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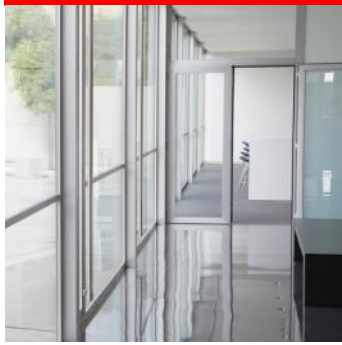
Building Web Data Dashboards Without Coding

Juan Ruiz

Product Manager – Oracle JDeveloper / ADF

Program Agenda



- Introduction
- Overview of ADF Data Visualizations
- Demo: Building a Web 2.0 Dashboard
- Demo: Runtime Visualization Capabilities
- What is Coming: Future Visualizations

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“A picture is worth a thousand words”
- Old Chinese phrase

“…But it consumes 3 time the memory.”
- Old geek phrase

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A Common Development Framework

Oracle Application Development Framework

- Increase productivity & ease-of-use
  - Visual and declarative development
  - Takes care of the “plumbing” code
  - Implements best practices
- Promote service oriented development
  - Re-usable business services
  - Composite applications development
- Standards-based
  - Java EE, SOA, SDO/SCA …
- End-to-end coverage
  - MVC, security, customization

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Oracle's Strategic Framework

- ADF is used at Oracle for all "next generation" Web User interfaces
  - Fusion Applications (CRM, HCM etc.)
  - Middleware components (Enterprise Manager, SOA Suite, BI EE, WebCenter)
  - Vertical applications (Insurance, telco, pharma…)
  - Many other applications and products
- Anyone can use this
  - Available to customers and partners as part of the platform

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Oracle ADF - Major Benefits

- Faster and simpler standard-based development
  - 30% productivity improvement over .Net
- Rich interactive user interfaces without the cost
- Single set of developer skills
  - Mobile, BI, Geographic Information, Cubic data
- Common infrastructure
  - Declarative customization (company, department, personal, portal)
  - End-to-end security
  - Drag-and-drop binding
  - Reliable certification and support
  - Advanced Tooling

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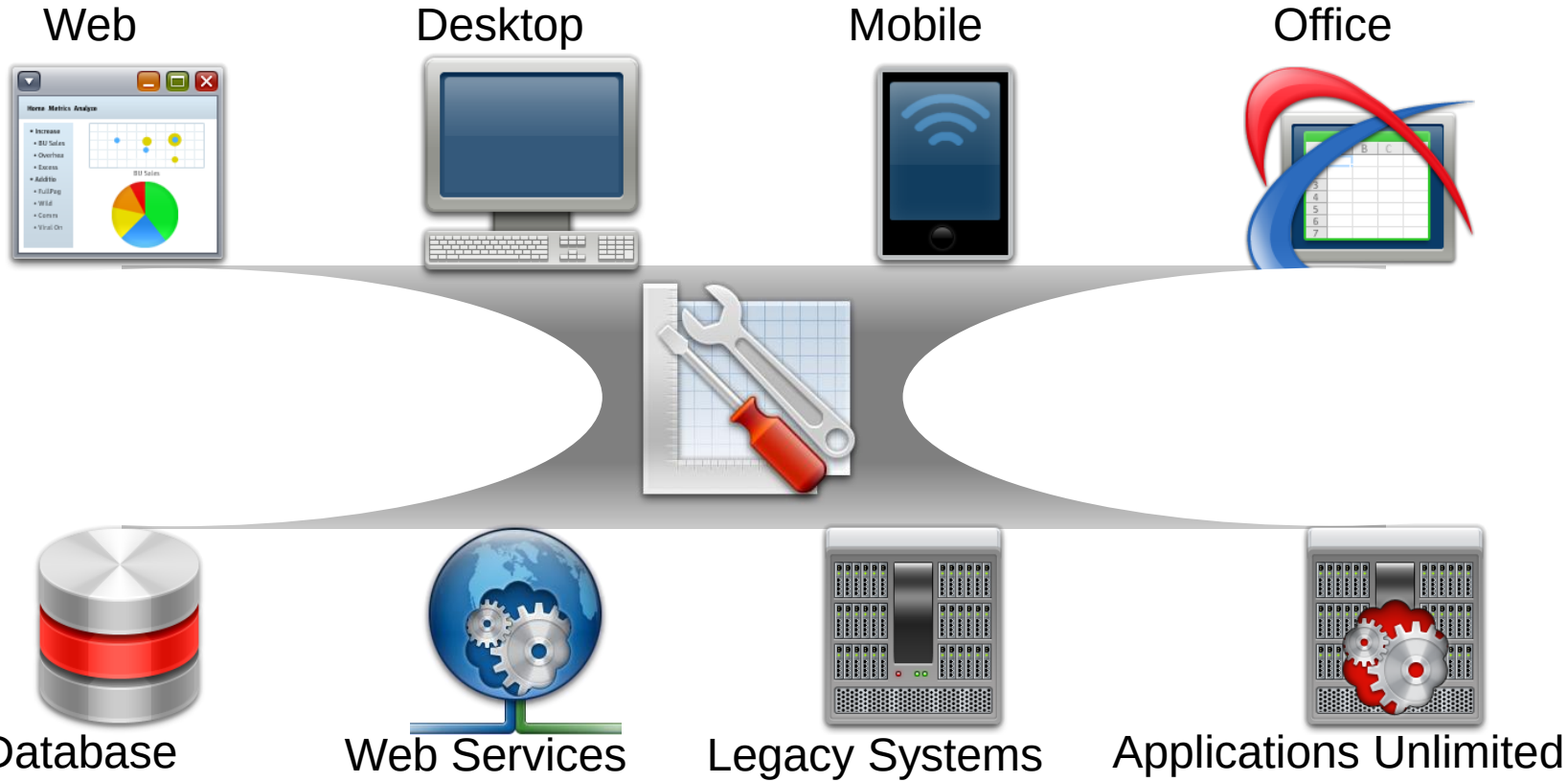
Oracle ADF – Multi Channel Framework



