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Herding 3000 Cats

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Oracle Fusion

What Is it?

- Oracle Fusion Applications
 - Next Generation Enterprise Applications
- Oracle Fusion Middleware
 - Integrated standards-based middleware platform
- Oracle Fusion Architecture
 - Recommended architecture for your custom applications

Oracle Fusion

Why Do It?

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E-BUSINESS SUITE



J D E D W A R D S

SIEBEL

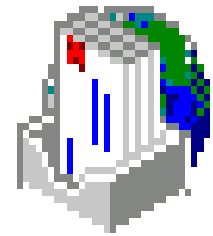


and many more . . .

PeopleSoft®

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What Would Users Expect?



Oracle Fusion

What We Wanted – Business Drivers

- Cutting Edge UI
- Agility
- System Integration
- Standards
- Scalability, Security, Portability
- Time to market

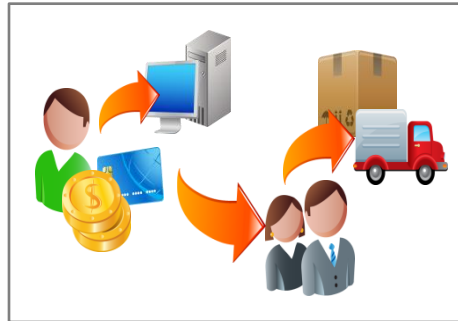
Oracle Fusion

What We Wanted – Next Generation Enterprise Applications

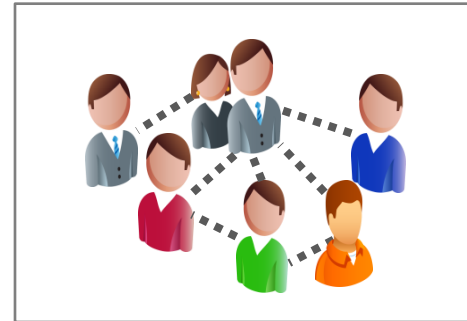
Rich Internet Applications



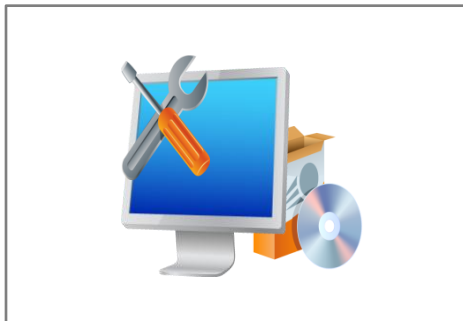
Business Process Management



Enterprise Team & Social Computing



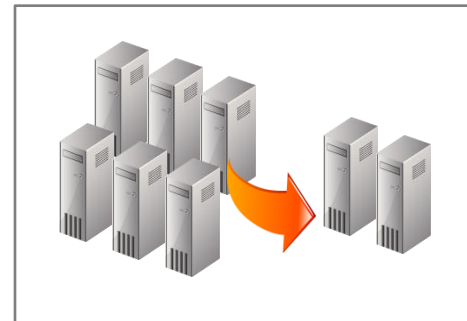
Application Customization



Identity & Compliance Management



Systems Consolidation



Oracle Fusion

Big Decisions Were Easy



Java EE 5



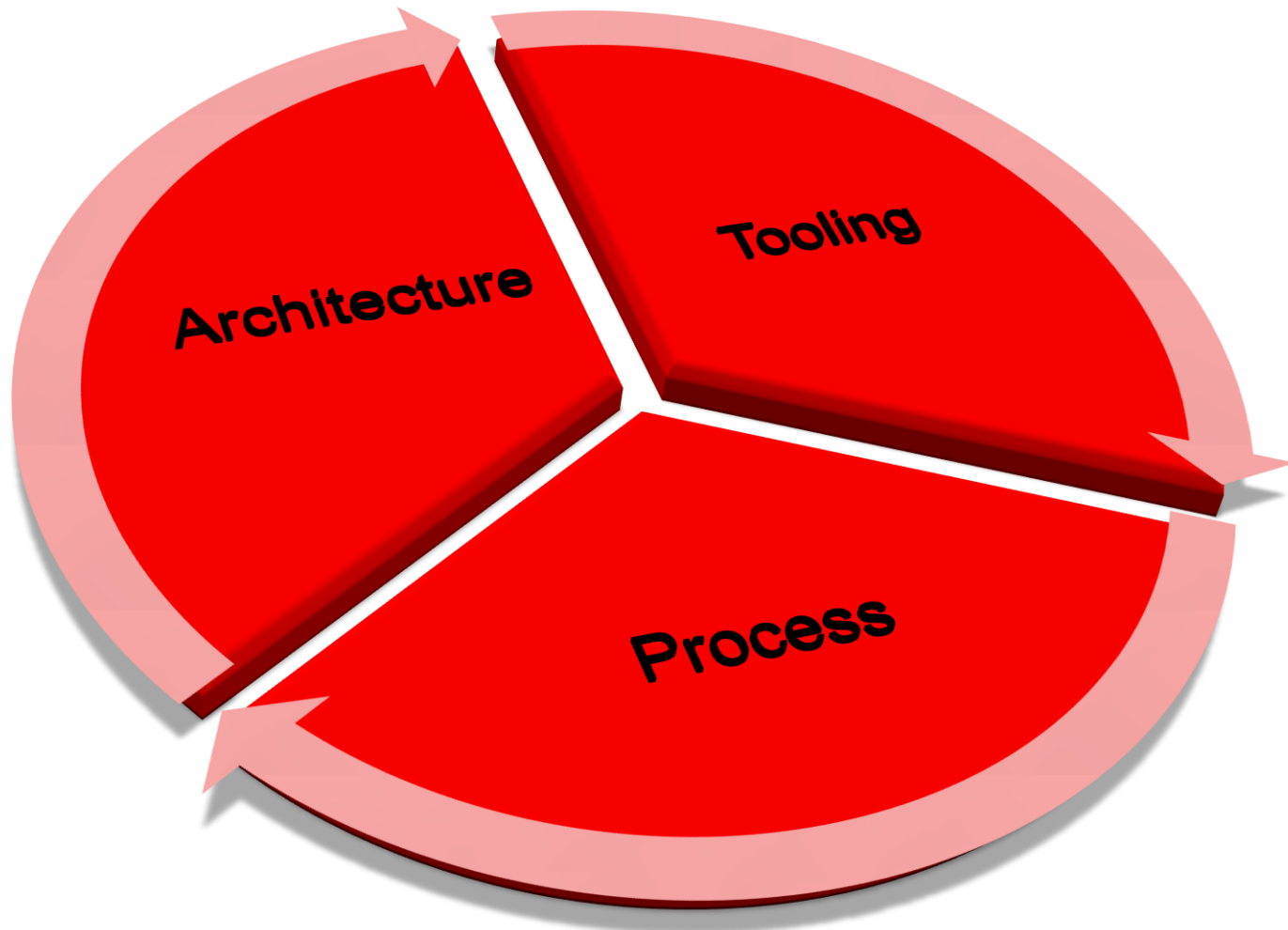
SOA



Web 2.0

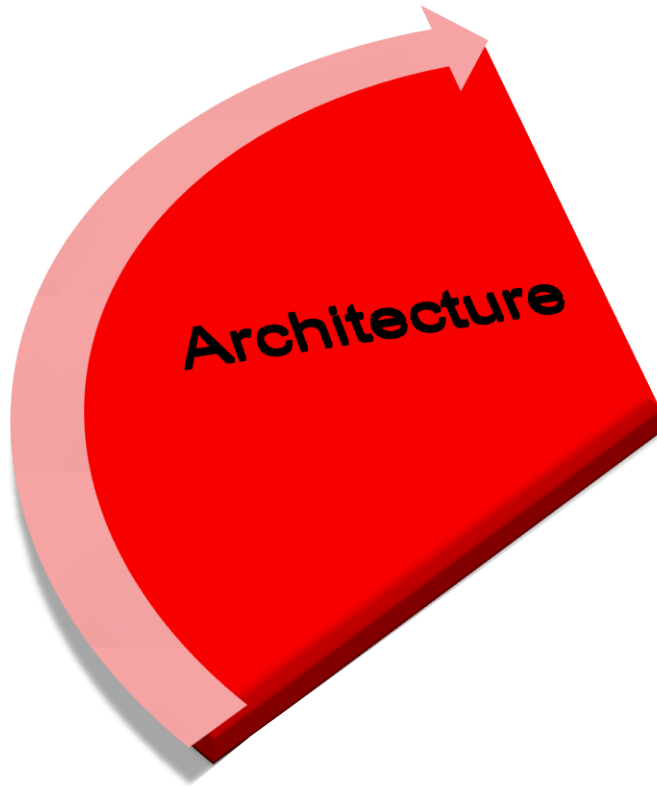
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The Three Challenges



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Challenge 1



Oracle Fusion Architecture

The Solution – Oracle ADF

- Development framework that simplifies development of Java EE-based SOA applications
- Abstract developers from technology complexities
 - Example - UI Components abstract from Ajax, Flash, Javascript, DOM
- Provides end-to-end infrastructure solutions...
 - O/R Mapping, persistence, caching, controller, binding, UI framework, security
- ...and an easy way to use them
 - Visual editors, Property editors, dialogs etc...

