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# Oracle WebCenter 11g Release 1 New Features Overview (updated for 11.1.1.4)

The Modern User Experience for the Enterprise and the Web

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## Executive Overview

In today's hyper-competitive global economy, the ability to be agile and responsive to change is more important than ever before. Information and the interactions around it have become the key assets of most enterprises, and making correct decisions in shrinking cycle times is the defining operating characteristic of winning companies. The market imperative to access the right information and people at the right time has led to an increased interest in building a next-generation enterprise portal that provides a modern user experience. Such a portal leverages Web 2.0 technologies and usage patterns to transition the enterprise to an Internet-powered, user-focused, and community-centric social fabric that ties together people, ideas, content, processes, systems, and enterprise applications.

Bringing Web 2.0 capabilities and services to the enterprise is about more than just the latest technology; it's about changing the traditional business model and tapping into the creativity, intellect, and passion of every single employee. It is much more important for companies to understand the changing trends in business than to just implement the next "hot" technology product. Oracle WebCenter Suite 11g enables companies to foster the development of new ideas with direct interaction with their customers, tap into critical employee thinking and knowledge, and enable the synergy of teams to revolutionize their existing business models and achieve lasting success.

At the core, Oracle WebCenter Suite is built on a standards-based, open, declarative framework. The new WebCenter Portal converges the best of all the existing portal products in Oracles portfolio to deliver a single infrastructure that meets the broadest set of use cases while still allowing developer flexibility to use the web toolkits that they already use today. This enables combining rich internet applications (RIAs) development through dynamic user interface technologies with the flexibility of an integrated multi-channel portal framework and horizontal Web 2.0 services that provide content, collaboration, presence, and social computing capabilities in the context of a business problem or user task. In summary, Oracle WebCenter Portal Framework speeds the delivery of next-generation applications and portals

that rapidly deliver extranet sites, blend enterprise applications into composite interfaces, and inject social computing services within their existing communities to both departmental and enterprise portals.

To enable businesses and users to quickly leverage the power of Oracle WebCenter's integrated framework and services, the ready-to-use Oracle WebCenter Spaces application provides multi-site capabilities along with dynamic online communities to quickly share information, collaborate on new ideas, and manage projects without waiting for IT to build a specialized solution. Oracle WebCenter Spaces delivers a modern user experience that enables your team or company to be productive immediately. With the new WebCenter Personalization Server, branding, look & feel, components on the page, and processes available can all be controlled to deliver multi-site experiences on the extranet or intranet. No development delays, no scattered set of departmental portals, and, finally, a way to manage all the unstructured processes that drive every business –all managed from a single, integrated management console delivered through Oracle Enterprise Manager. With the new WebCenter Analytics, the effectiveness of these new Spaces can be tracked directly and shared with others. No longer to teams and managers have to wonder which white papers or presentations are most important to the organization. They get an analytics dashboard to see for themselves with no assembly and can make key business resourcing decisions with accurate up to the minute information.

Enterprise communities leverage Oracle WebCenter Social Computing Services to enable online users to find others in the organization and to exploit the tools for communicating and sharing information quickly and easily. To relegate your organization's experts to delivering isolated services as part of a departmental portal only serves to isolate information and users to their specific group. A central set of services that are available as required is essential for pushing knowledge throughout the organization and operating much more effectively. The new recommendation engine, called WebCenter Activity Graph, provides users with suggestions on the best content and experts to help accomplish their task at hand.

Because users must interact with all the resources in the enterprise, portals must integrate an Enterprise Business Dictionary and provide pre-packaged integration with applications, content, rich media, business processes, and business intelligence in a role specific way that speeds user awareness of these critical resources. With the new Business Mashup Tools and Oracle Composer, business users and site administrators can quickly construct and assemble information from any enterprise or custom application. IT can deliver the base connection components and then business analysts can decide how they want the information displayed. This can all be accomplished within the browser and evolved very quickly. No other product today offers this complete, integrated, best-of-breed suite of capabilities that allows businesses to finally tap into the key knowledge and thinking of all their employees and partners to power them into the future. Oracle WebCenter Suite is the Modern User Experience Platform for the Enterprise and the Web.

## Introduction

Internet computing technology has experienced at least two revolutions. The first wave, referred to as Web 1.0, provided a way for companies to publish information about their products and services to consumers external and internal to their enterprises. Today, technology is advancing through a second revolution, referred to as Web 2.0. Inflexible, monolithic applications are transforming into Service Oriented Architectures (SOA's) with composite, business-driven solutions that quickly evolve with the rapidly changing requirements of the organization. Web 2.0 is technology's response to the need to access multiple applications and to integrate content and other resources with these applications in the context of a specific business task. It represents the convergence of application development and portal architectures. Additionally, rich Web 2.0 technologies such as wikis, blogs, tagging, linking, discussions, and RSS provide dramatic efficiencies in how people work together to come up with a common voice or a key answer.

Currently, bringing the benefits of individual Web 2.0 technologies into the workplace also means that users juggle many applications and tools to get their work done. There is no

connection between these new services that force users to remember how all the information relates. Users need an easy way to bring it all together into one environment to streamline and simplify the way they work. IT needs an easy way to manage one centralized set of services and make them universally available to all the teams that require them. Today, each department installs their own wiki server or their own blogging engine, and IT is left to manage all the issues around compliance, archiving, aging out information, and integrating search across the different tools. Attempting to harness all the valuable information from these virtual islands and integrate it with enterprise application processes is no small task.

