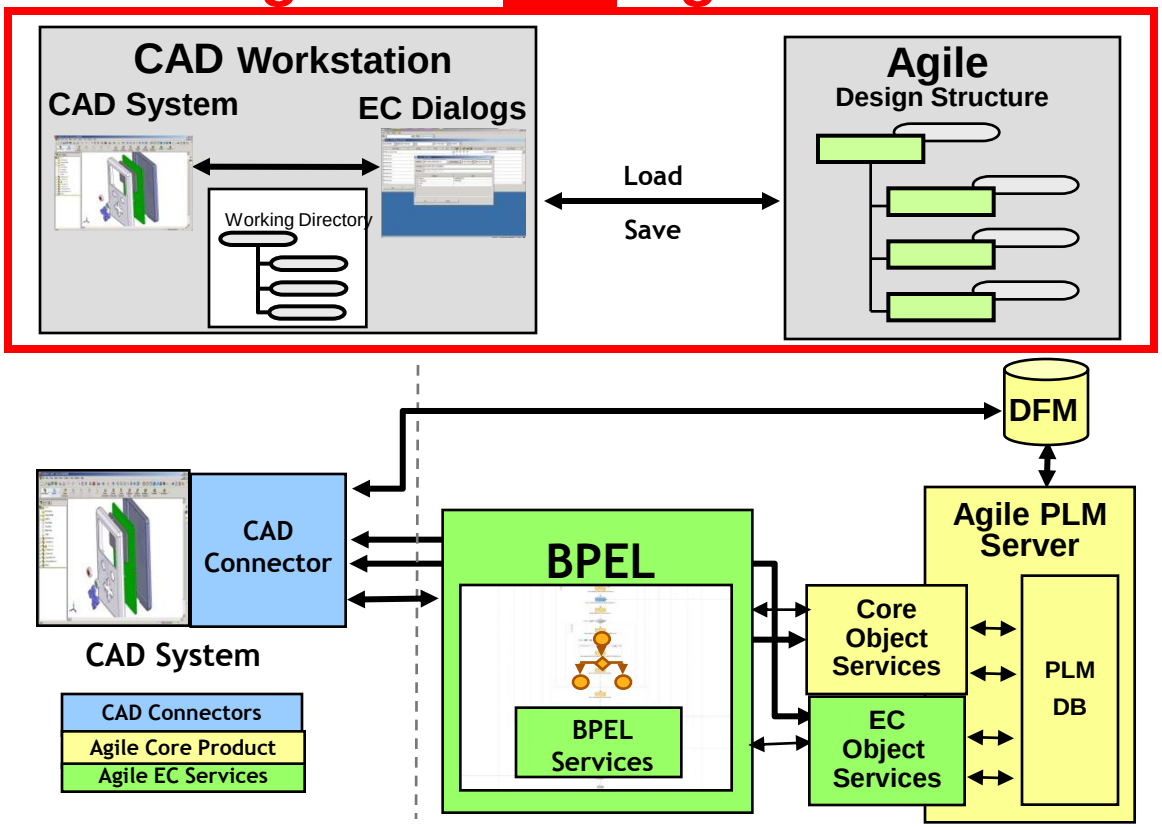
- Fusion Middleware: BPEL Process Manager
- Applications: Agile, E-Business Suite
- E-Business activities can be orchestrated as BPEL services
- Agile workflow state change event and Web Services provides a mechanism to launch E-Business suite BPEL workflow
- Agile ECO cover page attribute can be used to track E-Business Suite workflow process status

Benefits

- 360 view of product data (Agile, EBS) within Agile

CAD Integration in Agile PLM

Using BPEL and Agile EC Web Services



Challenges

- WAN performance of CAD connectors
- Ability to customize business logic based on business requirements