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Oracle Fusion Applications

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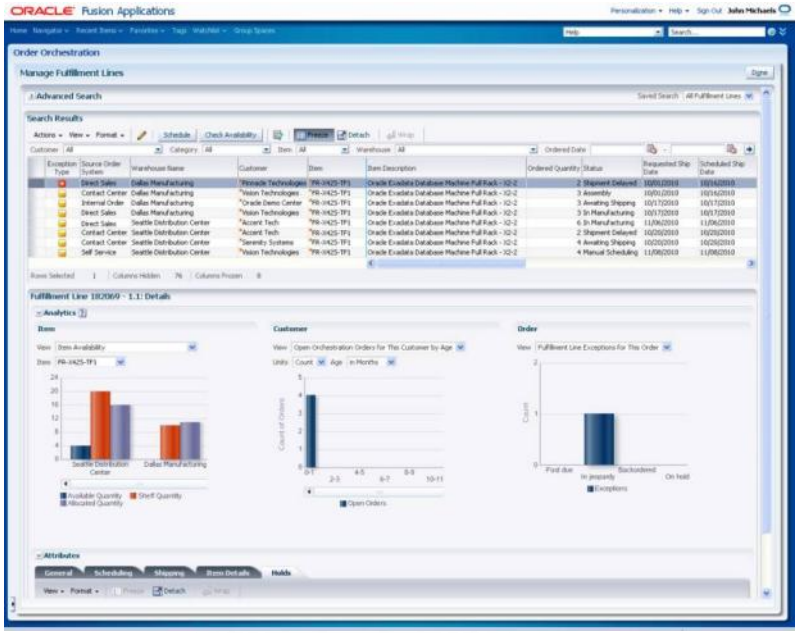
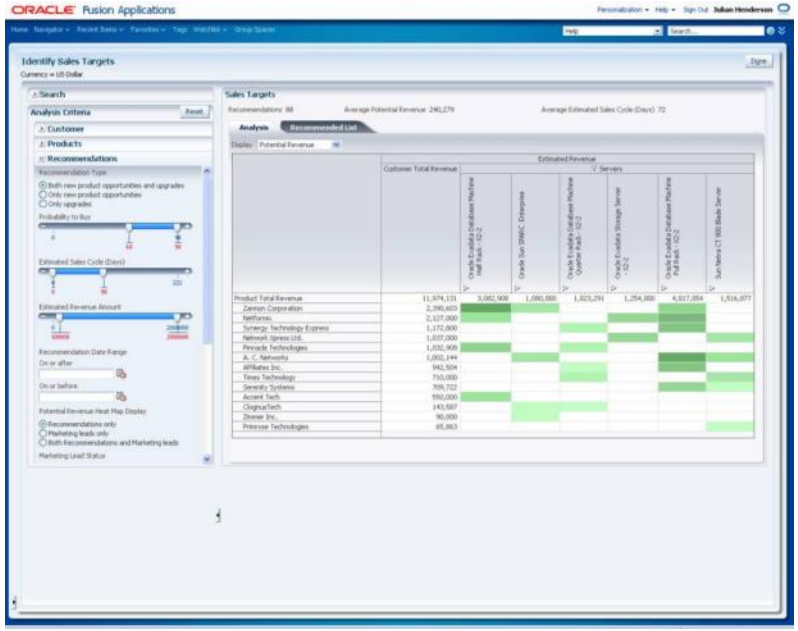
Oracle Fusion Applications





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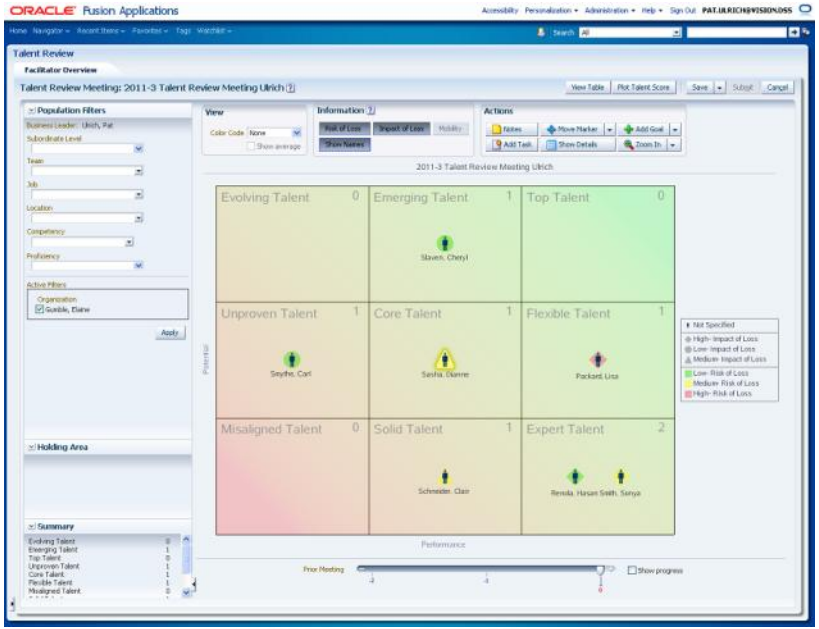
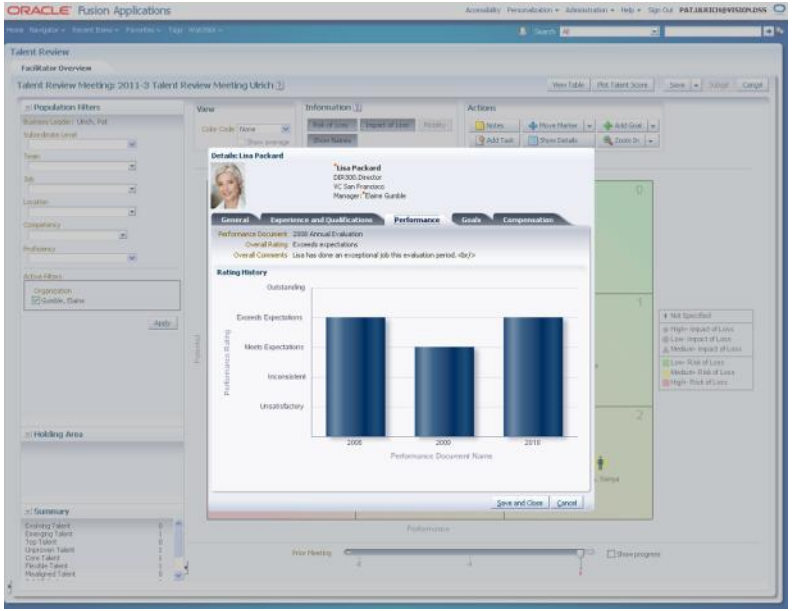
Oracle Fusion Applications