View / Controller

Model

Data

Java Server Faces
ADF Faces Components

Portal – WebCenter
Appcore

Microsoft
Desktop applications

Data control
JSR227

Web
Services

Services Layer

Tools / Java Layer

ADF BC
Services

Fusion
Schema

Reporting



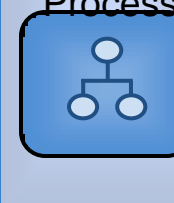
Business
Activity
Monitoring



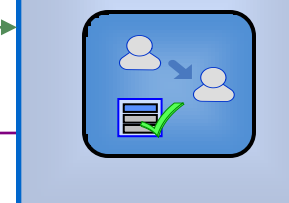
Rules
Engine



BPEL
Process



Human Workflow
Service



ESS



Analytics / Monitoring

Policy evaluation

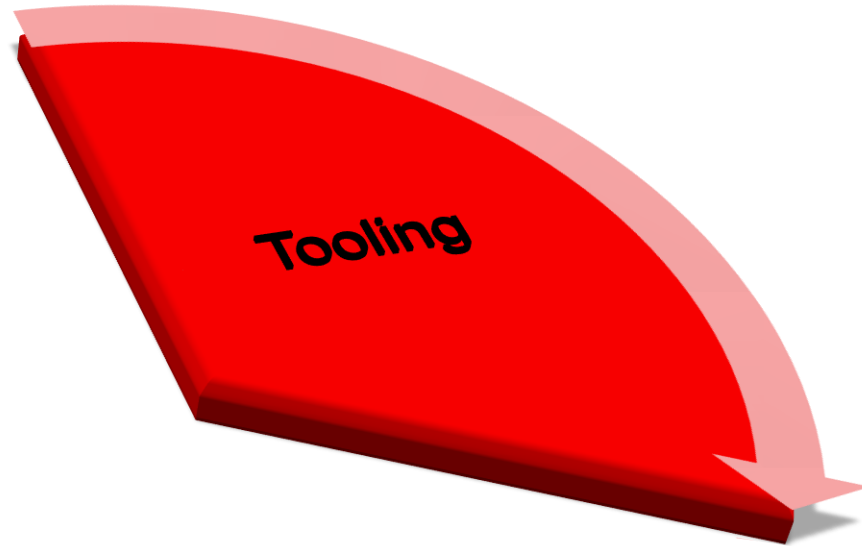
Orchestration

Human interaction

Scheduling

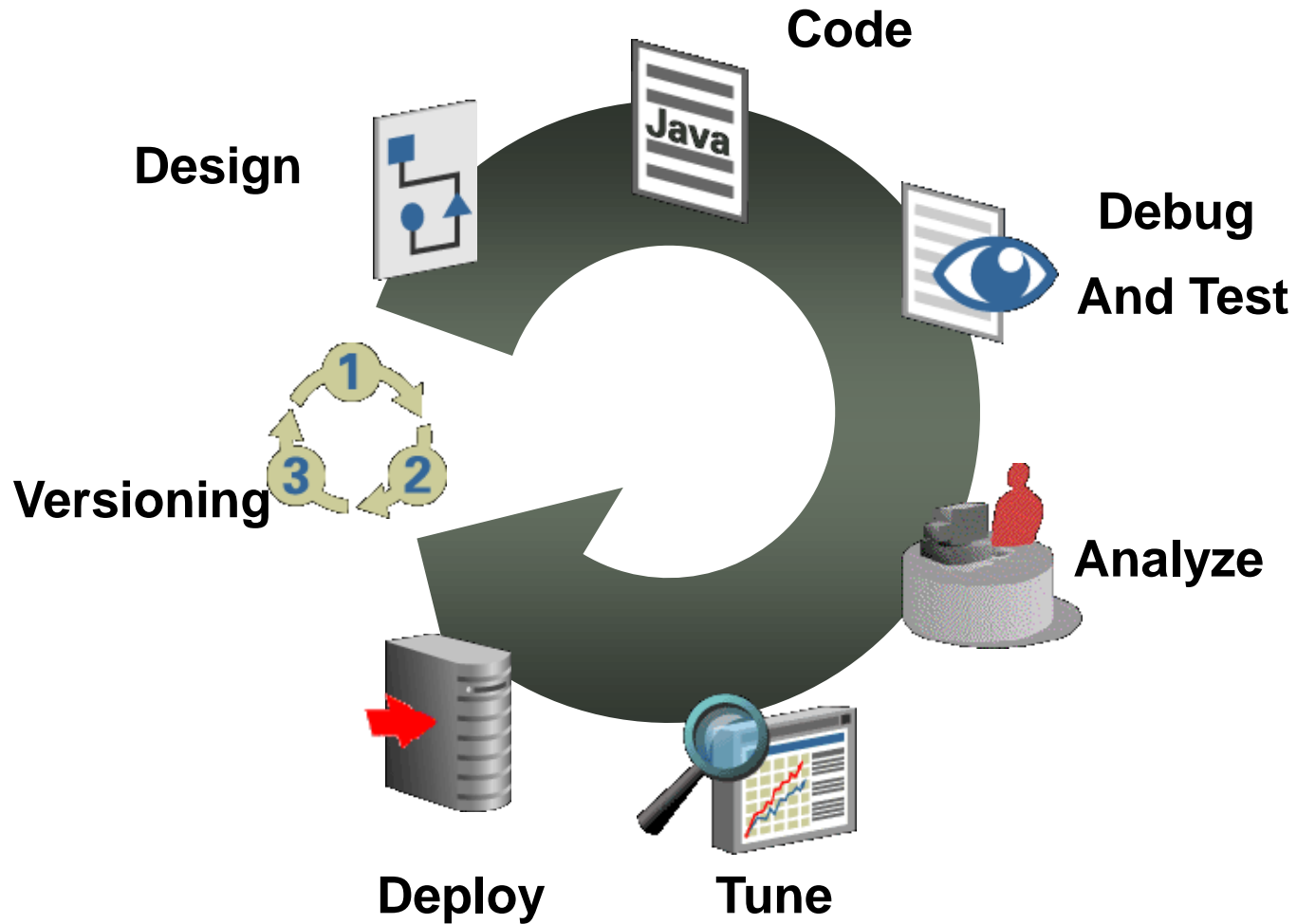
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Challenge 2



JDeveloper

Full Lifecycle Support



JDeveloper

Unified Development Tool

The screenshot displays the Oracle JDeveloper 11g Technology Preview 4 IDE. The interface is divided into several panes:

- Application Navigator:** Shows a project named 'SampleApp' with a sub-project 'SOAComposite1'. The 'SOA Content' folder contains 'testsuites', 'xsd', 'xsl', '.designer', and 'SCA-INF'. The 'approvOrder.bpel' file is selected.
- Structure:** Shows the file structure of the selected file, including 'Id', 'Value', and 'ViewId *' (set to 's/threeColumnTemplate.jspx').
- SOA Diagram:** A Business Process Model and Notation (BPMN) diagram showing a process flow starting with a 'client' actor, followed by a 'receiveInput' event, and then a 'callBpelClient' activity.
- Java Editor:** Displays the 'Sales.jspx' file in design view. It features a 'showDetailItem 1' component, a 'Node Stamp' table, and a 'Graph' component showing a bar chart with data points around 40, 55, and 35. The 'Component Palette' on the right lists various ADF Faces and Common Components like 'Train Button Bar', 'Tree', 'Tree Table', 'Xml Content', 'Layout', and 'Operations'. The 'Resource Palette' on the right shows 'My Catalogs' with various links and search options.
- Web 2.0:** A bar chart is visible in the Java editor, representing a data visualization component.

Large red text overlays are present: 'SOA' is centered over the BPMN diagram, 'Java' is centered over the Java editor, and 'Web 2.0' is centered over the Component and Resource Palettes.

At the bottom of the IDE, the status bar shows: 'Inserting inside /oracle/templates/threeColumnTemplate.jspx' and 'Selected: /oracle/templates/threeColu... Web Editing'.

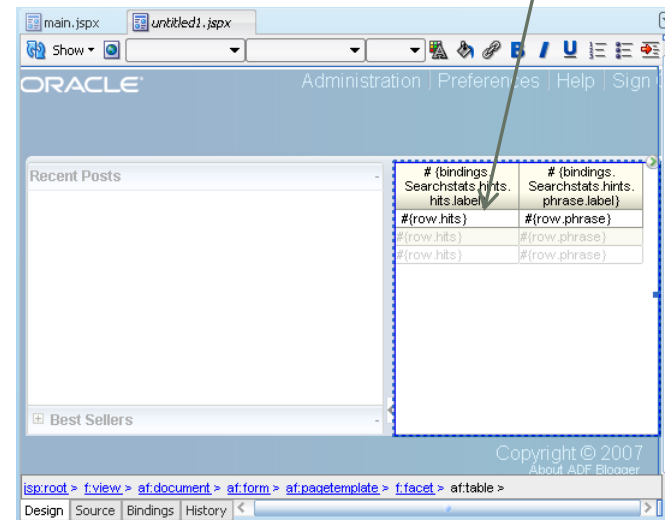
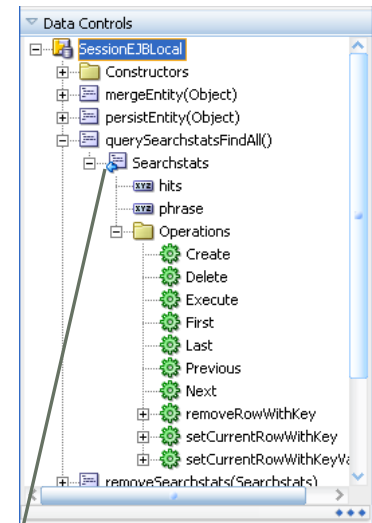
ADF Business Components

A framework that simplify developing Java EE business services for developers familiar with 4GL tools, declarative development, and relational databases

- Simplify data access
- Simplify validation and business logic
- Uses SQL based data views
- Separate data views from business logic
- Implement best practices
- Easy customization

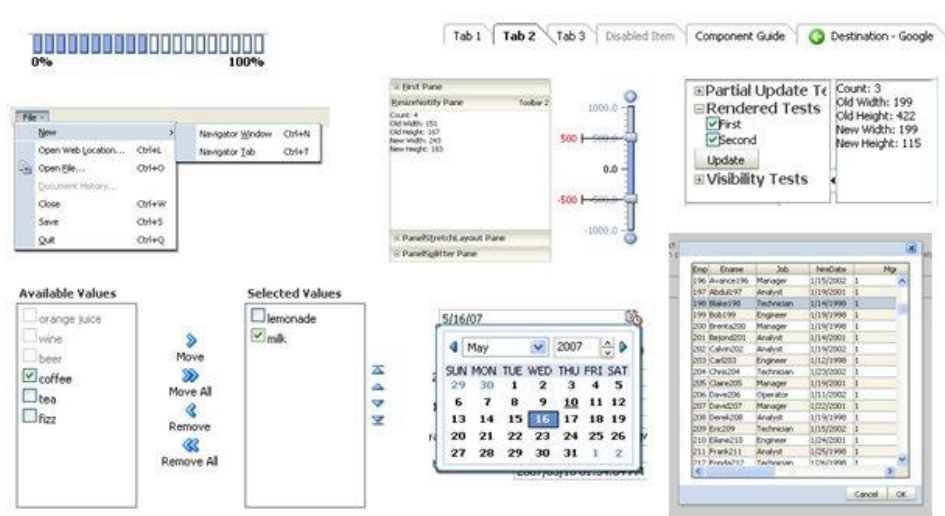
ADF Model – Declarative Data Binding

- ADF Model
 - JSR-227 Data Controls
- Service Oriented Interface
 - Abstract implementation from clients
 - Loose coupling between services and application
- More Productivity
 - Drag and Drop Data Binding
- More Reusability for Services
 - Discover and Share Services