## Oracle WebCenter Suite 11g Release 1: A Complete Solution

Oracle WebCenter Suite 11g Release 1 provides an open, standards-based, and extensible portal framework that enables users to interact with Business Applications and services and brings together all the best capabilities of all of Oracle's portal portfolio products. From the world class portlet container in Oracle WebLogic Portal, through team and community support in Oracle WebCenter Interaction (formerly ALUI), to embracing any web development toolkit from the Sun Portals, Oracle WebCenter Suite now delivers a converged portal platform capable of meeting the broadest set of use cases for Internet, Extranet, Intranet, and team deployments. Oracle WebCenter makes it easy for users to get the information they need and to work with others to make the necessary changes to business applications and processes. It supports in a single, modern framework the development of all styles of Web sites, Portals, and composite applications. Oracle WebCenter delivers Oracle Composer along with a comprehensive set of Business Mashup tools for users and site administrators to highly personalize the behavior, look, and feel of the Portal to meet user requirements while insulating them from future upgrades.

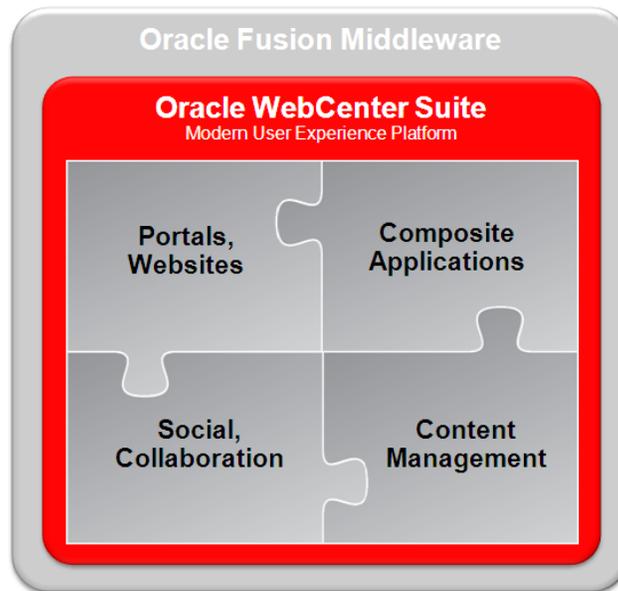


Figure 1: Oracle WebCenter Suite: The Modern User Experience for the Enterprise and the Web.

Oracle WebCenter Suite is the modern user experience platform for the enterprise and the Web. It consolidates the best user experience capabilities from a significant portfolio of leading portal products and related technologies to deliver a modern user experience for the enterprise that is seamlessly integrated with your enterprise applications. The suite consists of four main components including: Portals & Websites; Composite Applications; Social & Collaboration; and Content Management.

### Quickly Create Dynamic Portals & Websites

Oracle WebCenter Portal allows users to easily create dynamic enterprise portals such as intranets and extranets. Within Oracle WebCenter Suite you can create out-of-the-box communities with Oracle WebCenter Spaces, allowing you to create individual, team and organizational work environments to connect people and content. Personalized dashboards let users monitor performance and minimize the page transitions by integrating information and keeping it in the context of the activity, action, or task that they are attempting to complete.

### Easily Build Composite Applications & Mash-ups

With Oracle WebCenter Suite, you can easily assemble composite applications with Oracle's common user experience architecture. This includes best practices and design patterns for developing next

generation user experiences and is based on Oracle Application Development Framework (ADF), the common development framework for all Oracle Fusion Middleware user interfaces and Oracle Fusion Applications. In this way, you can easily extend existing applications and Oracle Fusion Applications with reusable, standards-based components.

### Out-of-the-box Social and Collaboration Tools Enrich Applications

Oracle WebCenter Services delivers social and collaborative services to help optimize connections between people, information and applications. Enterprise-ready social computing services such as wikis, blogs, RSS, discussion forums, tags, links, social networking and activity streams can be embedded directly into applications. Oracle WebCenter Real-Time Collaboration and Oracle WebCenter Intelligent Collaboration provide services such as instant messaging, presence, web conferencing and brokered connections to further optimize the connections between individuals and groups.

### Complete Enterprise Content Management Infrastructure

Oracle WebCenter Suite includes a complete enterprise content management infrastructure, Oracle Universal Content Management, which provides a single repository for all structured and unstructured content and allows you to capture and manage the entire content lifecycle. You can also publish content from any portal or website, provide item level security, in-place rendering of content, and file conversion -- all available from the extensible, modern user interface of Oracle WebCenter Suite.

Oracle WebCenter Suite provides an adaptable service model that follows what SOA has done for Enterprise Applications by enabling delivery of reusable, customizable, and personalizable Social Computing Services to provide the only modern user experience platform. Because users want to interact through the Enterprise Portal with all the resources in the Enterprise, Oracle WebCenter Suite provides direct integration with Oracle's Enterprise Business Dictionary and provides prepackaged integration with Applications, Content and Rich Media, Business Processes, and Business Intelligence in a role-specific way to speed user awareness of these critical resources. Together, this integrated set of Oracle WebCenter tools and services empowers end users and IT to build and deploy next-generation collaborative applications and portals that take advantage of the creativity and intellect of every user to improve internal and external business processes and delivers this information to users pervasively.