Solutions

- Fusion Middleware: BPEL Process Manager
- Applications: Agile, CAD Tools

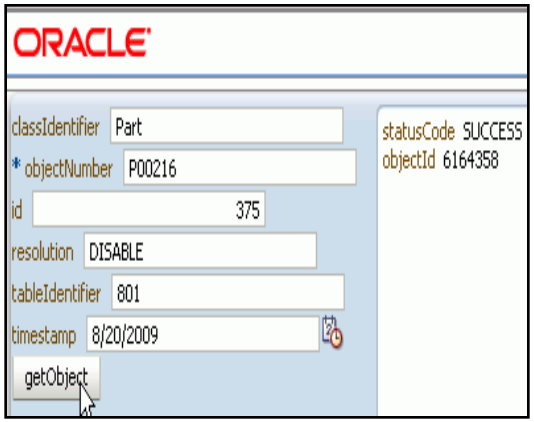
- Agile EC services migrates some CAD connector logic to server side using BPEL services
- BPEL editor provides ability to customize Agile EC BPEL orchestrated flows
- BPEL Process Manager provides infrastructure for deploying and managing BPEL business processes

Benefits

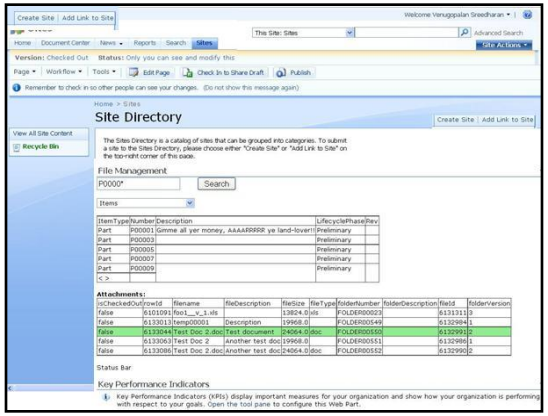
- Improves efficiency of partners and customers to develop & maintain CAD connectors

Custom Web Applications in Agile PLM

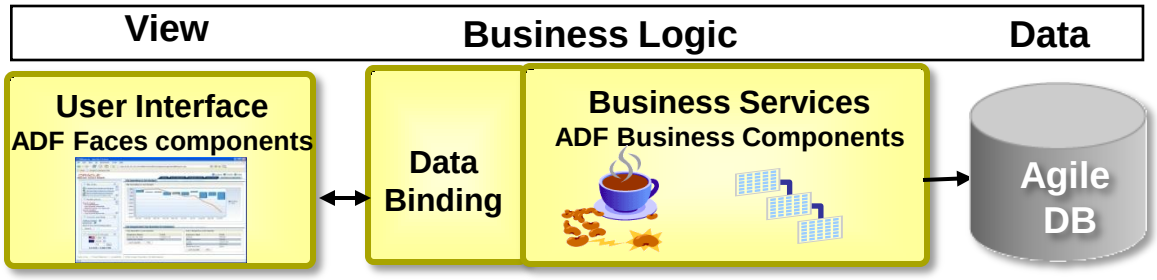
Using ADF and Agile Web Services



Item Management



Document Management



Oracle ADF

Oracle Fusion Middleware

Challenge

- Simplified UI for Casual users: Document Management, Item Management. Price & Compliance data import

Solution

- Fusion Middleware: Application Design Framework (ADF), JDeveloper
- Application: Agile

- Oracle ADF provides visual and declarative approach to Java EE Web applications development
- ADF Business Services layer manages interactions with data persistent layer leveraging Agile Web Services

Benefits

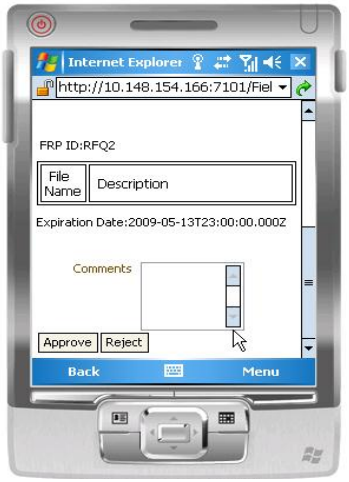
- Increase casual user adoption
- Less training overhead

Mobile Applications in Agile PLM

Using ADF Mobile and Agile Web Services

RFQ Search

RFQ Details



RFQ Approval

Challenge

- Access to PLM use cases (ECO Approval, Sales RFQ) from mobile devices:

Solutions

- Fusion Middleware: Mobile ADF, JDeveloper
- Application: Agile

HTML Support

- Basic mobile web applications
- Consumer mobile phones with simple HTML browse

AJAX Support

- Rich mobile web applications
- High-end consumer phones with AJAX-enabled browser