ADF Faces Components

- 150+ AJAX enabled JavaServer Faces components
- Drag-and-drop framework
- Dialog and popup framework
- Navigation menu framework
- Partial page rendering
- Advanced data streaming
- Complete JavaScript API
- Skinning
- Accessibility



ADF Data Visualization Components

The image displays several Oracle ADF data visualization components:

- Network Diagram:** A central node labeled "Peripherals" is connected to four peripheral nodes: "Computer Accessor...", "Scanners", "Storage", and "Printer".
- Map Application:** An Oracle-based map application showing a route between two addresses:
 - Starting Address:** 510 saint francis st, Redwood City,
 - Ending Address:** 200 Oracle pkwy, Redwood Shore
 The map shows a route through Belle Monte, Belmont, and San Carlos.
- Bar Chart:** A grouped bar chart with three groups of bars in blue, orange, and purple. The y-axis represents values, and the x-axis has three categories.
- Pivot Table:** A table showing sales data for "All Channels" (World and Boston) across years 2005, 2006, and 2007.

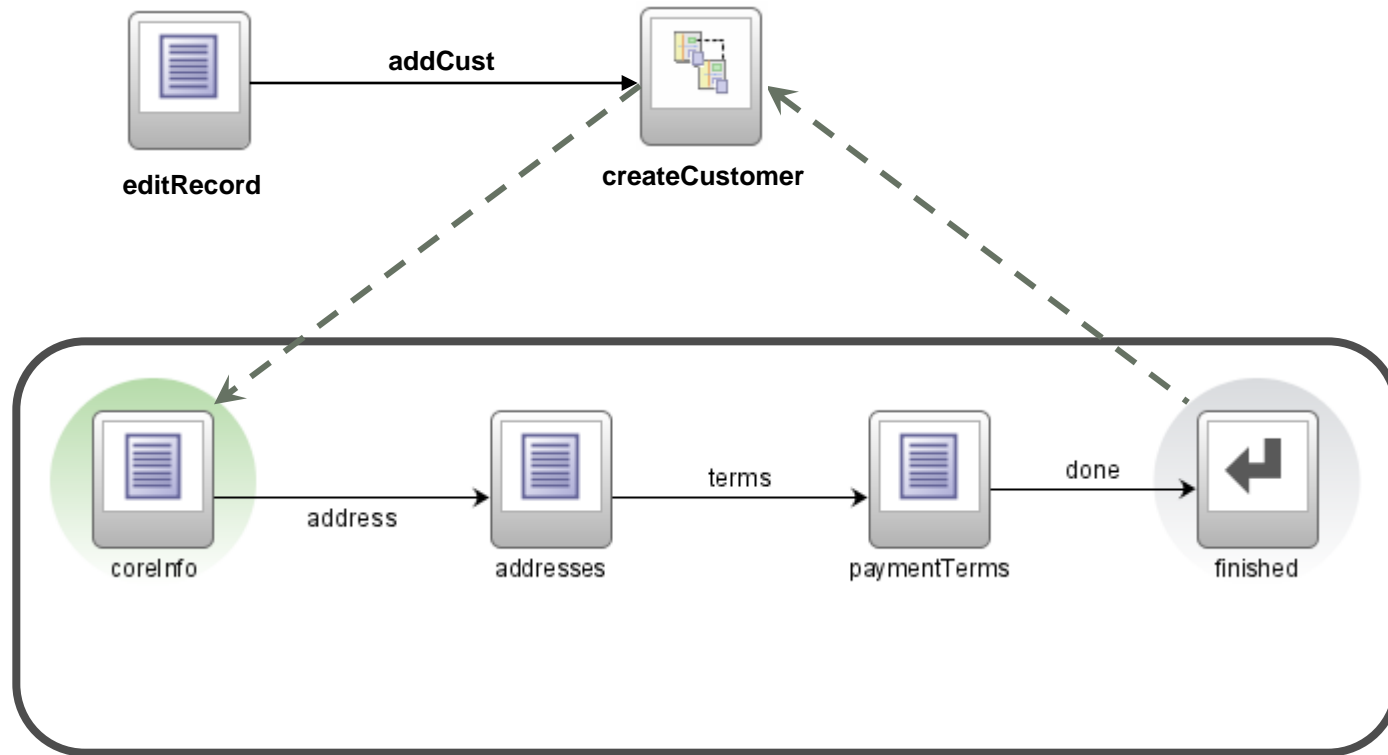
		Sales	
		World	Boston
2007	Tents	20,000.000	500.000
	Canoes	15,000.000	1,500.000
2006	Tents	10,000.000	250.000
	Canoes	7,500.000	750.000
2005	Tents	5,000.000	125.000
	Canoes	3,750.000	375.000
- Task List:** A table listing tasks with columns for Name, Prio, Orig.Est, Curr.Est, Elapsed, Remain, and Resource(s).

Name	Prio	Orig.Est	Curr.Est	Elapsed	Remain	Resource(s)
Design time	1	280	280	152	128	Chadwick, Karin
First	2	120	120	120	0	Karin
ing First	0	40	40	32	8	Karin
st	4	40	40	0	40	Karin
erty Drawer	6	40	40	0	40	Karin
l Editor	1	40	40	0	40	Chadwick
rinting	1	68	68	32	36	Imran
eral frame setup	5	8	8	8	0	Imran
erate column header	3	40	40	24	16	Imran
erate time-axis	2	12	12	0	12	Imran
erate data for each i	7	8	8	0	8	Imran
- Gantt Chart:** A Gantt chart showing task progress from August 10, 2008, to August 24, 2008. Tasks are represented by horizontal bars, with some bars indicating progress. Resources like "Imran" and "Chadwick" are associated with specific tasks.

The ADF Controller – ADF TaskFlows

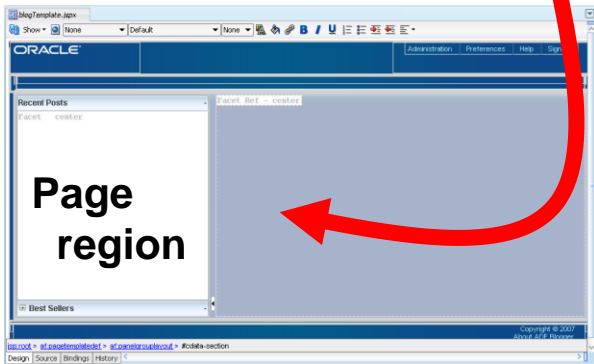
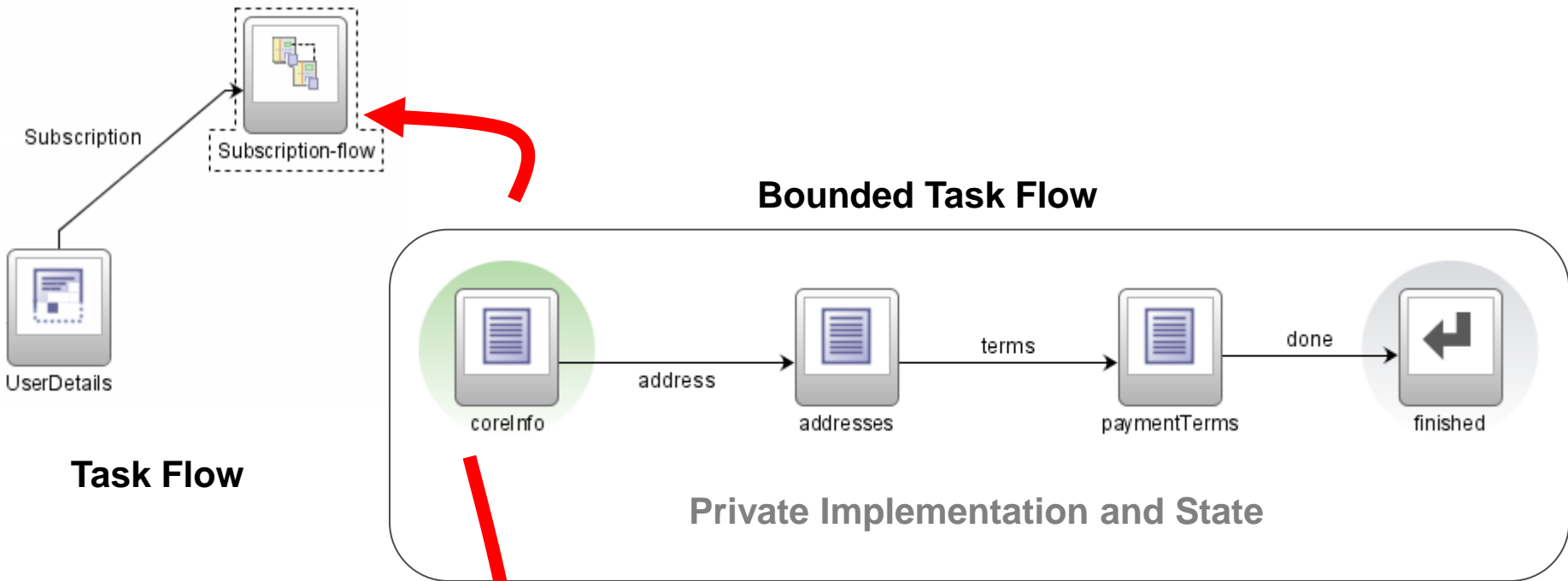
- An extension to the JSF standard page flow engine that adds:
- Page and flows re-use
- Executing code in a flow (hence *task* flow not page flow)
- Security
- Flow control
- Exception and transaction management
- Declarative back button control
- Reusable regions and portlets