## Oracle WebCenter Suite 11g Release 1 Components

An essential element of modern business applications and portals is that they are designed to be evolved by business users after they have been built. Oracle WebCenter Suite 11g includes components that provide a full range of functionality to develop Web-based applications, Internet and extranet Web sites, enterprise and departmental portals, and composite applications. A critical part of the software infrastructure for business applications is that it must make it easy for users to get the information they need and to work with others to make the necessary changes to business applications and processes. There are a whole set of core components that are part of Oracle WebCenter Suite that make up the Modern User Experience Platform for the Enterprise and the Web:

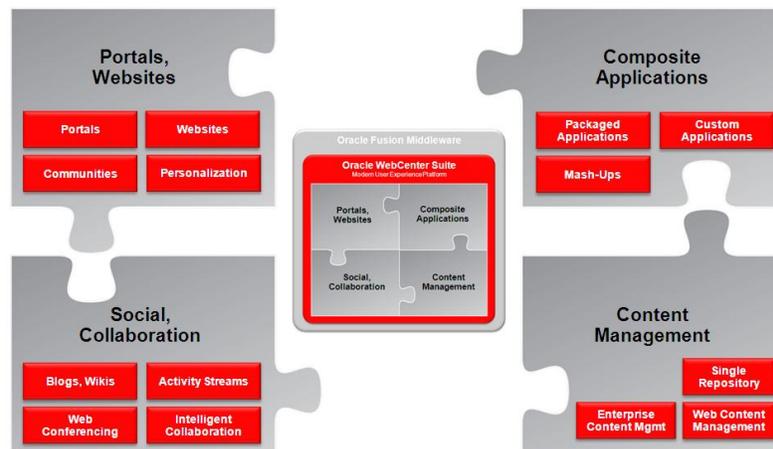


Figure 2: Oracle WebCenter Suite core components.

- Oracle WebCenter Portal Framework** is a modern portal framework that speeds deliver of Portals & Websites and extends the capabilities of traditional enterprise portals in four very important ways: (i) Its new capabilities around Themes and Skins provide powerful facilities for tailoring the look and feel of the site in a tiered way – for an entire site and for portions of a site associated with a department. This enables consistency in look and feel while consolidating deployment; (ii) WebCenter Personalization Server provides the ability to further tailor the usage of the portal and information delivered to the portal based on user’s activities; (iii) Powerful portal resources that can be called and used from any web toolkit such as Dojo or jQuery and others to deliver enterprise portal resources for within and beyond enterprise boundaries; (iv) Common Enterprise Metadata services provide a revolutionary way to store all portal look and feel changes, personalizations, and mashups in one shared location,

enabling rapid analysis of the impact of any changes to the site. Portals built with Oracle WebCenter Suite 11gR1 are therefore ideally suited for all forms of information delivery within the enterprise and across enterprises. It is delivered as an extension to Oracle JDeveloper, which provides an integrated development environment for composite Java EE applications, business processes, BI applications, and enterprise portals. Oracle WebCenter Portal further extends on the best of breed features from Oracle WebLogic Portal by exploiting the world class portlet engine and delivering significant performance improvements.

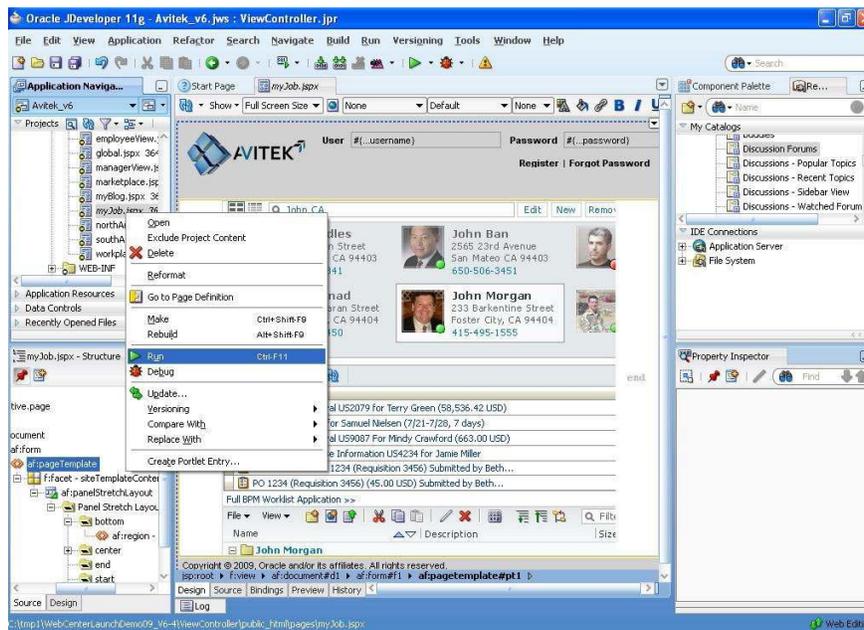


Figure 3: Developing a WebCenter Application leveraging Oracle JDeveloper.

- Oracle WebCenter Portal** is a set of components that speeds portal development from within JDeveloper as well as from within the browser. These tools provide the ability to layout a site structure, secure site resources, provide a multi-level delegation model, and deliver a personalized user experience. It enables both developer and business users to collaboratively build out the exact portal solution required for the extranet, Intranet or teams and departments. Within JDeveloper, there is a component palette that delivers the components required to quickly build sites leveraging content, processes, and people. Within Oracle

WebCenter Spaces, there is a resource palette that provides for easy creation, editing, and management of these components as well. Due to the core JSF model, the metadata underlying these portal resources is exactly the same whether they are built with JDeveloper or built inside the browser in a wizard based approach.

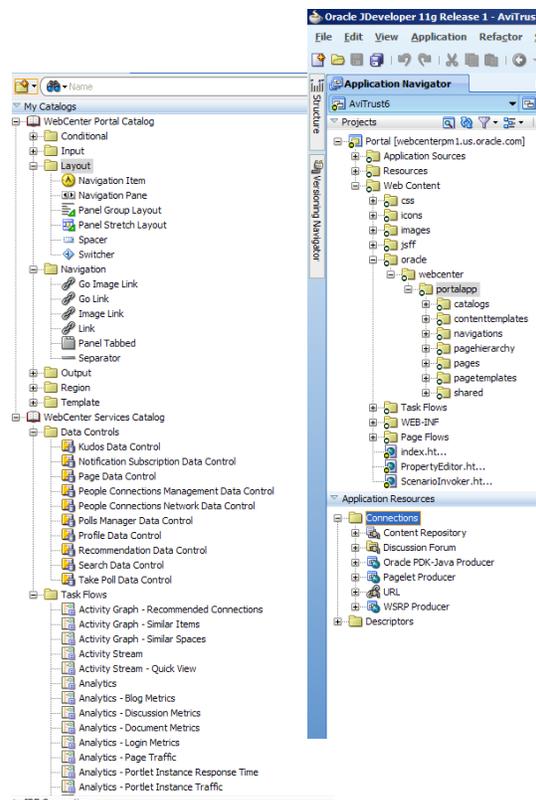


Figure 4: Oracle WebCenter Portal resources available directly to Developers and Business Users.