Java Client

- Applications integration with device PIM apps and peripherals
- High-end Smart Devices

Oracle Mobile ADF

Oracle Fusion Middleware

- Mobile ADF provides a framework to create Mobile applications for MTML, Ajax and Java enabled Mobile devices
- Agile data can be presented in a Mobile applications using Agile Web Services

Benefits

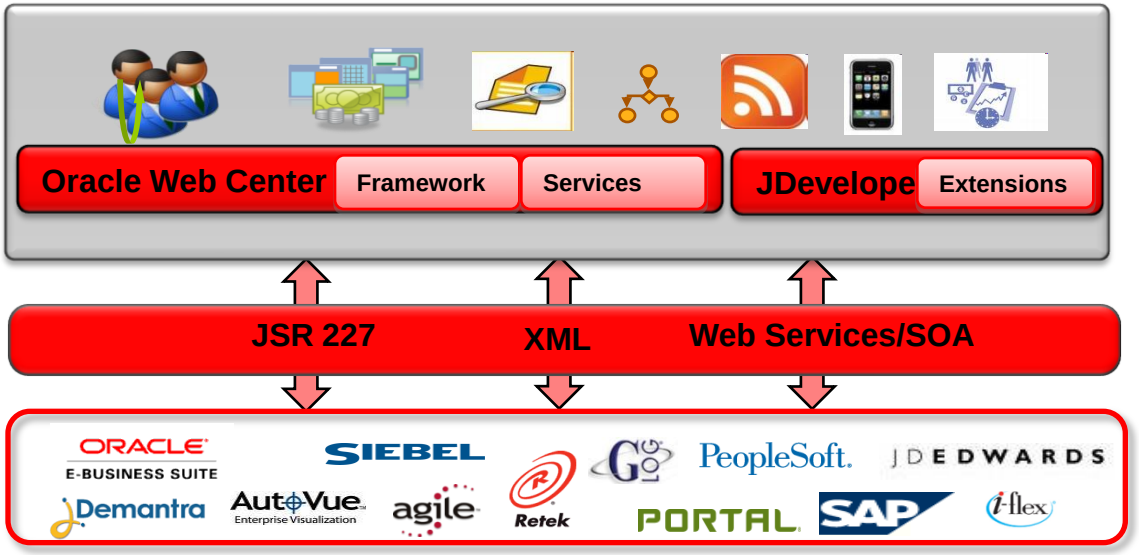
- Improves mobile users productivity

Composite Application Integration

Using Web Center and Agile Web Services

Product Defect Escalation Dashboard

Customer Needs Management



Oracle Web Center

Oracle Fusion Middleware

Challenge

- Composite and Mashups applications: Product Defect Escalation, Customer Needs Management Dashboard

Solutions

- Fusion Middleware: Oracle Web Center, ADF, JDeveloper
- Applications: Agile, E-Business Suite, Siebel and BI

- Oracle Web Center is an enterprise portal designed for business users and IT
- Unified with Business applications , Enterprise 2.0 services and social communities

Benefits

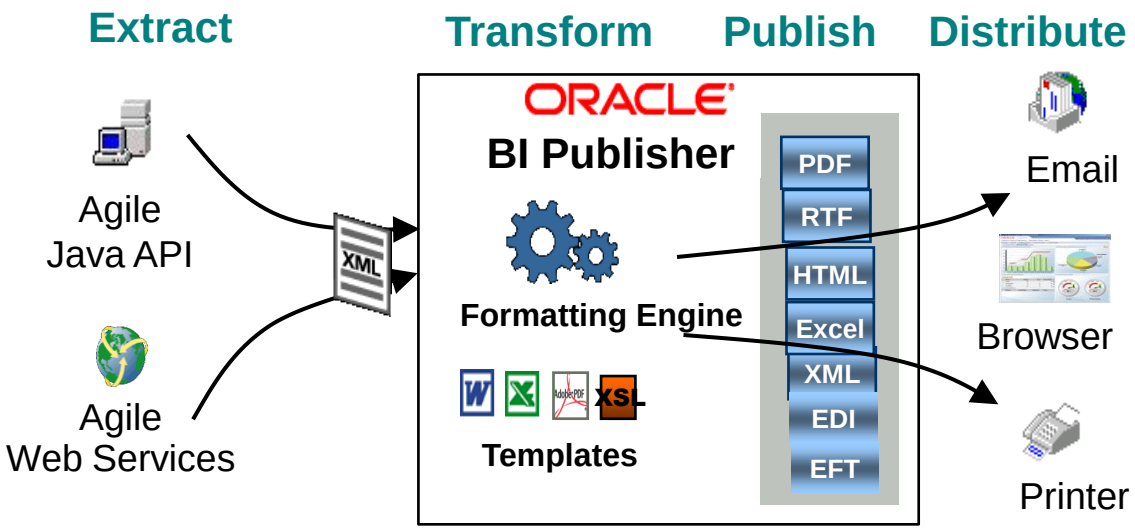
- Easy to develop and maintain composite and Mashup applications