Bounded Task Flow Example



Bounded Task Flow

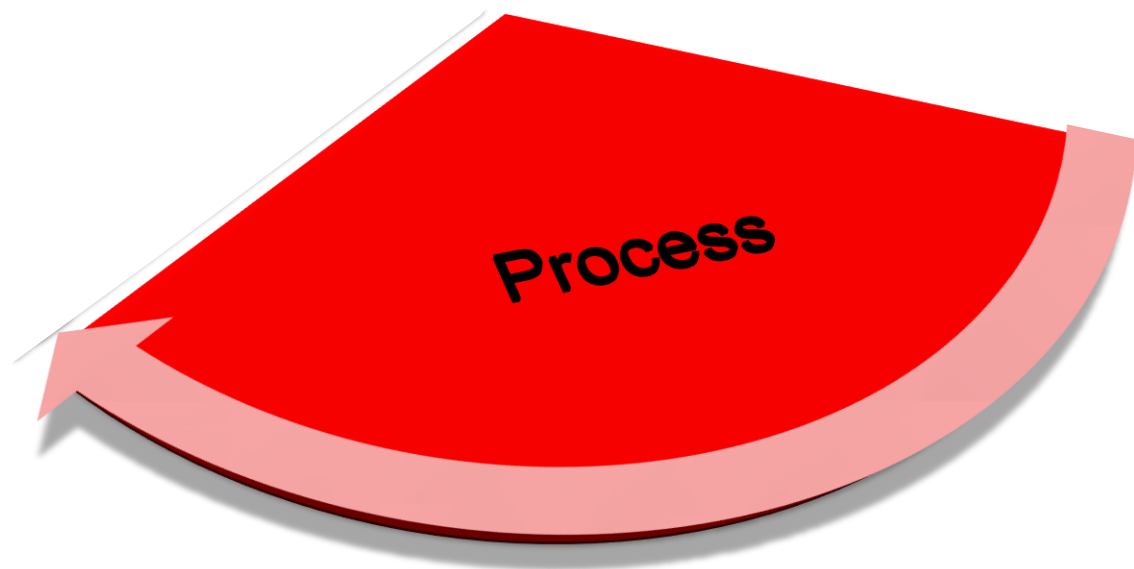
Task Flows - Reusable Page Flows



Demo

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Challenge 3





1. Distrust
Can I do it?



2. Excitement
I can do it!!!



3. Astonishment
How will I do it?



4. Enthusiasm
I got hold of the flow!!!



5. Love
I am an excellent programmer!



6. Disillusionment
Code is not functioning properly



7. Fright
Will this logic work?



8. Horror
Another A level bug!!!



9. Fury
Damn with computers
#@\$%^



10. Frustration
Not working in expected manner



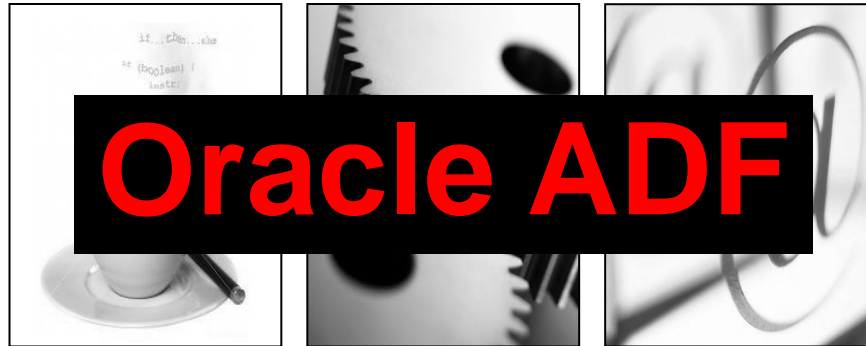
11. The End
Project Appraisal

3000 times

In The Beginning . . .



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JDEVELOPER



Java EE 5

SOA

Web 2.0

Oracle Fusion

Developing The TA Team

Technical Architecture Team (TA)

- Cross functional
 - A-Team Engineers
 - Architects
 - Tool Product Managers
 - Domain specialists
- Discuss, tackle, break old paradigms
- POC and Prototype
- Disseminate knowledge
- Support developers

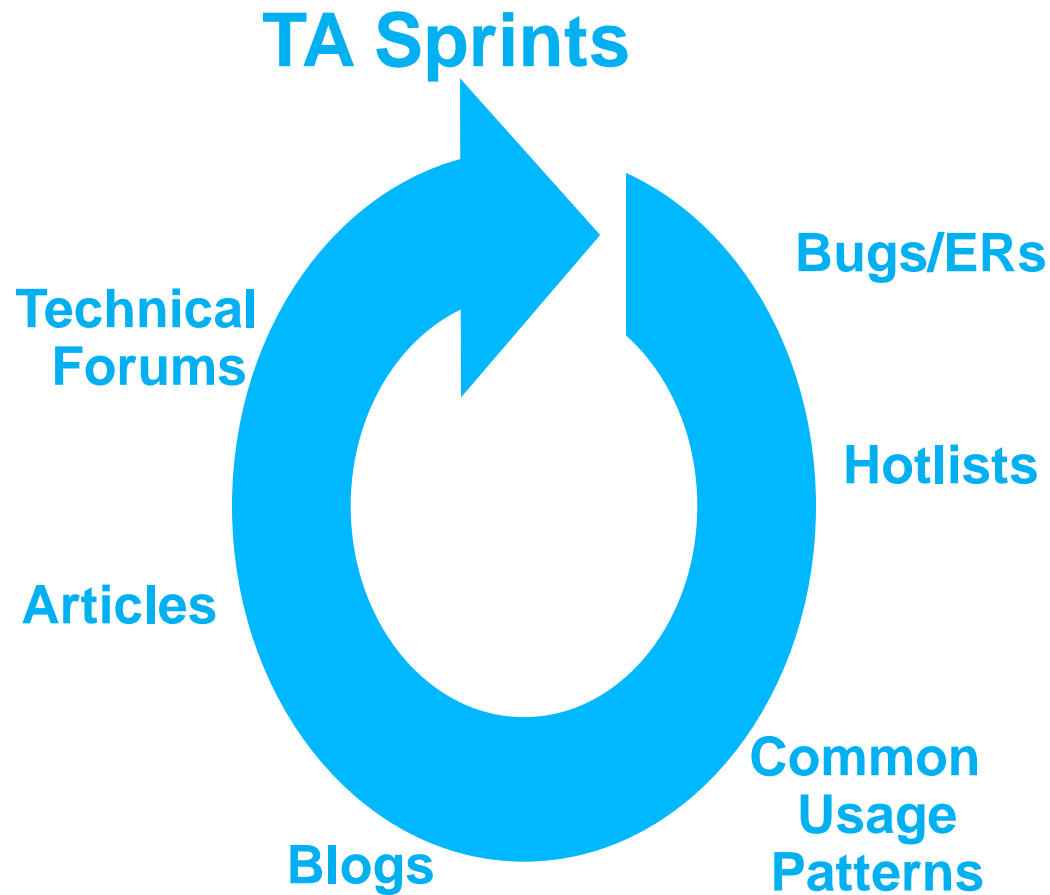


Tier 1 Business Flows

- Business Importance
- Technical Challenge

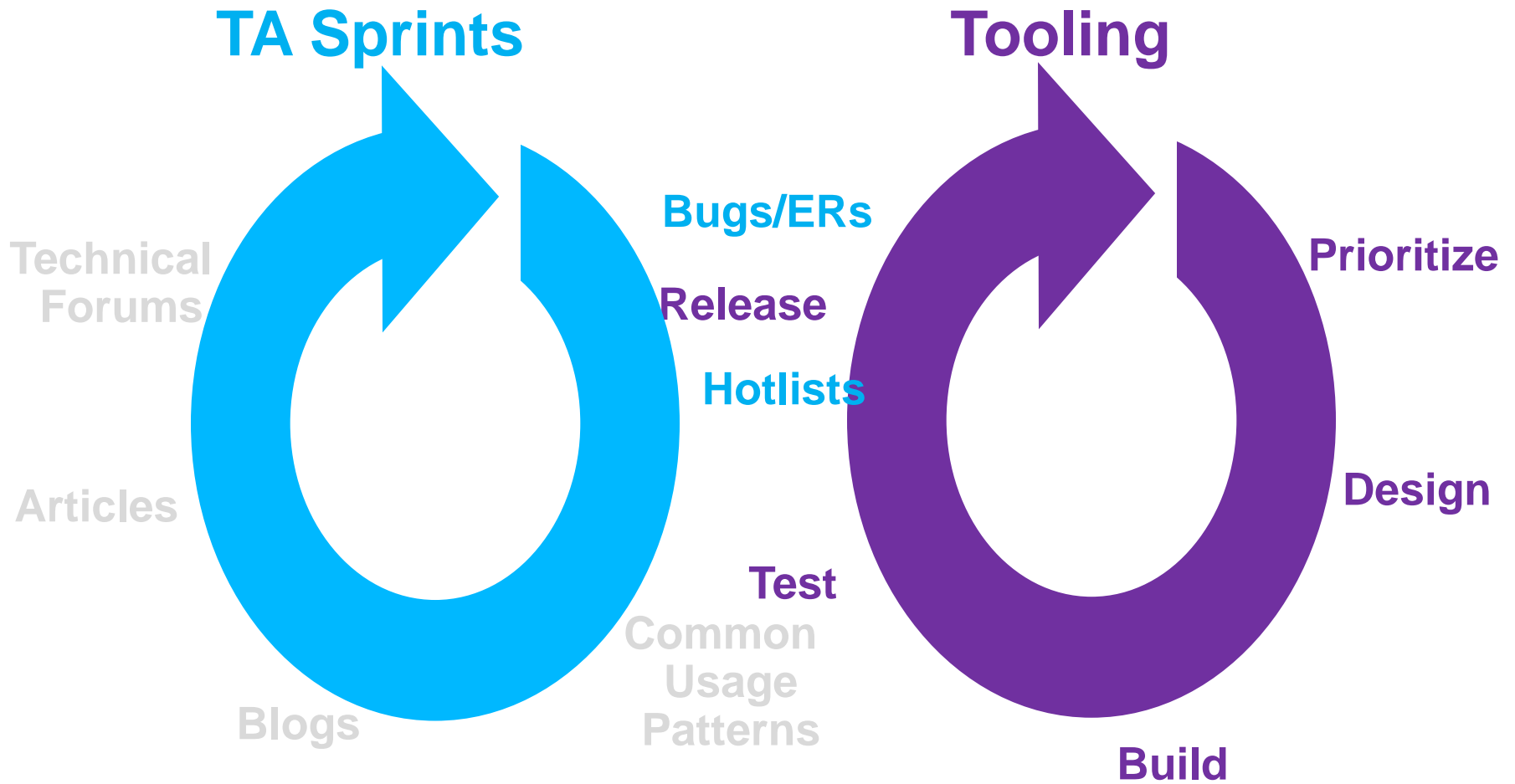
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Developing the Process



Oracle Fusion

Developing the Process



Oracle Fusion

Developing the Process

TA Sprints

Tooling



A-Team

Training

- War Floor doesn't scale
- Curriculum Development group
 - Application development standards
 - Materials
- Developed new training model
 - University style approach
 - Entry level lectures
 - Smaller sessions in labs
 - Myforums for discussion and questions
- Oracle University courses devised

Design Process – UI First

- 1. Functional Design Document

The screenshot shows the Oracle HR system interface for 'View Person Process History' for a person named Terrance Smith. The interface includes a sidebar with navigation options, a main content area with a table of payroll activity history, and a right-hand panel with various action and view options. Red arrows and boxes highlight specific design elements and user flow paths.