- Oracle WebCenter Business Communities, called Oracle WebCenter Spaces,** is a ready-to-use application that pulls together Oracle WebCenter Services to empower teams to quickly and efficiently manage their information, applications, projects, and people. Oracle WebCenter Spaces introduces powerful new facilities to enable formal and informal teams that require multi-site and hierarchical Social Communities within the Enterprise and across Enterprises. These Social Business Communities include facilities: (i) for business users to

create Online Communities dynamically within a browser or familiar personal productivity tools; (ii) for integrating these communities with Pre-Packaged information resources from a variety of enterprise sources – Applications, Documents, Content and Multi-Media, Business Processes, and Business Intelligence; (iii) for powerful Enterprise Mashup capabilities that enable business users to further personalize the information they want to see; (iv) for delivering information from the community to a user who wants to interact seamlessly within their Personal Productivity tools – Office, Outlook, Mobile; and (v) for embedding business communities directly within Enterprise Applications, eliminating information duplication and incorporating Social Computing Capabilities that capture unstructured interactions directly into Business Applications. Oracle WebCenter Spaces offers a powerful set of secure capabilities that are unmatched in the software industry.



Figure 5: Online Business Community leveraging Oracle WebCenter Spaces.

- **Oracle WebCenter Business Mashup Tools including Oracle Business Dictionary along with Oracle Composer** provides powerful role-based facilities that enable business users to seamlessly unify many corporate information assets with enterprise portals. These include: (i) Pre-Packaged Enterprise Application Integration via the Application Library with

SAP, E-Business Suite, PeopleSoft, JD Edwards, Siebel, Hyperion, BI Applications, and Oracle's Industry Applications delivered as packaged Portlets; (ii) Pre-Packaged Enterprise Content Integration from Oracle Content Management and a variety of other content stores across the Enterprise; (iii) Enterprise Business Process Integration via its Process Portal, which unifies the end-user's Worklist, the composite user interfaces for the applications being integrated into Business Processes, the Business Process Console, and Process Intelligence via a prepackaged Business Process Library; (iv) Enterprise Business Intelligence via its integration with Oracle Business Intelligence and Enterprise Performance Management products that make the enterprise portal both an Executive Intelligence Cockpit and enable personalized collaboration around Business Intelligence.

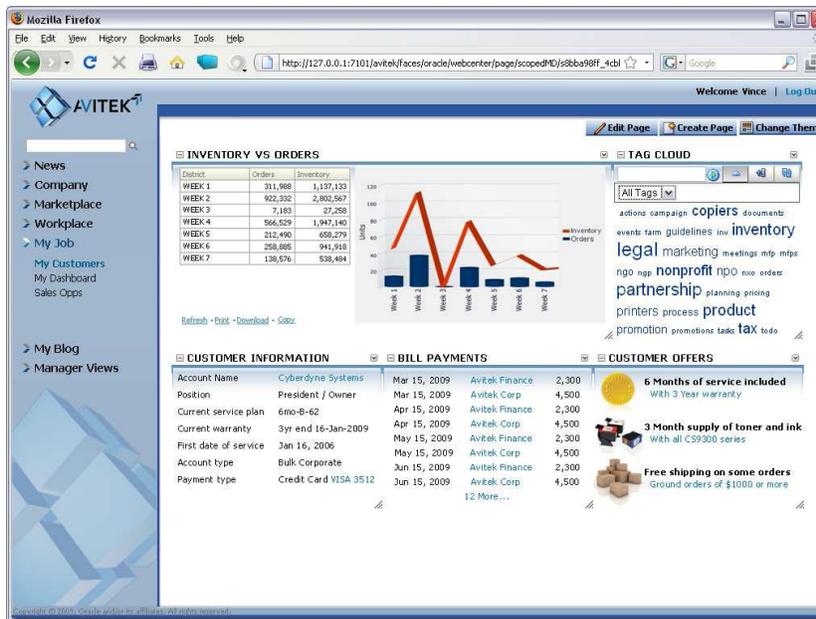


Figure 6: Executive Intelligence Cockpit mashup including Oracle E-Business Suite, PeopleSoft, Seibel, Real-Time Decisions, Oracle Business Intelligence along with a Tag Cloud.

- Oracle WebCenter Social Computing Services** make it easy to integrate new social computing tools with enterprise information and business processes. There are four breakthrough capabilities: (i) the most comprehensive catalog of pre-packaged social computing tools and services available today, including wikis, blogs, RSS, lists, discussions, commenting, sharing, polls, and search. Each of these services is seamlessly integrated as a

resource library within the portal framework, making drag-and-drop addition to business applications and portals easy. (ii) Business Activity Streams so that all the actions happening within the enterprise can be channeled directly to users where they can discover new patterns, information, and experts; (iii) the ability to model the relationships between Business Resources that are included within the Enterprise Portal and the people accessing those resources to enable the creation of both formal and informal social networks; (iv) Activity Graphs that deliver revolutionary capabilities to recommend valuable but non-obvious relationships based on information access patterns between people, content, and enterprise application activities enabling new ways of information discovery; (v) existing customers of products such as Oracle WebLogic Portal, Oracle WebCenter Interaction, and Oracle Portal can directly leverage all of these features within the context of their existing production releases.