Oracle HCM Talent Review





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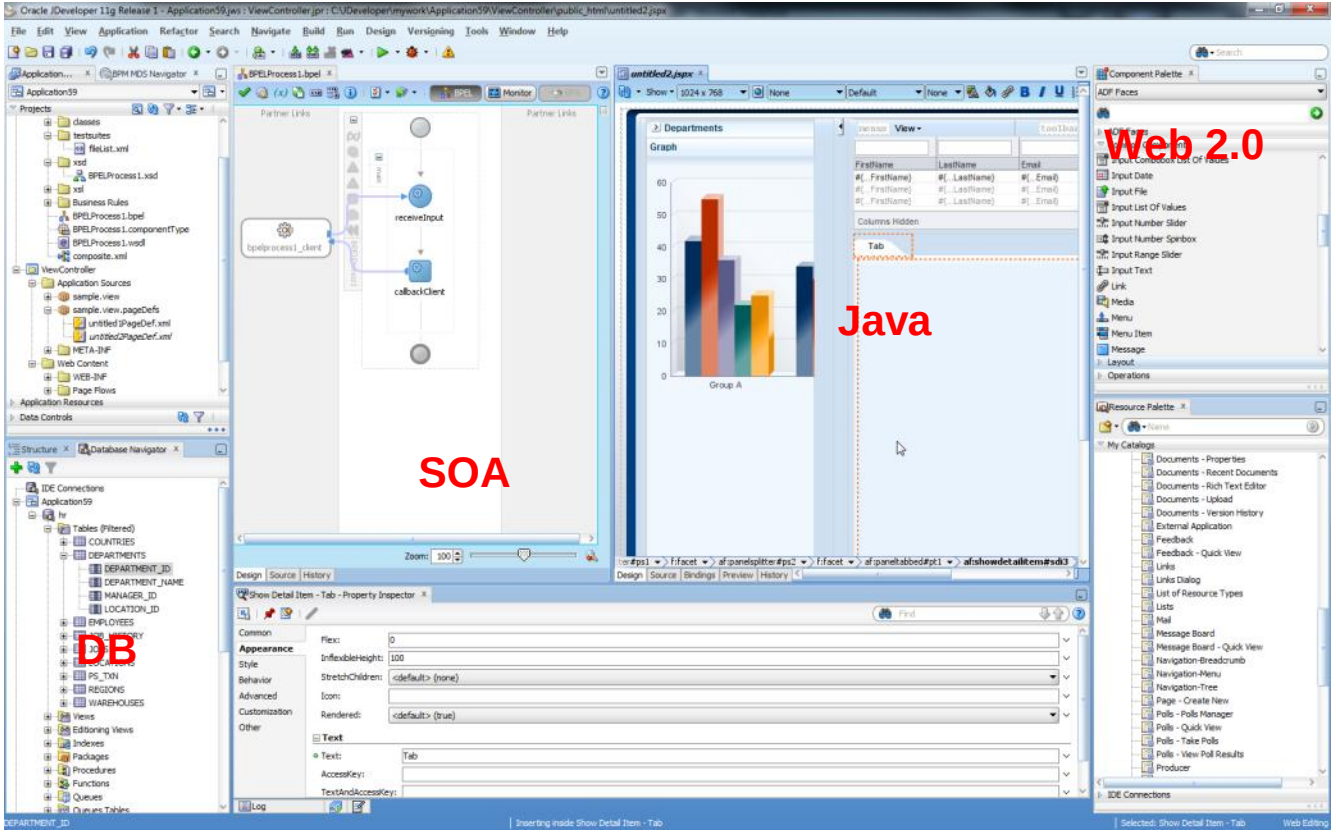
JDeveloper - Unified Visual Development



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ADF Faces Rich Client Components

- Component approach to page construction
- Visual and declarative development
- Ajax baked-in the component
- The standard UI platform at Oracle
  - Oracle Fusion Applications
  - Oracle Products
    - Web Center
    - SOA
    - Enterprise Manager
  - More…

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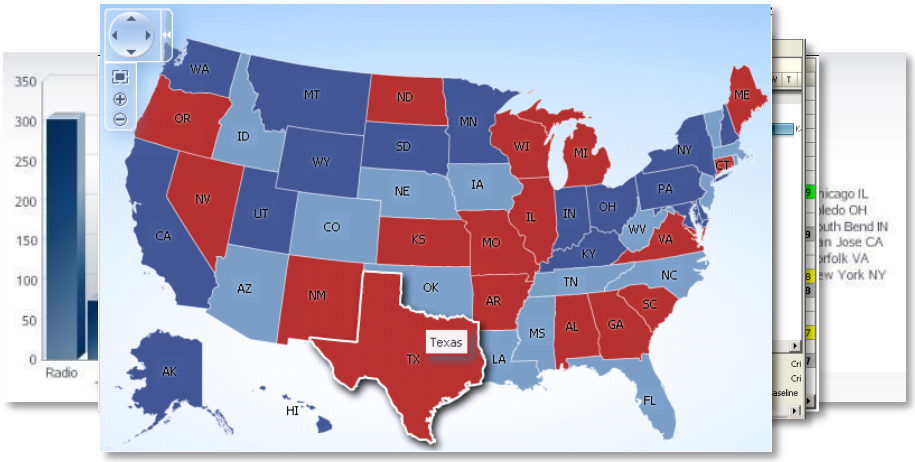
ADF Data Visualization Components

Overview

- Rich interactive Java Server Faces components
- Significant graphical and tabular capabilities for analyzing data
- Data Visualization components in JDeveloper 11g:
  - Graph
  - Gauge
  - Geographic Map
  - Pivot Table
  - Gantt Chart
  - Hierarchy Viewer
  - Thematic Map