Person: Terrance Smith
Name: Terrance Smith National ID: KJ456123C DOB: 16-May-1967

Person Payroll Activity History

Activity Name	Type	Activity Status	Person Status
QuickPay - Period 12 - Run 1	12-Jun-2008	✓	✓
L... Run - Run Type A	12-Jun-2008	✓	✓
L... Run - Run Type B	12-Jun-2008	✓	✓
L... Quick Pre-payments	12-Jun-2008	✓	✓
Sales Bonus Run	11-Jun-2008	✓	✗
L... Pre-Payments	12-Jun-2008	✓	Not Included
Expenses	29-Jun-2008	✓	✓
Manual Payments	29-May-2008	✓	✓

View
SOE: Balances | Run Messages
Statement of Earnings
QuickPay Period 12 -Run 1

Person Payroll Activity

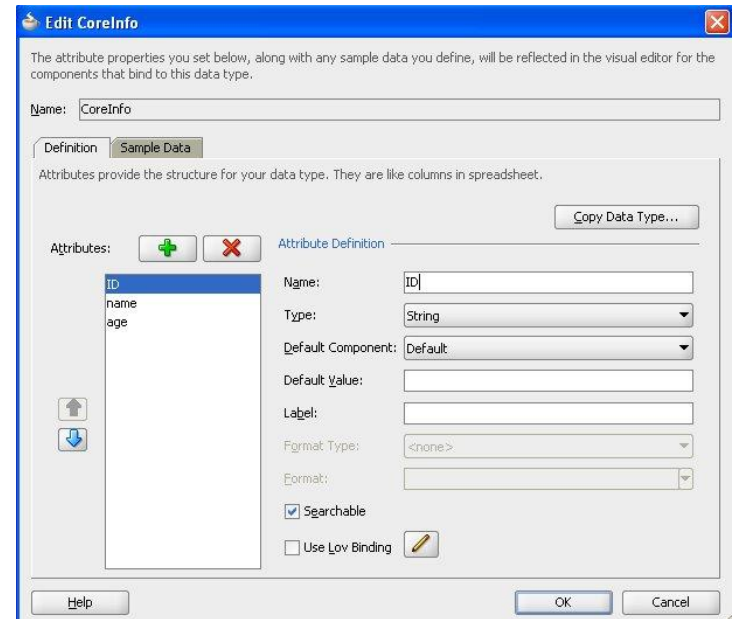
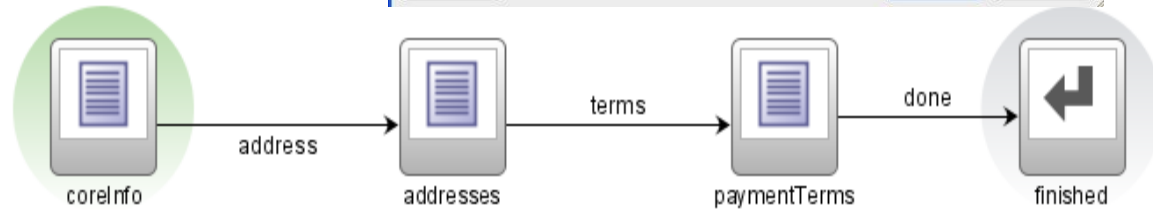
- QuickPay - Period 12 -Run 1
 - Run Run Type A
 - Run Run Type B
 - Quick Pre-payments
- Sales Bonus Run
- Expenses

Annotations:

- A yellow callout box on the left states: "Need a hierarchy conversion icon to switch tree to show Runs within Payments." with an arrow pointing to the 'QuickPay - Period 12 -Run 1' entry in the activity history table.
- Red arrows indicate a flow from the 'QuickPay - Period 12 -Run 1' entry to the 'Actions - QuickPay' menu, then to the 'Run Pre-Payments' dialog, and finally to the 'View' menu.

Design Process – UI-First

- 2. Interactive Prototype
 - Basic interaction and navigation
 - No validation logic
 - Existing data controls
 - Placeholder data controls
 - Shareable
 - Data-first
 - Dummy data
 - Task Flows



- 3. Technical Design
 - Data model changes
 - Business Components

Implementation – Data-First

- Starts with model
 - Reusable
- Bind
- UI
- Translation
 - Every string in the UI
 - Repository based
 - Entries minimised using mappings
 - Terminology
 - Approved terms and acronyms

Implementation – More

- Live UI Audits
 - PM/engineer/usability
 - Every page and popup
 - Conforms to standards
 - Functional usability issues
 - 90% bug close to clear audit

Implementation – More

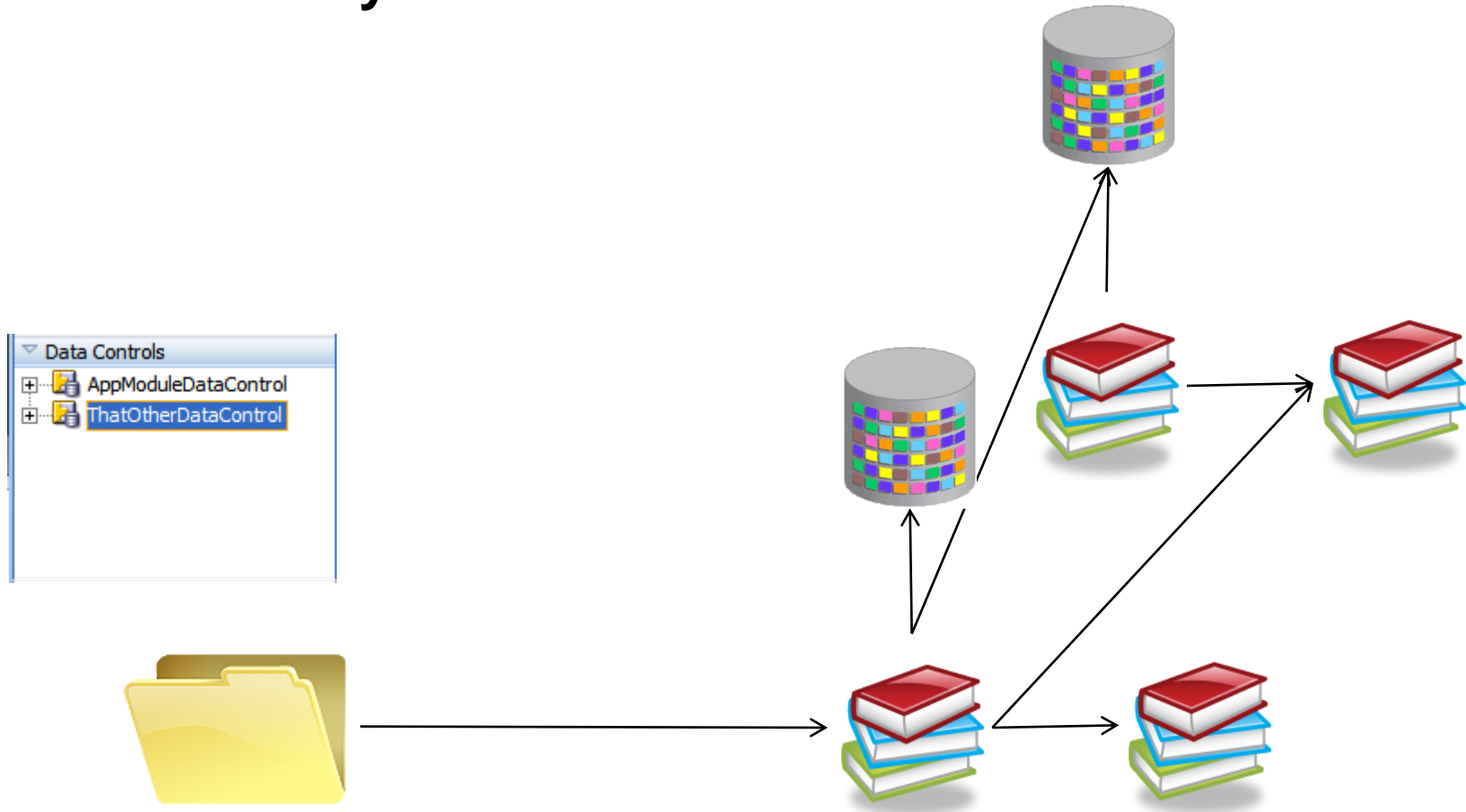
- Accessibility
 - Engineers – JUnit standard accessibility issues
 - Product Managers – Firefox plugin

The screenshot displays a web browser window with a Firefox plugin window overlaid on the left. The plugin window, titled 'Form Helper - Mozilla Firefox', shows a table of form elements in an Oracle Applications payroll calculation overview. The table has three columns: 'Label', 'Input Element', and 'Status'. The first three rows show valid elements with descriptive status messages, while the remaining rows show 'ERROR: Empty Label'.