Recognizing that, as more information resources in an organization are integrated with enterprise portals, the need to have that information delivered pervasively to users becomes ever more important, Oracle WebCenter Suite 11g Release 1's Pervasive Delivery facilities provide five important new capabilities:

- First, the ability to deliver the information that users need into all the common personal productivity tools – Office, Outlook, Browser, Mobile - that they might access while maintaining their focus on the task at hand
- Second, to seamlessly embed the Portal and its information in a “headless” form via its powerful REST capabilities into departmental web sites, to extranet sites, through applications
- Third, via its integration with WSRP 2.0 the capability of embedding information surfaced in WebCenter into other portals within the enterprise and consuming SharePoint Web Parts directly
- Fourth, via Oracle Pagelet Producer (formerly Oracle Ensemble) to provide a lightweight deployment environment within a firewall or DMZ for departmental and branch-office access
- Fifth, leveraging Oracle WebCenter Analytics to deliver usage-based information on the impact of the portal and all its content to better target and deliver information to all users

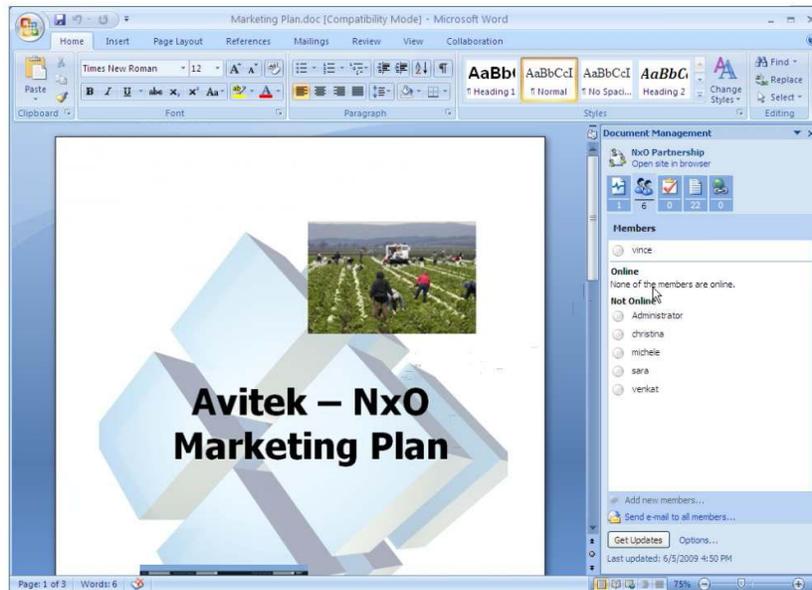


Figure 7: Oracle WebCenter Spaces available inside of Microsoft Word.

## Oracle WebCenter Portal Framework 11g Release 1

Oracle WebCenter Portal Framework is an Oracle JDeveloper design-time extension that breaks down the boundaries between Web-based portals and enterprise applications. It also provides the runtime portal and Web 2.0 framework on which all Oracle WebCenter technology runs.

Oracle WebCenter Portal Framework enables you to embed AJAX-based components, portlets, services, and content into context-rich customizable applications and portals. Traditionally, developers had to decide whether they were building a portal, a Web application, a composite application, or community site. Oracle WebCenter Portal Framework provides a modern user experience platform that bridges these gaps and speeds delivery of all these different types of sites or applications. Developers do not need to decide ahead of time whether they are building a portal or an application; with Oracle WebCenter Portal Framework, any application can be a portal and any portal can be an application. Most importantly, Oracle WebCenter Portal Framework is designed in such a way that each type of component can be added to the portal or application when required, or left out if not

required. This significantly improves overall application delivery and the speed at which enterprises can react to changing market conditions.

Oracle WebCenter Portal Framework augments the JSF declarative development environment with additional components, integration, and runtime options by incorporating capabilities that are historically included only in portal products. These capabilities enable you to:

- Build and consume rich standards-based portlets
- Integrate content from many different content stores through standard interfaces
- Build pages and navigation components to ease enterprise wide reuse as well as deliver dynamic query and content based navigation
- Organize pages in a structure or hierarchy to ease portal and application development
- Make the application customizable at runtime, thus empowering end users to edit application pages according to their requirements using Oracle Composer
- Enable developers to use any web toolkit (like Dojo, jQuery, or any of their favorite JavaScript frameworks) to deliver their portal site
- Enable administrators to personalize the behavior of components in ways that are helpful to their users

Oracle WebCenter Portal Framework's standards-based portlet development environment and business user tools support the rapid creation of JSR 168 & JSR 286-based portlets and the deployment of WSRP 1.0- and 2.0-based portlet producers. In addition, developers have the flexibility to build their portlets in Struts or Spring, then plug them directly into Oracle WebCenter. And with the new improvements in the Pagelet Producer (formerly Ensemble) and the WSRP Producer (formerly Application Accelerator for .NET), .Net components and SharePoint Web Parts can be consumed directly.

Oracle WebCenter Portal Framework's new capabilities around delivering dynamic navigations provide incredible flexibility in delivering dynamic portals and sites. With the adaptive navigation model, any system or service can be used to feed the menus and navigation. Developers are not restricted to only WebCenter pages as part of the reusable navigation model. In addition, these navigations can be derived directly with queries of the content system so that as new content is created and approved, they immediately show up in the portal menus.

Because Oracle WebCenter Portal Framework's security is based on the JAAS and Java EE standards, you can leverage an existing identity management store's enterprise roles directly when securing an

Oracle WebCenter application or portal. All the major directory sources are supported directly from the framework without the need to replicate information around and through the enterprise. Also, the direct support for hierarchies of pages, the security model is automatically propagated to each sub page or can be overridden directly by the owners of the new pages.