Custom Reports & Datasheets in Agile PLM

Using BI Publisher and Agile Java API & Web Services

Operational Reports

Product Datasheets & Manual



Oracle BI Publisher

Oracle Fusion Middleware

Challenge

- Empower Agile customers to create their own functional reports & product documents (Datasheets & Manuals)

Solutions

- Fusion Middleware: BI Publisher
- Applications: Agile

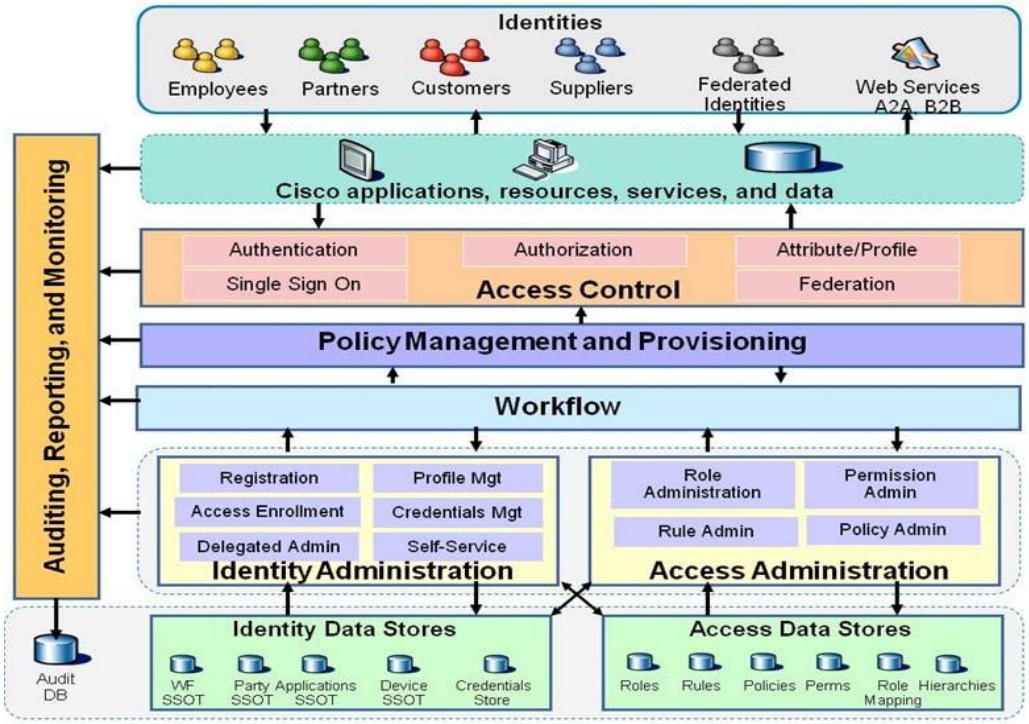
- Oracle BI Publisher is a standard-based reporting platform
- Combines existing Agile Report functionality with powerful publish and distribute capabilities of BI Publishers
- Agile Process Extension (Px) enables report and document generation using Agile & BI Publisher APIs

Benefits

- Business consultants can customize the report and document templates using familiar desktop tools
- Simplifies report maintenance by separating data logic, layout and UI translation

Enterprise Identity Management

Using Identity Manager & Access Manager



Oracle Identity Manager, Internet Directory & Access Manager

Oracle Fusion Middleware

Challenges

- Intellectual Property Protection and Security
- Business risk reduction, regulatory, legal, and corporate policy compliance