Label	Input Element	Status
All	<input type="text" value="All"/>	Ensure Label correctly describes field.
Search...	<input type="text"/>	Ensure Label correctly describes field.
Advanced	<input type="button" value="Advanced"/>	Ensure Label correctly describes field.
Saved Search	<input type="button" value="Saved Search"/>	Ensure Label correctly describes field.
		ERROR: Empty Label
		ERROR: Empty Label
		ERROR: Empty Label
		ERROR: Empty Label
		ERROR: Empty Label
		ERROR: Empty Label
		ERROR: Empty Label
		ERROR: Empty Label

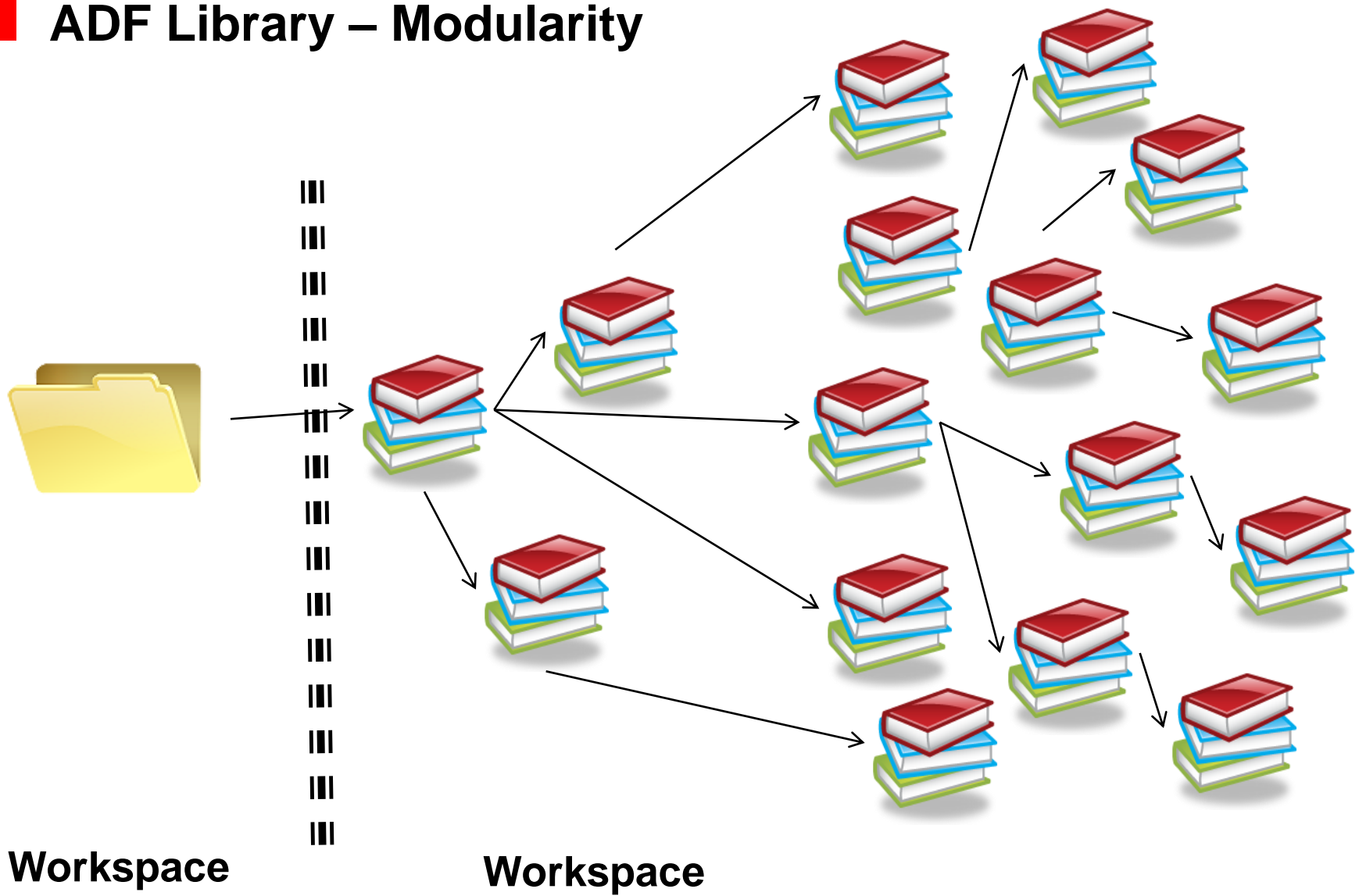
The background web application interface shows a search form with fields for 'Period', 'FlowInstanceStatus', and '* LegislativeDataGroupId'. The 'Period' field is highlighted in red. Below the search fields are 'Search', 'Reset', and 'Save...' buttons. At the bottom, a table header is visible with columns: 'PayrollNo', 'Period', 'FlowInstanceStatus', 'FlowInstanceProgress', 'InstantiatedBy', and 'InstantiatedOn'.

ADF Library



All data sources & Data Controls are pulled into the project

ADF Library – Modularity

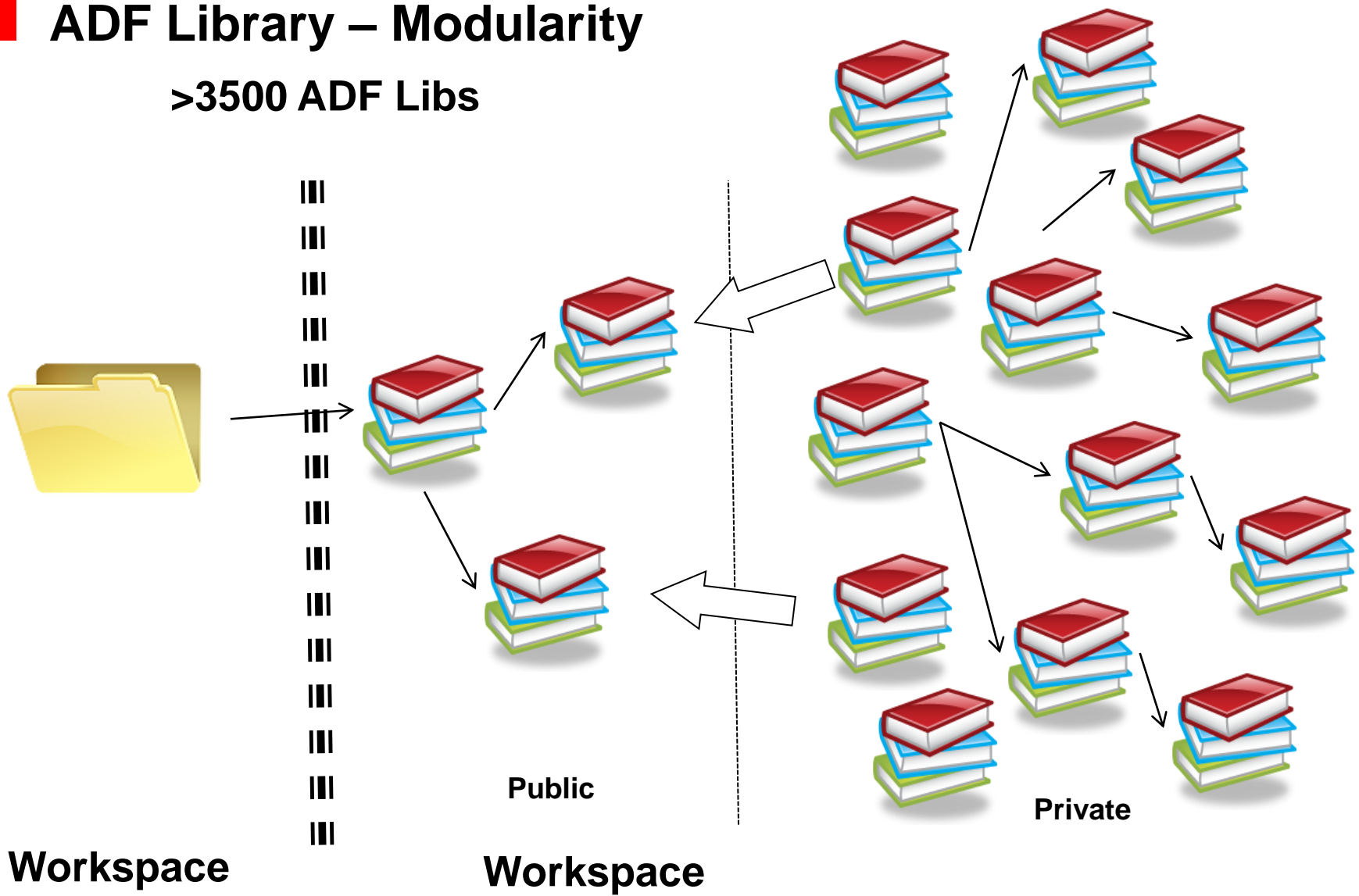


Workspace

Workspace

ADF Library – Modularity

>3500 ADF Libs



Workspace

Workspace

Oracle Fusion Middleware Customer Advisory Boards

Strategic Customer Board	SOA & Application Grid	Identity Management	Business Intelligence	Enterprise 2.0

Partner Input to Fusion Middleware 11g



Implementation – More

- Screen Access
 - Functional Access
 - Task has privilege - assigned to role
 - Jobs – Payroll Manager
 - Duty – logical grouping ‘mge persons, mge addresses
 - Data Access
 - Security profile
 - Objects - PERSON

Mge Persons – Condition = edit self

I can get to Mge Persons task – but only see my record

- Implemented via JAZN calls

Fusion Apps in Numbers (as of November, 2009)