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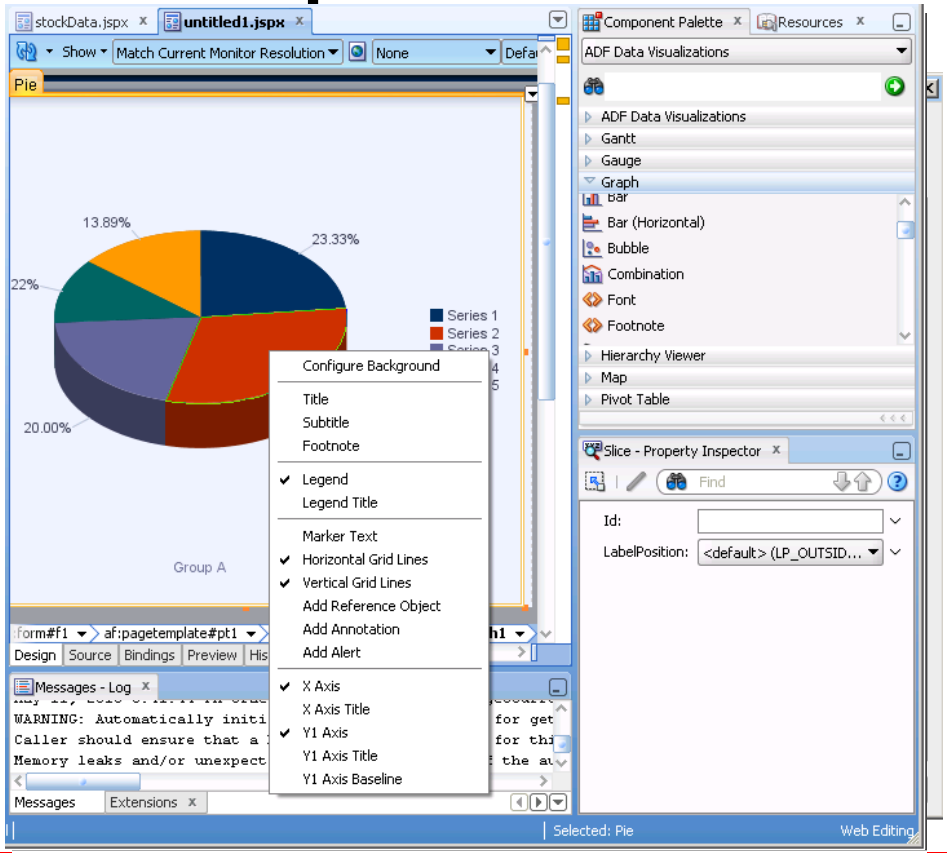
ADF Data Visualization Components

Common Features

- Declarative development using simplified JSF tags
- Design time creation using:
  - Data Control Palette
  - JSF Visual Editor
  - Property Inspector
  - Component Palette
- Live data preview at design time
- Data Binding access to any rowset or tree data control
- Automatic choice of best rendering technology



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ADF Data Visualization Graph

More than 50 types including pie, bar, line, bubble, funnel, and stock graphs

- Interactivity
  - Active Data Enabled
  - Animation
  - Selection
  - Data Highlighting
  - Dynamic Reference Objects
  - Interactive Pie Slices
  - Master-Detail
  - Scrollable Legend
  - Time Selector
  - Zoom and Scroll
- Sparkcharts

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ADF Data Visualization Gauge

- Quickly track key performance indicators
- Available Types:
  - Dial
  - Status Meter
  - Vertical Status Meter
  - LED
    - Arrow, Bulb, Rectangle, Triangle
- Animation and Interactivity
- Custom Graphics Support

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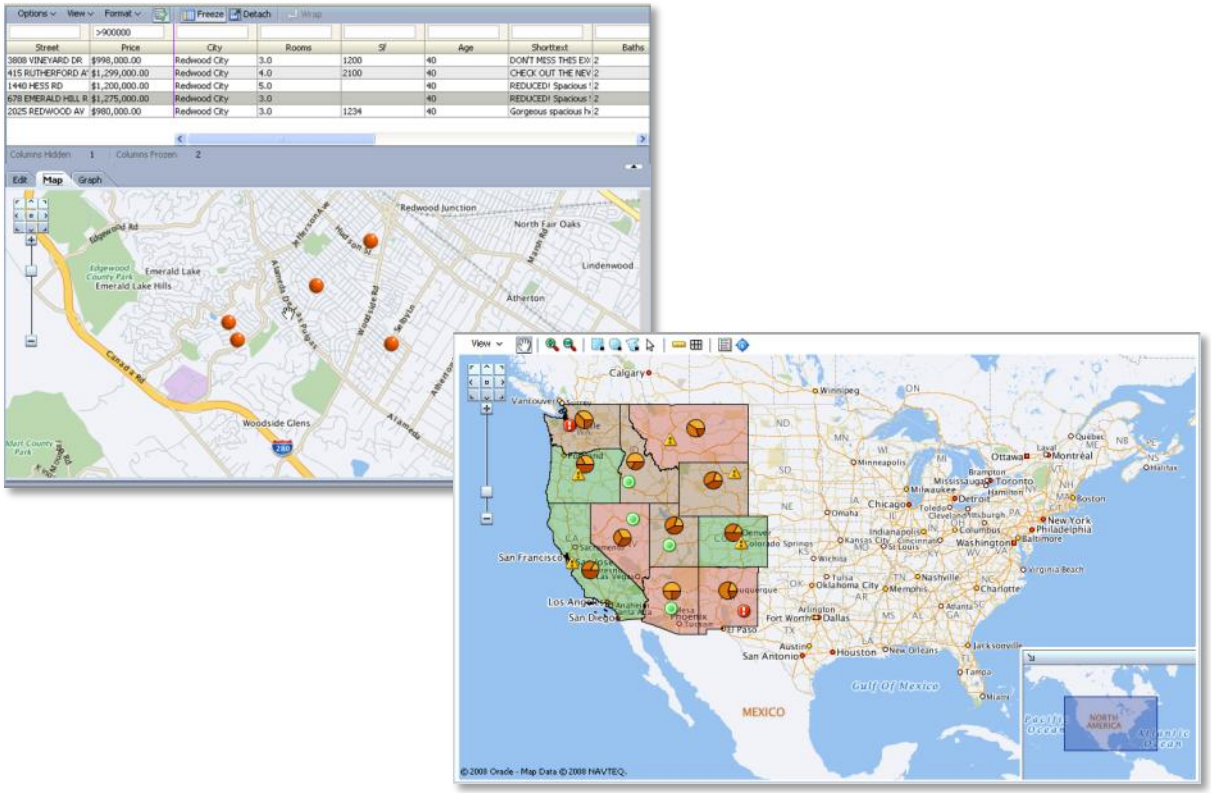
ADF Data Visualization Geographic Map