Oracle WebCenter Portal Framework includes ready-to-use components for easy addition of social networking and personal productivity services to your application or portal. For example, use the Tags service to enable your users to tag key items and share them with others. Directly call the REST interfaces for the WebCenter Activity Stream to enable any custom application to inform users of relevant activities and allow users to comment on them directly. Use the Discussions service to quickly and easily provide a means for users to enter important feedback about ongoing work. Call the WebCenter Activity Graph to deliver recommended products and services for users that are browsing your extranet site. By creating a scenario for Oracle WebCenter Personalization Server, a custom product offer, upsell, or campaign can be delivered directly to your web site whether written in Oracle WebCenter or written in any other technology. Use Oracle WebCenter Services to create mashups, manage security, or leverage the Oracle JSF Portlet Bridge to easily project any JSF application or task flow into a JSR 168 portlet. Use JSR 170 data controls to integrate and publish content from disparate repositories. Oracle WebCenter Portal Framework includes adapters for Oracle Content Server and Oracle Portal along with adapters to third-party content stores like EMC Documentum or Microsoft SharePoint.

Oracle Composer is exposed in Oracle WebCenter Portal Framework as a collection of ready-to-use components that enable your portal or application to be customized after it has been deployed. You can provide role-based versions of Oracle's Business Dictionary or Resource Catalog to enable all users' access to critical information for shaping the application around the tasks they need to accomplish.

### Build Standards-Based Portlets Against a Variety of Sources

Oracle WebCenter Portal Framework includes the following features for creating standards-based portlets against a variety of data sources:

- **Portlet Creation Wizards** assist in building JSR 168 / 286 and PDK-Java (Portlet Development Framework for Oracle Portal) portlets quickly and easily. And with the enhanced portlet support, portlets can be implemented using any framework including Oracle ADF, or Springs or Struts.



Figure 8: Java Portlet Creation Wizards used inside JDeveloper.

- **JSR 168 & 286 Portlets along with WSRP 1.0 & 2.0** standardize pluggable portal components so that they are independent of the actual portal server for which they are written. Consequently, you can reuse portlets seamlessly between portals without changing any code. This standard enables you to share portlets between different Oracle portal products, such as Oracle WebLogic Portal, Oracle Portal, and Oracle WebCenter Interaction, as well as non-Oracle portals. Since the core engine for running all these different types of portlets came from Oracle WebLogic Portal, you can be assured that the world class performance you require is even faster within the new Oracle WebCenter Portal Framework.
- **Oracle WebCenter REST services and Java APIs** enable developers of any language to take advantage of the core portal resources to deliver headless portals. More importantly, any portal resource can be used on a web site, inside of an application, or directly called for a plain old HTML page.
- **Content Presenter & Data Presenter** enables business users to easily publish data from various data sources using a variety of layouts, without needing to write any code. Using a wizard-based approach, business users can quickly produce new mashups from all of the standard feeds that developers produce. Developers can easily build AJAX-based user interfaces and add them to the wizard for business users to select. Use Content Presenter & Data Presenter to enable your users to include any type of Internet content, such as Google gadgets or RSS feeds, within the context of their portal or application.

- **Oracle WebCenter Pagelet Producer (formerly Oracle Ensemble)** includes business mashup tools for clipping some or all of a Web page and exposing it within an Oracle WebCenter application or portal. Developers can inject new behavior into clipped content, expose the content within a portlet, and reuse a wide range of Web content. This can include pages written with HTML 4.0.1, JavaScript, applets, and plug-in enabled content, retrieved through form submission. It handles advanced cases where identity propagation is critical for getting role-based information to only the users who have permission to see it.
- **Oracle WebCenter WSRP Producer (formerly Application Accelerator for .NET)** provides a means for developers and administrators to service-enable new and existing ASP.NET 2.0 applications through the Web Services for Remote Portlets (WSRP) standard. It also provides an API toolkit that is integrated into Microsoft Visual Studio template extensions to simplify portlet development for .NET developers. It also unlocks the SharePoint Web Parts to standards based portals by exposing these Web Parts directly as WSRP components. Now enterprises can take advantage of departmental resources directly.
- **WebCenter Propagation tools** speed the deployment of just the basic changes to the site. As developers continue to enhance a site based on user feedback, they often have to redeploy the entire portal or application. With the new support for iterative site development, developers can quickly add features without having to redeploy the entire site. Oracle WebCenter allows the developer to select just the changes and then deploys them to the testing and production systems when ready. These new tools dramatically speed changes to an active site so that business owners can respond rapidly to changing conditions.

### Task Flows: Develop Applications & Portlets Like Never Before

In building portals, the model is straightforward: deliver portlets for integration onto one page.

However, portlets have four common drawbacks:

- Applications and portlets are often built as separate projects: the application is built first, and then the portlets are produced. This can sometimes nearly double the cost of development and maintenance.
- Often a subset of application logic is replicated within the portlets.
- Coordination logic between multiple portlets is replicated on each page where you want to connect two portlets together

- Due to the portlet standard, there are no transactional semantics across portlets; for example, if there is a “Customer” portlet and an “Orders” portlet, if a transaction is required across these two portlets, it can’t be done in a standard way.

With Oracle WebCenter Portal Framework and Task Flows, developers build an application once out of a set of Task Flows and then individually expose any Task Flow directly as a portlet. When changes or updates to the application occur, the portlets are updated immediately. You can group the coordination logic together with an aggregated Task Flow for reuse from a single instance instead of having to replicate coordination logic in many locations. Because Task Flows are delivered in the context of the application, they can have transactional semantics wrapped around them. No other development framework provides this revolutionary, powerful, flexible, and standards-based technology.