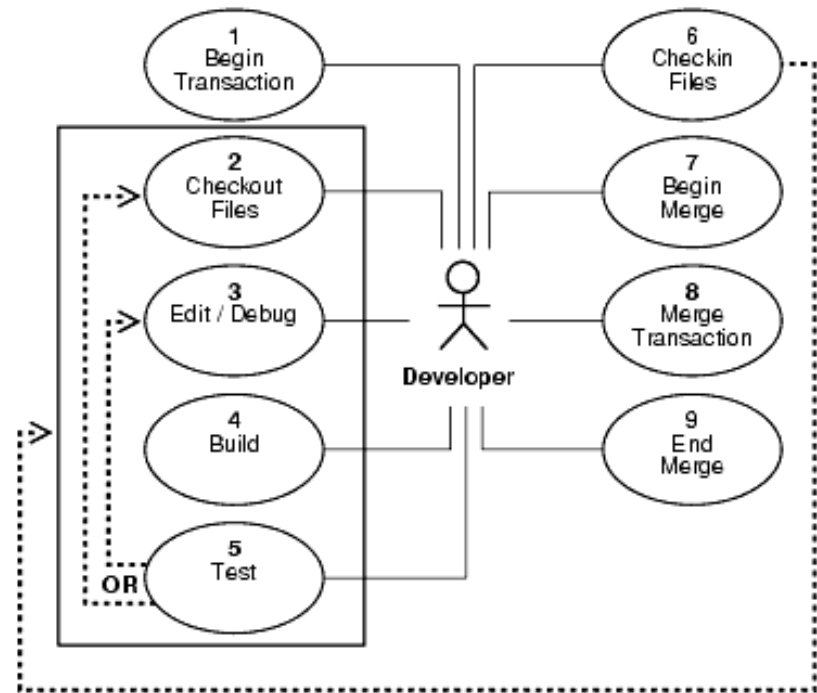
- +2,000 JEE Developers around the world
- +11,000 UI Flows
- +5,000 Tables
- +6,000 Business Objects
- +18,000 Queries (Projections)
- +2,500 Business Modules (Facades)
- +1,200 Services
- +3,600 shared, reusable libraries (ADF Libs)
- +20Gb Codebase
- ... and growing fast.

Build and Source Management - ADE

- Advanced Development Environment.
- High-end source management tool
- ADE is the most performant, highly available, and scalable Source Code Management system on Earth.
- Oracle DB stores content and
- No single point of failure.
- Fail-over and load-balancing capabilities.
- Supports a huge development environment,
- Geographically scalable.

ADE

- Label-Transaction Model
 - Single feature or bug
 - Consistent view of product
 - Transactions don't block
 - Local merge
 - Don't break the build!
 - Roll transactions out of label



JDEVADF_MAIN_GENERIC Build Summary

Updated: May 13, 2010 7:00:23 AM PDT.

On the hook for the current **sanity** build or test breakage:

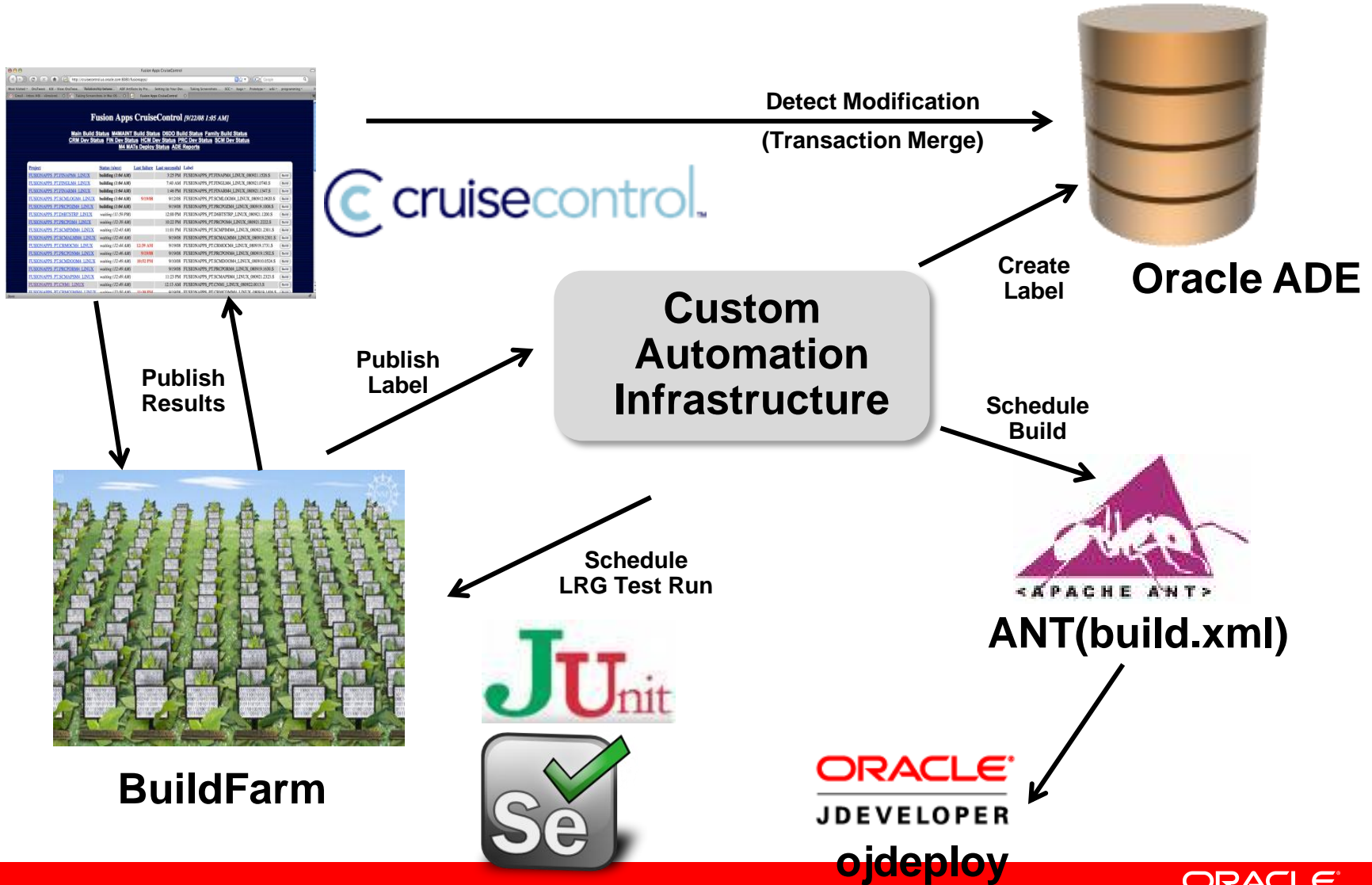
imohamma vimgupta srajan dagriffi vredla gvanmat jdanner yoli cbroadbe dedwards mhawkins jblair gneumann lmathew crathod jobracke vinagarw nkatoori mzchen rchalava mabansal pmui viraj ccchow sidswami stserban mromano pillanch phari rtaneja jsmiljan wazhang mytang mjakobis pbalmfors sankesh dlane dhawkins jrstephe soyeung lamat jramanat svinayak akkalyan jzoss mjakubia trothwei nvarma mwarner cccenter rabhusa abaliga bfoster rovarghe abanugar viganesa jloropez svassile jmillis rifrost hdharmaw wenhlee browles stom dklein wychan ltribble kbrownko osingh rmaslins lmcandle ayu ppetkovi prselvar rvangri pcarlis jamchoi dpoudret sim nvause gdavison xujin rmagnuso pthulasi

View: All Sanity Nightly

Dev S

Label	Status	Txns	Bugs	Label	Build	Links	Dist	MATS	ADFDI MATS	Ran	Fa
Not yet labeled	Not yet labeled	4	1					-	-		
JDEVADF_MAIN_GENERIC_100513.0558.5682.S	Labeling	2	1					N/A	N/A		
JDEVADF_MAIN_GENERIC_100513.0455.5682.S	Building [27%] adf-faces-templating-dt-core	1		51m		zip		N/A	N/A		
JDEVADF_MAIN_GENERIC_100513.0320.5682.S	Building [66%] dvt-basemaps	4	5	50m		zip		N/A	N/A		
JDEVADF_MAIN_GENERIC_100513.0225.5682.S	Building [95%] adfrm-business-editor	4	2	49m		zip		N/A	N/A		
JDEVADF_MAIN_GENERIC_100513.0121.5682.S	Built OK, untested	4	7	53m	173m	zip		N/A	N/A		
JDEVADF_MAIN_GENERIC_100513.0016.5682.S	Failed build in	3	2	55m		zip		N/A	N/A		
JDEVADF_MAIN_GENERIC_100512.2310.5682.S	Built OK, untested	1	1	54m	195m	zip		N/A	N/A		
JDEVADF_MAIN_GENERIC_100512.2216.5682.S	Built OK, untested	5	5	49m	173m	zip		87.50%	N/A		
JDEVADF_MAIN_GENERIC_100512.2112.5682.S	Skipped	1		53m		zip		N/A	N/A		
JDEVADF_MAIN_GENERIC_100512.1901.5682.S	Built OK, untested	1	1	52m	168m	zip		95.83%	N/A	7999	12 ex
JDEVADF_MAIN_GENERIC_100512.1804.5682.S	Built OK, untested	2		50m	185m	zip		N/A	N/A		
JDEVADF MAIN GENERIC 100512.1656.5684	Building	64	54			src install		N/A	N/A		

Continuous Integration and the Build Loop



Testing – an example

JDeveloper Database group

- SRG <20
- MATS <10
- LRG >1800
- Component Tests >3000
- Acceptance
 - >450
 - JFCUnit – API
 - Selenium – Runtime
 - Abbot - UI
- Scenario Tests >15

Build Executor Status	
#	Master
1	Idle
db-automation	
1	Building WebserviceTests Drop8_Build4 #3
db-dagriffi (offline)	
1	Offline
db-lmcardle	
1	Idle
db-mwarner (offline)	
1	Offline
DEV-ADC-1	
1	Building WebserviceTests TestTrans #655
DEV-UK-1	
1	Idle
DEV-UK-2	
1	Idle
HAIRY-UK-1	
1	Idle
jspyve-ukp79308	
1	Building WebserviceTests Main #1957
master-housekeeping	
1	Idle
QA-ADC-1	
1	Idle