Solutions

- Fusion Middleware: Identity Manager, Access Manager, (OAM) Internet Directory (OID)
- Application: All applications, Servers

Benefits

- Operational Efficiency & Cost Containment (e.g. reduce IT support costs)

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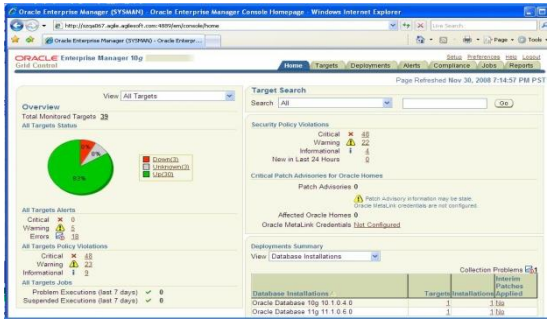
Reference: Cisco Enterprise Identity and Access Management (EIAM)– Cisco and Oracle White Paper, April 2009

Agile Application Management Pack

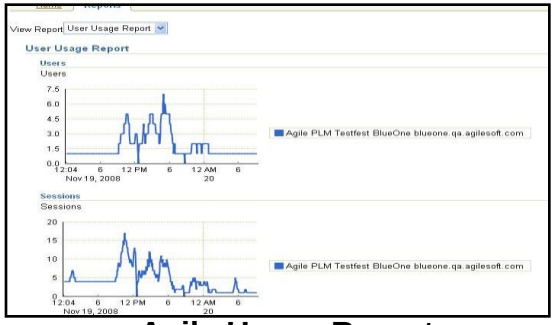
Using Oracle Enterprise Manager

IT Administrator

Enterprise Manager Dashboard

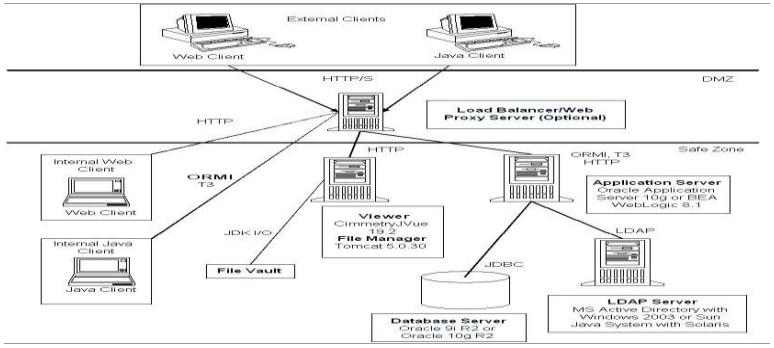


System Status



Agile Usage Reports

Agile Deployment



Oracle Enterprise Manager

Oracle Fusion Middleware

Challenges

- Manage applications top-down, from the business perspective
- Manage entire application lifecycle to increase business agility

Solutions

- Fusion Middleware: Enterprise Manager
- Applications: E-Business Suite, Siebel, JD Edwards, PeopleSoft, Agile, etc.
- Servers: All

- Enterprise Manager monitors health of Database, Application, File manager, LDAP, SSO and Web Servers and send alert to IT Administrators
- Agile Application management plug-in tracks user usage, application versions, application status and alerts

Benefits

- Reduce IT Operation Costs

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Benefits

- Improve ROI of IT investments
  - Industry leading, open standards-based Fusion Middleware platform
- Extend value chain through Integrated PLM
  - CRM, ERP, CAD, BI, SCM
- Better alignment of business with technology
  - Model services to business requirements and needs
- Lower integration costs & complexity
  - Use platform-neutral technology infrastructure
- Empower business users
  - Better usability, Mobile applications, Web 2.0 Services

Where do we find information?

Agile Fusion Middleware Best Practice Center

- Oracle By Example (OBE):
  - Tutorials with step-by-step instructions
- Articles
  - Articles covering Agile and Fusion Middleware best practices and techniques
- Blogs
  - Blog entries from Oracle Experts & Partners
- Webcasts
  - Webcasts from Oracle Experts & Partners

http://www.oracle.com/technology/tech/fmw4apps/agile/index.html