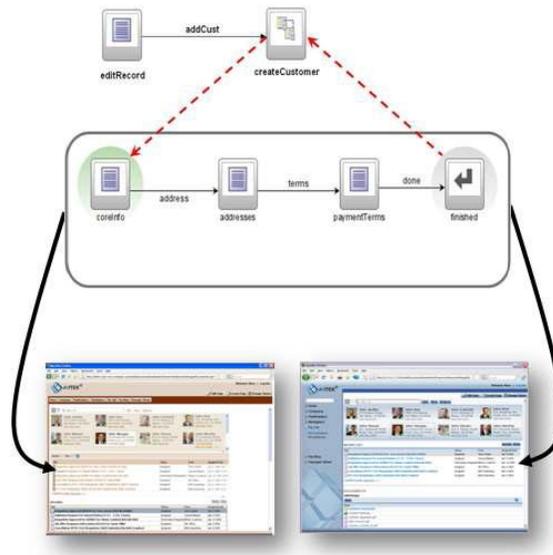


Figure 9: Task Flows provide a flexible way of building & deploying shared portlets that can participate in transactional applications.

### Customizing Pre-Built Task Flows To Deliver Exact Look & Feel

Oracle WebCenter 11g Release 1 Social Computing Services deliver over 100 pre-built Task Flows and portlets. Oracle recognizes that in many cases these pre-built user interfaces don’t exactly match what

end users require. Traditionally, modifications require that developers rebuild portlets from scratch or get copies of the source code to make modifications directly. Subsequently, when new versions of the base components are delivered, the process starts all over again. With Oracle WebCenter Portal Framework's powerful customization capabilities, you can customize the pre-built Task Flows and portlets delivered with Oracle WebCenter Social Computing Services to deliver the specific look and feel that is required without accessing the source code. For example, if a user's photo must be displayed with each discussion thread, you can customize the pre-built Task Flow in JDeveloper or within the browser using Oracle Composer to add this functionality directly. Customizations are saved directly into Oracle Metadata Services (MDS) without any coding on your part. This also means that when new versions or patches of the Task Flows are released, customizations can be directly applied without any complicated merge processes.

### Dynamic User Experiences: Oracle WebCenter Personalization Server

**The Oracle WebCenter Personalization Server** builds on the foundation that Oracle WebLogic Portal has pioneered and combines capabilities from Oracle WebCenter Interaction (formerly ALUI) to deliver a complete dynamic user experience that can provide targeted branding, processes, and content. In its simplest form, the Oracle WebCenter Personalization Server can deliver content directly to the users based on existing attributes from many different systems. The published service provider interface enables developers to aggregate any systems to provide a unified user profile to then determine the best set of elements to deliver to the user. Developers build a "scenario" to determine the basic decision logic required, then business users select the appropriate scenario for their audience and the Conductor runs these scenarios when users step through the site. For example, extranet sites might offer customers or partners special offers based on products they've ordered in the past. And leveraging the WebCenter Activity Graph, recommendations can be delivered directly into the site or called through REST and used wherever they are required. The open architecture for gathering user attributes and exposing the results of the services is essential for delivering a modern user experience for the enterprise or the web.

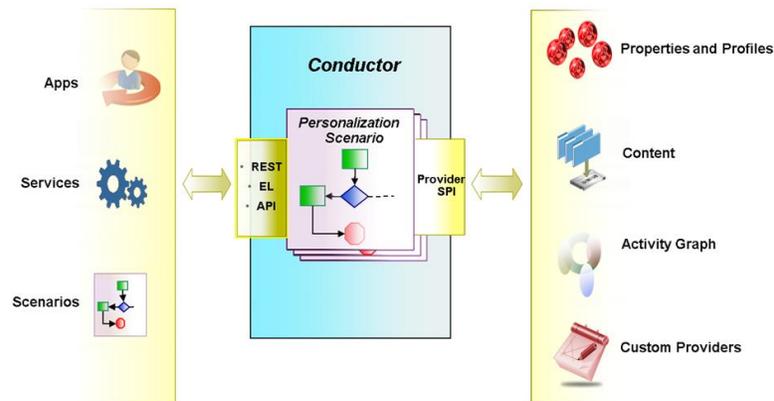


Figure 10: Oracle WebCenter Personalization Server leverages Scenarios to deliver dynamic modern user experiences.

## Integrate Content Using REST, CMIS, & JCR Standards

In today's IT deployments, structured and unstructured content must be organized through content management systems. Integrating content from these systems usually requires custom coding against proprietary and complex APIs. In the past, creating new applications that leveraged these content systems has been costly and difficult to maintain or upgrade.

Oracle WebCenter Portal Framework leverages a set of standards to speed this integration. Starting with REST and Content Management Integration Standard (CMIS) along with the Java Content Repository (JCR) standard, WebCenter provides an easy alternative to purely coding against content APIs for achieving integration. Oracle WebCenter Portal Framework hides the complexity of the JCR standard behind a generic framework, making integration a simple matter of dragging and dropping the relevant controls into your application and binding them to the appropriate content data control. Additionally, Oracle WebCenter includes a browser-based UI (or Task Flow), called Document Library, to manage and interact with the content items directly. This enables developers to handle content repository connections the same way they manage all other connections for their applications. After the application is deployed, you can update these connections independently from the application logic.

Oracle WebCenter provides JCR adapters to access Oracle Enterprise Content Management, Oracle Portal, and the file system. Additionally, Oracle delivers a set of adapters for third-party content systems (such as EMC Documentum, IBM Lotus Domino, and Microsoft SharePoint), and also

supports third-party adapters supplied by other vendors. If you have content that is stored in a proprietary content system (for example, digital media assets), with Oracle WebCenter's content integration architecture, these systems can easily be integrated into an extranet or Intranet solution.