- Functionality of Oracle Spatial within ADF
- View business data on a map
- Format by:
  - Point
  - Color
  - Pie
  - Bar
- Active data support



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ADF Data Visualization Pivot Table

- Multiple layers on row and column edges
- Supported features include:
  - Drag and drop pivoting
  - Horizontal and vertical scrolling
  - Cell, row and column selection
  - Header and cell formatting
  - Automatic totals/subtotals
  - Data filtering
  - Drilling
  - Sorting
  - Cell editing
  - Stamping, e.g. data bars in cells
- Pivot Filter Bar

		Sales		Units	
		All Channels		All Channels	
		World	Boston	World	Boston
2007	Tents	20000.0	500.0	200.0	50.0
	Canoes	15000.0	1500.0	75.0	8.0
2006	Tents	10000.0	250.0	100.0	25.0
	Canoes	7500.0	750.0	40.0	4.0
2005	Tents	5000.0	125.0	50.0	15.0
	Canoes	3750.0	375.0	20.0	2.0

				Dollars	Units	Dollars/Units
Gloss	1998	CENTRAL REGION	Enterprise			
		EASTERN REGION	Enterprise			
		SOUTHERN REGION	Enterprise			
		WESTERN REGION	Enterprise			
			Magicolor			
	1999	CENTRAL REGION	Enterprise			
		EASTERN REGION	Enterprise			
		SOUTHERN REGION	Enterprise			
			Magicolor			
		WESTERN REGION	Enterprise			
			Magicolor			
Flat	1998	CENTRAL REGION	McCloskey			
		EASTERN REGION	McCloskey			
			Valspar			
		WESTERN REGION	McCloskey			
	1999	CENTRAL REGION	McCloskey			
			Valspar			
		EASTERN REGION	McCloskey			
			Valspar			
		SOUTHERN REGION	McCloskey			
		WESTERN REGION	McCloskey			
	2000	EASTERN REGION	McCloskey			
Primer	1999	EASTERN REGION	McCloskey			
		SOUTHERN REGION	McCloskey			

Filters: Direct | Massachusetts

		Audio Components	Video Components	Gaming
First Quarter	January	5,000	10,000	
	February	5,400	14,000	
	March	5,800	18,000	
Second Quarter	April	2,000	10,000	
	May	2,400	14,000	
	Jun	2,800	18,000	
Third Quarter	July	5,000	10,000	
	August	5,400	14,000	
	September	5,800	18,000	

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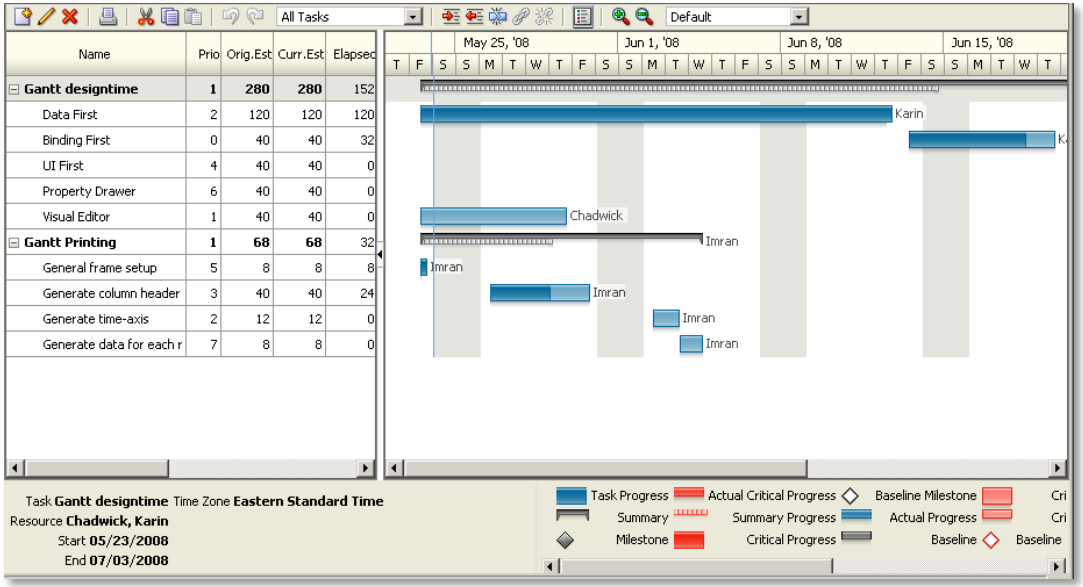
ADF Data Visualization Gantt Chart

- Track tasks and resources over time for project planning

- Project Gantt (project management)
- Scheduling Gantt (resource management)
- Resource Utilization Gantt (resource utilization)