		DatabaseTests Main-Abbot db role	12 hr (#96)	N/A
		DatabaseTests Main-Abbot j2ee role	1 day 12 hr (#94)	12 hr (#95)
		DatabaseTests Main-Coverage	2 days 2 hr (#5)	N/A
		DatabaseTests Main api	3 hr 57 min (#175)	N/A
		DatabaseTests Main modeler	31 min (#187)	N/A
		DatabaseTests Main other	3 hr 57 min (#180)	N/A
		databaseTests Main QA	2 mo 12 days (#648)	N/A
		DatabaseTests Main reports	3 hr 57 min (#186)	5 days 10 l
		DatabaseTests Main timesten	10 min (#40)	N/A
		DatabaseTests Main transfer	3 hr 39 min (#156)	7 days 7 hr
		DatabaseTests PS2	7 days 14 hr (#87)	N/A
		DatabaseTests PS3	12 hr (#78)	N/A
		DatabaseTests SQLDev CheckTheirBuild	2 days 1 hr (#36)	12 hr (#39)

[Back to Dashboard](#)

[Status](#)

[Changes](#)

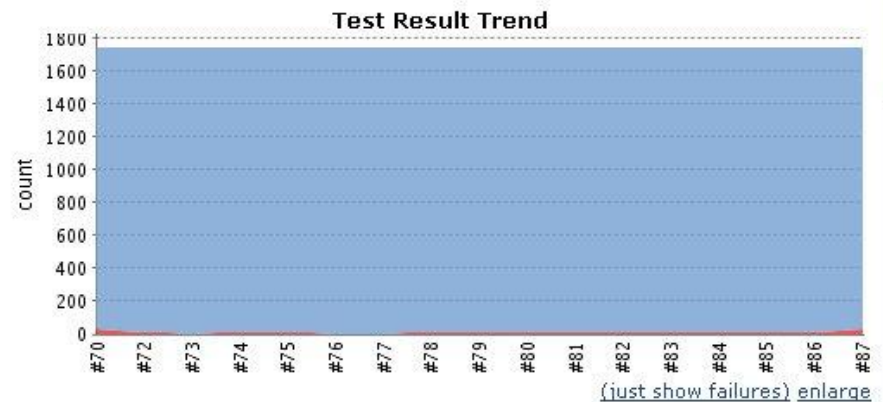
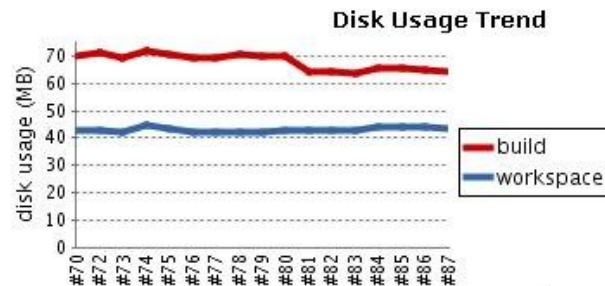
Build History		(trend)
#87	May 5, 2010 9:49:01 PM	64MB
JDEVADF_11.1.1.3.PS2_GENERIC_100504.1442.5664		
#86	Apr 26, 2010 12:12:43 AM	65MB
JDEVADF_11.1.1.3.PS2_GENERIC_100423.0036.5662		
#85	Apr 25, 2010 12:12:12 AM	65MB
JDEVADF_11.1.1.3.PS2_GENERIC_100423.0036.5662		
#84	Apr 24, 2010 12:15:06 AM	65MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#83	Apr 23, 2010 12:15:19 AM	64MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#82	Apr 22, 2010 1:24:25 AM	64MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#81	Apr 21, 2010 1:26:37 AM	64MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#80	Apr 19, 2010 3:25:06 PM	70MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#79	Apr 17, 2010 12:24:48 PM	70MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#78	Apr 16, 2010 1:26:31 AM	71MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#77	Apr 15, 2010 1:27:46 AM	69MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		
#76	Apr 14, 2010 1:37:59 AM	69MB
JDEVADF_11.1.1.3.PS2_GENERIC_100411.2207.5661		

Project DatabaseTests_PS2

Runs the Database JUnit and Abbot Tests on the 11.1.1.3.0 branch.

Contact [Mark Warner](#) before changing anything.

Disk Usage: Workspace 43MB, Builds 1GB



- [Back to Dashboard](#)
- [Status](#)
- [Changes](#)

Build History		(trend)
#177	May 13, 2010 1:17:27 PM	
JDEVADF_MAIN_GENERIC_100512.2216.5682.S		
#176	May 13, 2010 11:39:40 AM	-
JDEVADF_MAIN_GENERIC_100512.1901.5682.S		
#175	May 13, 2010 8:16:51 AM	26MB
JDEVADF_MAIN_GENERIC_100512.1255.5682.S		
#174	May 12, 2010 5:02:11 PM	26MB
JDEVADF_MAIN_GENERIC_100512.0228.5682.S		
#173	May 12, 2010 1:18:41 PM	26MB
JDEVADF_MAIN_GENERIC_100511.2211.5682.S		
#172	May 12, 2010 9:33:31 AM	26MB
JDEVADF_MAIN_GENERIC_100511.1552.5682.S		
#171	May 12, 2010 8:16:44 AM	26MB
JDEVADF_MAIN_GENERIC_100511.1306.5682.S		
#170	May 12, 2010 5:13:06 AM	26MB
JDEVADF_MAIN_GENERIC_100511.1207.5682.S		
#169	May 10, 2010 9:02:29 PM	26MB
JDEVADF_MAIN_GENERIC_100510.0423.5680.S		
#168	May 10, 2010 5:06:48 PM	26MB
JDEVADF_MAIN_GENERIC_100510.0239.5680.S		
#167	May 10, 2010 3:21:01 PM	26MB
JDEVADF_MAIN_GENERIC_100509.2314.5680.S		
#166	May 10, 2010 1:24:07 PM	26MB
JDEVADF_MAIN_GENERIC_100509.2122.5680.S		
#165	May 10, 2010 10:54:36 AM	26MB
JDEVADF_MAIN_GENERIC_100509.1106.5680.S		

Project DatabaseTests_Main_api

Runs the Database API tests on JDEVADF_MAIN_GENERIC

-  [Last Successful Artifacts](#)
-  [Recent Changes](#)
-  [Latest Test Result \(24 failures / ±0\)](#)

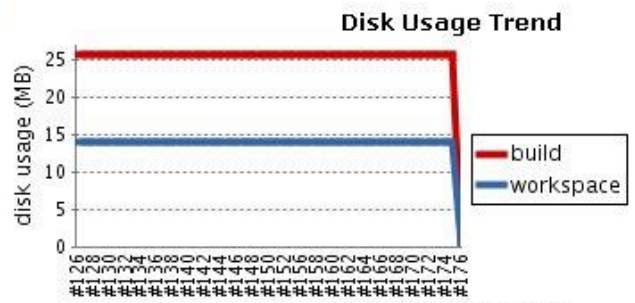
Upstream Projects



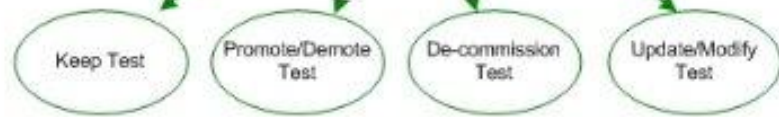
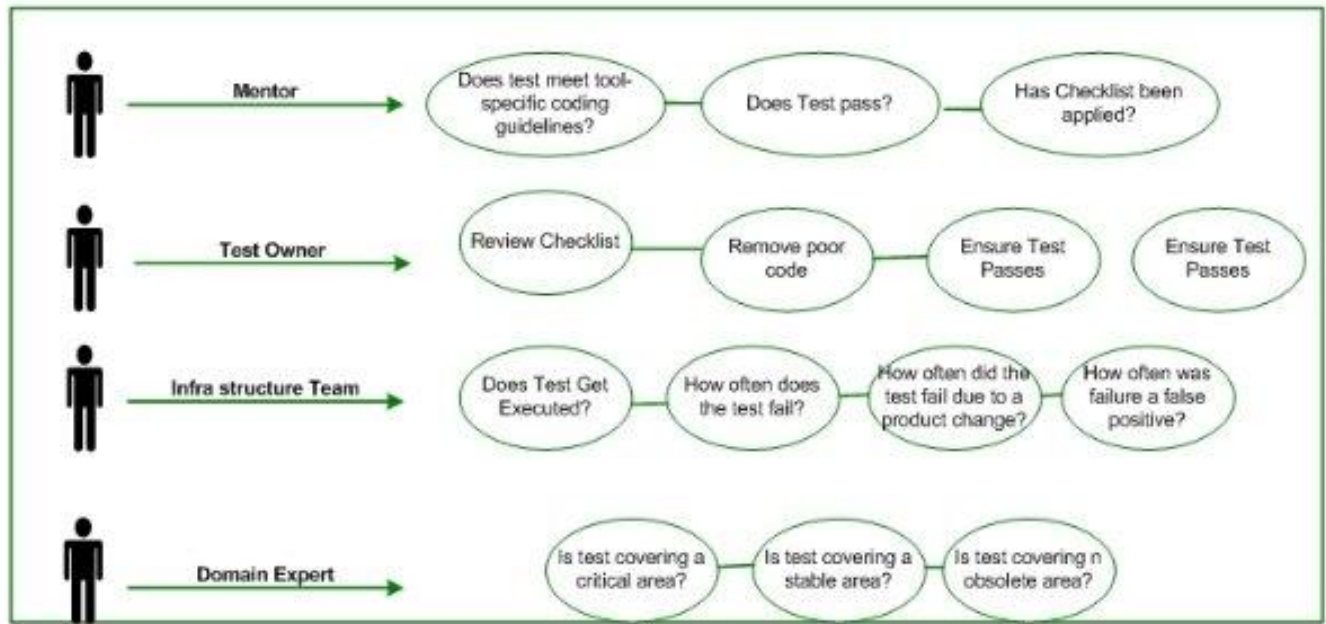
[DatabaseTests_Main](#)

Permalinks

Disk Usage: Workspace 4KB, Builds 1GB




[\(just show failures\)](#) [enlarge](#)



Herding Cats?

- "It turns out that the entire group can respond indirectly to a single individual, as each individual's movement response is a signal to its next neighbour," said Lewis, the Canada Research Chair in Mathematical Biology. "By this method, signals are passed quickly from individual to individual. So for example, one fish turns, causing the next one to turn, then the next one, and so on. This produces the complex collective behaviours--swarm formation, zig-zag group movements--that emerge from the 'bottom up', simply based on interactions between neighbors."





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