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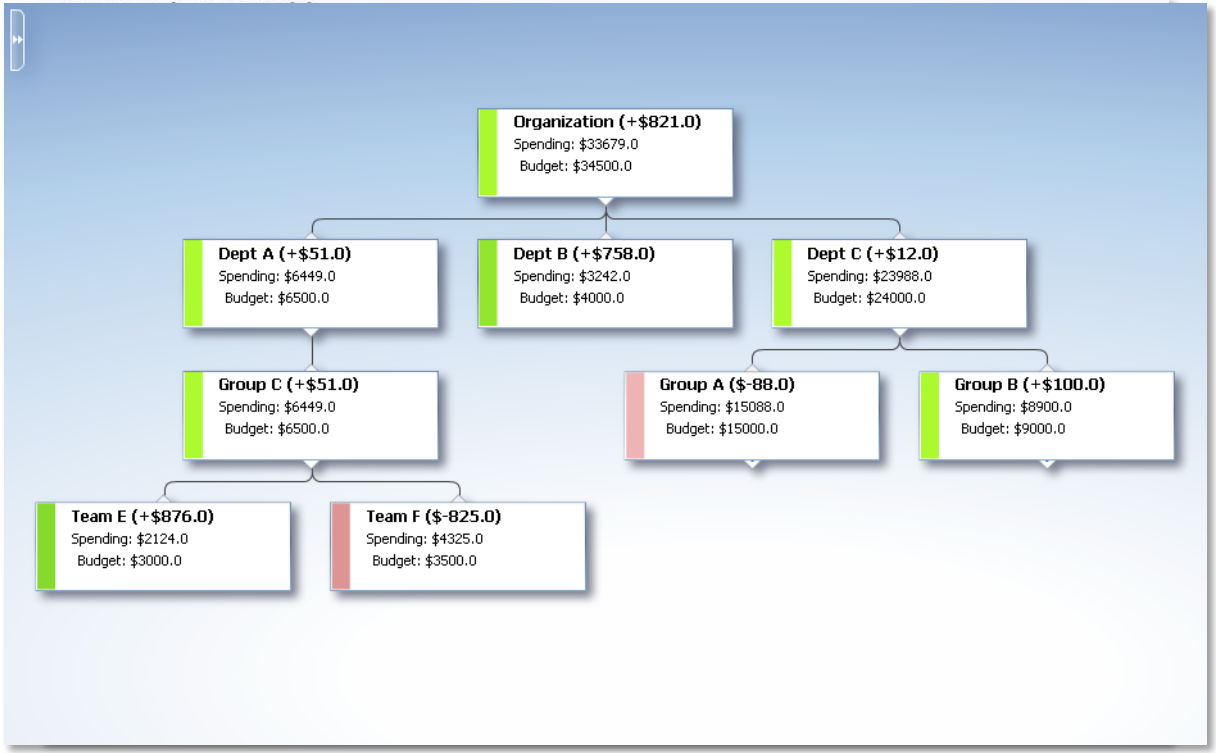
ADF Data Visualization Hierarchy Viewer

- View hierarchical data
- Often used for org charts
- Features:
  - Multiple PanelCards for details
  - Multiple layouts
  - Progressive disclosure of details
  - Expand/collapse nodes
  - Rendering simple ADF components inside the nodes
  - Search



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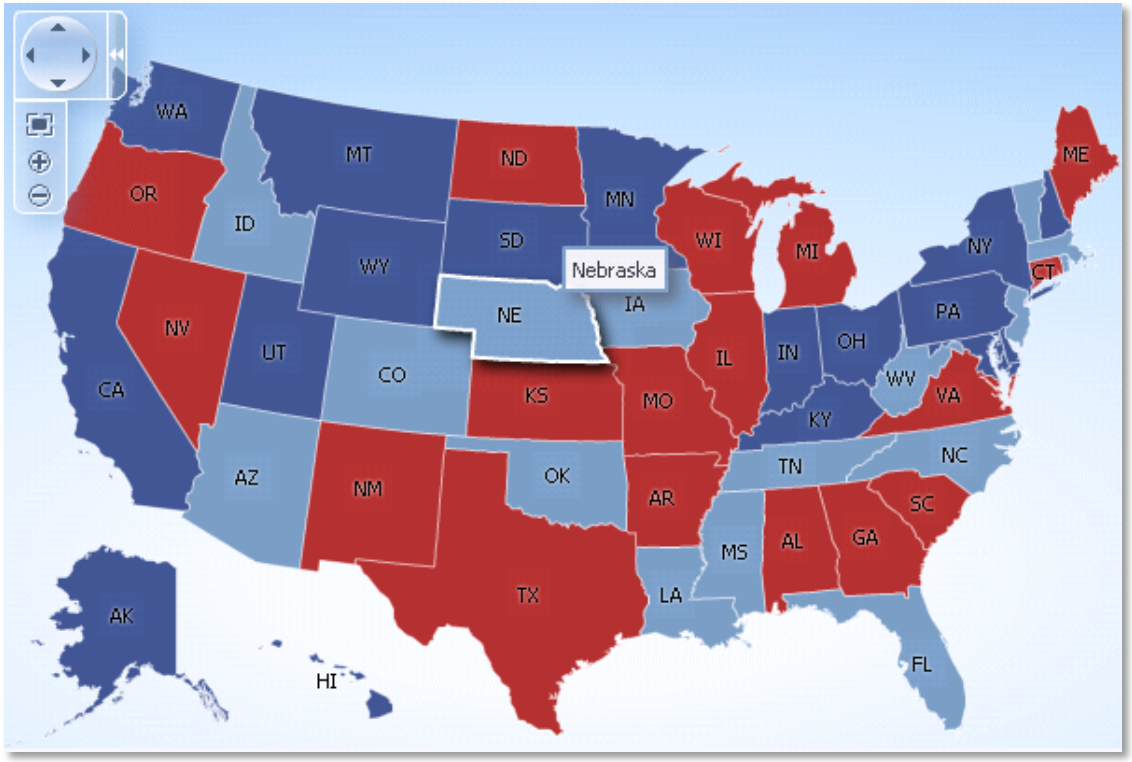
ADF Data Visualization Thematic Map

Features:

- Basemaps
- Custom regions
- Animation
- Drilling
- Selection
- Markers
- Formatting:
  - Colors
  - Gradients
  - Patterns



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Demonstration

Building a Web 2.0 Dashboard

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ADF Faces and DVT Demo

- Component gallery and feature demos for ADF Faces and DVT features
- View page source directly from the demo
- Available to download and deploy, complete with source code
- Find the demo and instructions on OTN JDeveloper site under Sample Applications

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Demonstration

Data Visualizations Runtime Features

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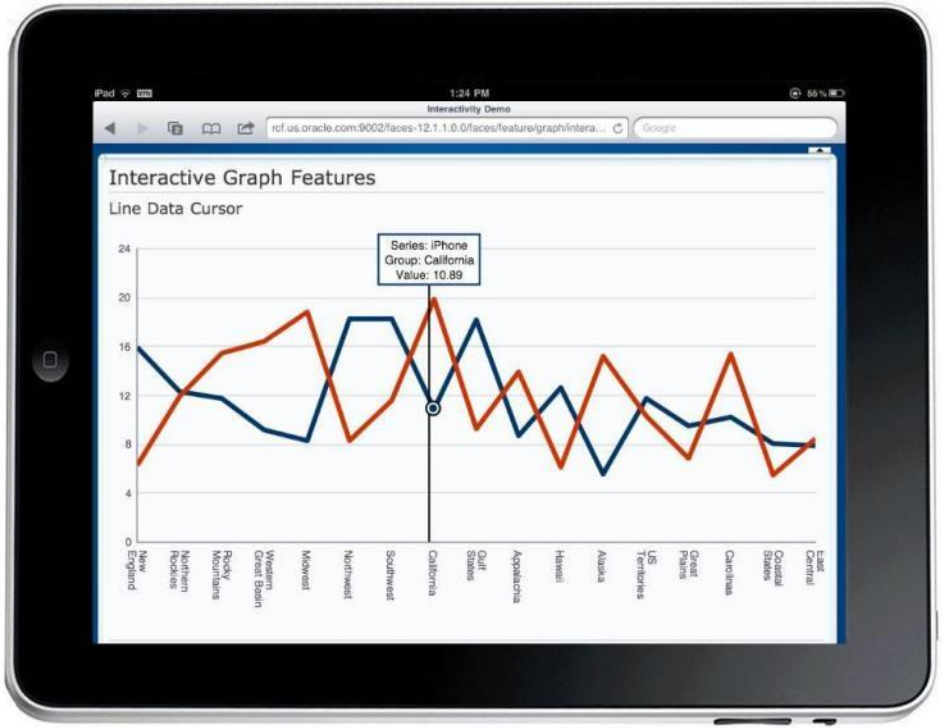
ADF Data Visualizations Future

Support for Mobile Platforms

- Touch and iOS support coming up in a future release
  - HTML5 rendering
  - Interactivity and touch support for mobile devices



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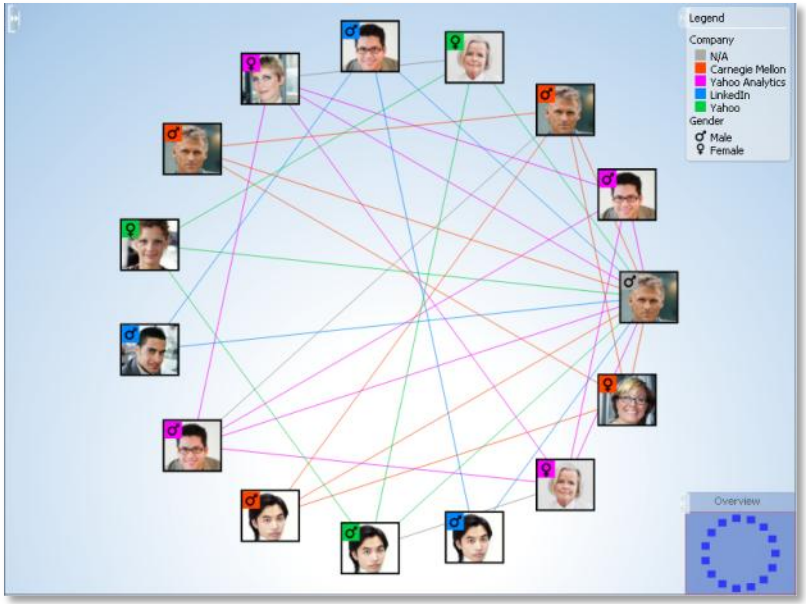
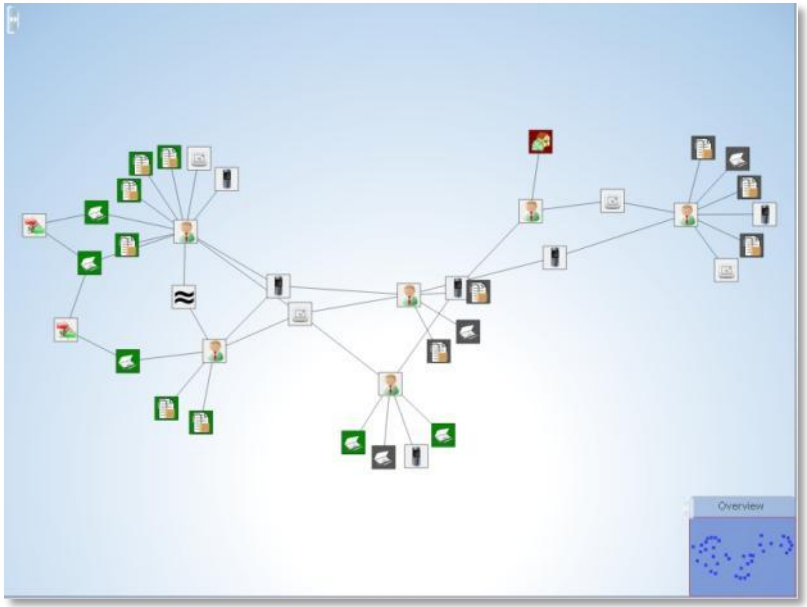
ADF Data Visualizations Future

Diagrammer

- Network of nodes that can be arbitrarily linked together





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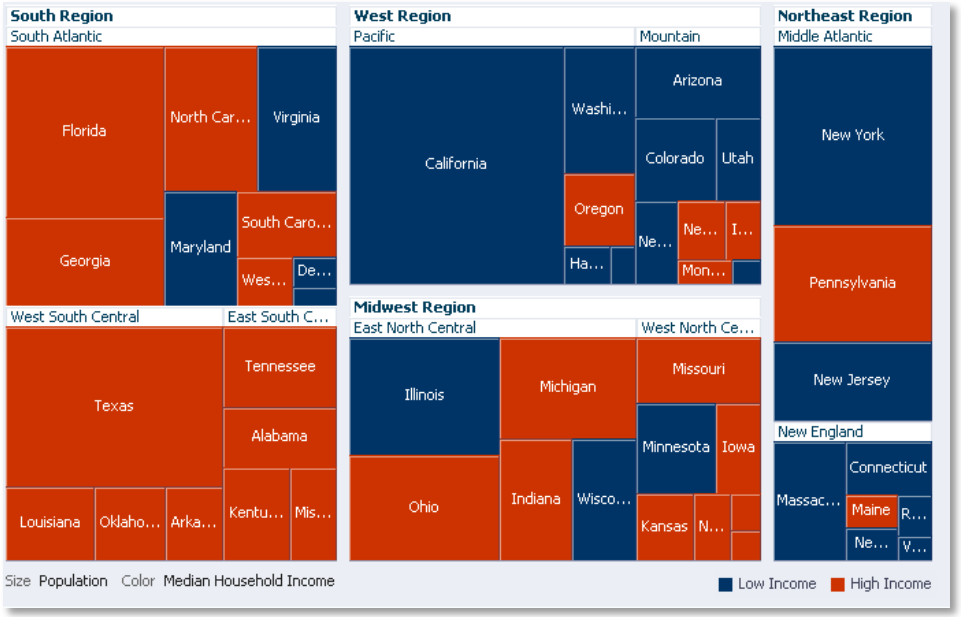
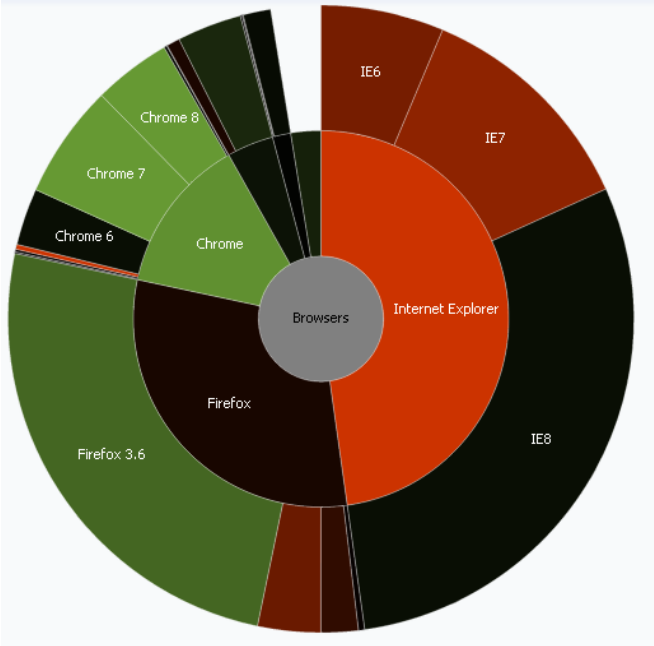
ADF Data Visualizations Future

Treemap and Sunburst

- Display hierarchy using color and size of the nodes to convey information





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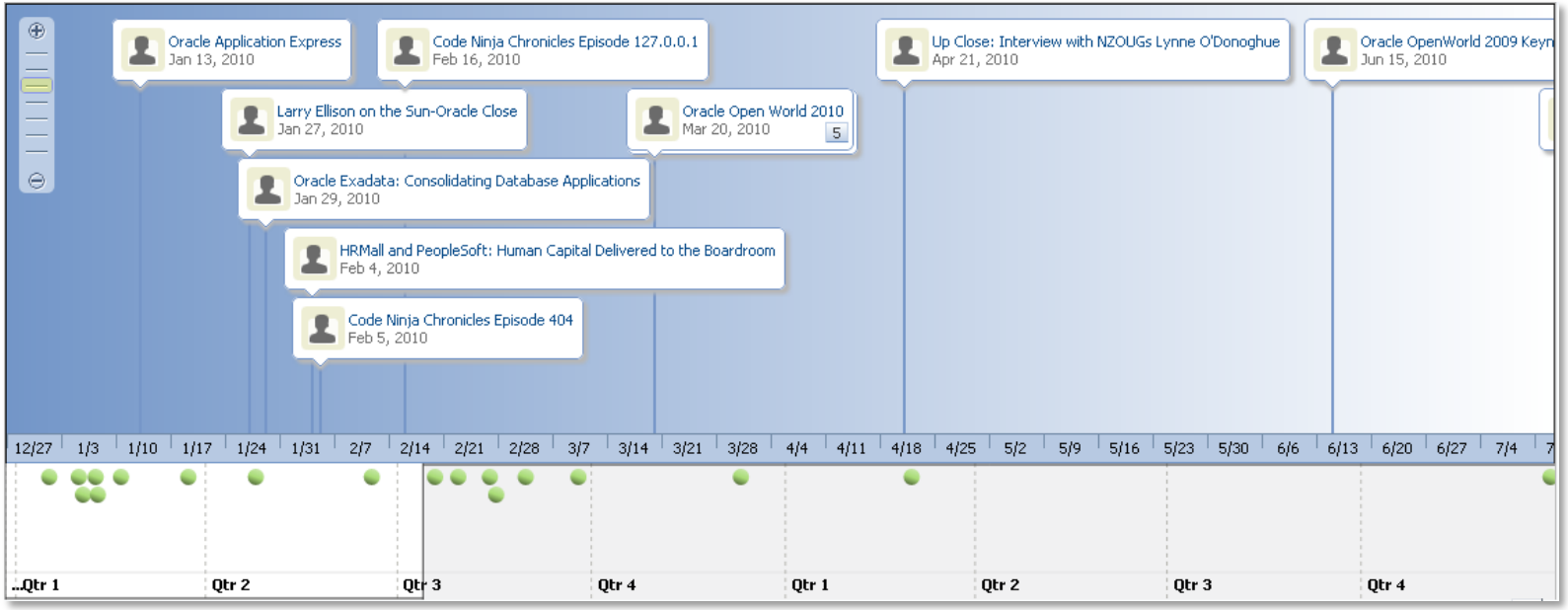
ADF Data Visualizations Future

Timeline

- Visualizes events on an interactive time line



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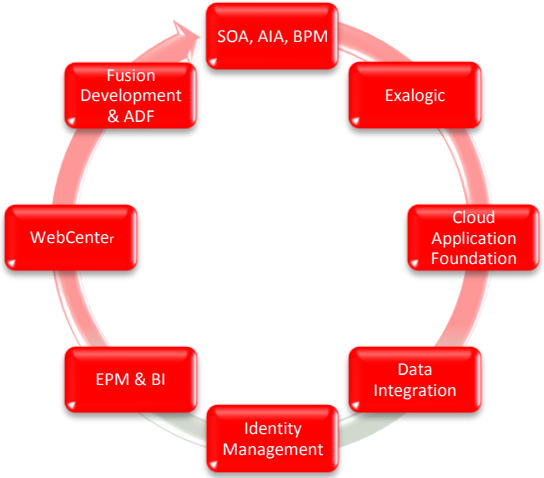

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