### Mashup & Wire Components & Portlets Through Contextual Events

One way to ensure that your users can use information in-context of their current work is by wiring—or mashing up—related components or portlets together so that their content is always synchronized. In Oracle WebCenter Suite 11g Release 1, this is delivered via Contextual Events that are part of the Oracle WebCenter Portal Framework. To provide a rich, dynamic application or portal, Oracle WebCenter enables you to wire together Oracle ADF Faces components, WSRP portlets, PDK-Java portlets, Task Flows, gadgets, widgets, Web Parts, and more. For example, suppose you have a Products portlet and a Service Tickets portlet on the same page. These portlets—which would likely be wired together—are based on the product identification number. When a specific product is selected in one portlet, all the service tickets are shown immediately. The key is that Oracle WebCenter provides the ability to refresh only the contents of affected components. This ensures a rich, dynamic, and intuitive user experience that does not rely on the user knowing when or how to refresh the page, and requires no direct coding to deliver rich Web 2.0 applications and portals. And more importantly, with the new Business Mashup Tools, these combined mashups can be published out to the rest of the enterprise users to get maximum reuse of everyone's efforts.

### Secure Applications, Portals, and Communities Via Standards

When you build a portal using Oracle WebCenter Portal Framework, you can include "Delegated Administration" capabilities at runtime, such that runtime evolution of the portal can be assigned and managed across different users or groups of users.

**With the Oracle Java Platform Security** extensions provided in Oracle WebCenter Portal Framework, you can define security for an entire application or portal, for any page within the application or portal, or for individual actions provided by different components. The Security Wizard assists you in easily configuring security for your Oracle WebCenter application. Additionally, you can use WS-Security for secure identity propagation for the Oracle WebCenter Social Computing Services and WSRP producers.

Because Oracle WebCenter security is based on the JAAS and Java EE standards, you can directly leverage the enterprise roles that are defined in an existing identity management store when securing an Oracle WebCenter application or portal. You do not need to synchronize roles within the portal that you are building; instead, the application references and uses defined users and roles directly.

Additionally, you can use file-based security during the development phase of your portal and then easily switch over to an enterprise identity management server during the deployment phase.

Many applications manage their users and passwords directly and are not integrated into a single sign-on architecture. Consequently, users are forced to remember their various user names and passwords for several different applications. Because you can leverage existing applications that have their own authentication mechanism—such as e-mail or custom applications—you can use Oracle WebCenter Portal Framework’s external application features to map user names from your application to the existing applications. By leveraging the Oracle Credential Store included with Oracle WebCenter Suite 11g Release 1, the disparate user names and passwords can be stored securely so that your end users can leverage a single sign-on experience to access all of their needed applications, even if all the applications aren’t on the same identity management system.

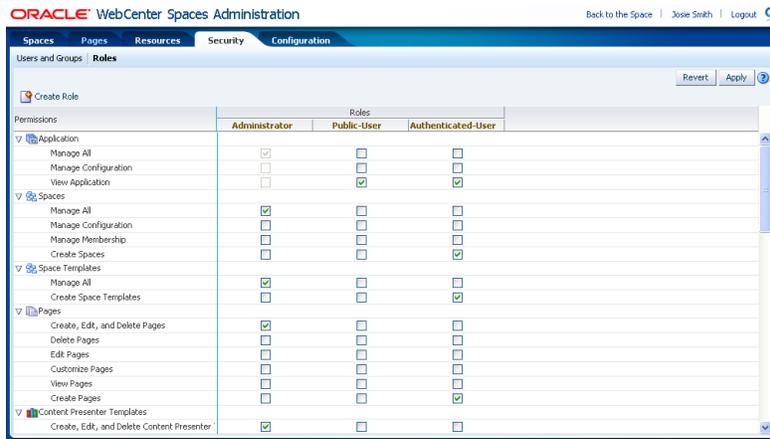


Figure 11: Assigning Enterprise Roles is built-in no matter what back end system is required.

## Deliver Content Pervasively Over Multiple Channels

Oracle WebCenter Portal’s development framework enables you to surface pages and content over multiple types of channels. For example, you can surface your application simultaneously in a browser and a handheld device, and, for the latter, provide a look and feel that is more appropriate for mobile devices.

Oracle WebCenter Portal Framework’s interaction management features enable you to improve the visitor experience, increase adoption and loyalty, and achieve your goals for customer interaction with

your application or portal. The ADF Mobile and ADF Native Mobile capabilities provide a means of delivering a targeted experience for the different mobile devices, while at the same time leveraging all the same resources used in your application or portal.

**With Oracle WebCenter Suite's Representation State Transformation (REST) services**, all Social Computing Services and base portal services can be accessed and delivered in any portal, application, or web site. It enables .Net developers, PHP, PERL, Ruby, and any non-Java language to access these core services and directly take advantage of them. In this way, the services can be pervasively used throughout the enterprise or with partners in a secure way, but all managed from a central IT instance. This enables teams to add new capabilities quickly and provides a single set of procedures for use in managing, archiving, and discovering this information when needed.

## Personalization, Customizations & Oracle Metadata Services

Oracle WebCenter Portal Framework uses the **Oracle Metadata Services (MDS)** repository to provide a means of setting up customized content and services to enhance how users interact with their application or portal. The information is stored as a layer on top of the base portal deployment, which insulates you and your users from updates and patches to the base application or portal. MDS is used across business processes, with business intelligence information, and with Oracle's new enterprise applications. It is a common metadata store that delivers unmatched capabilities that insulate applications and portals from patching and new releases.

Personalized content can include content or images targeted to specific users or audiences. For example, you can create dynamic images or links that are personalized for each user. Using this example, you could dynamically guide users through a process (such as signing up for employee benefits or shopping online) that takes them to different places based on their personal preferences or characteristics. You could even record the path users take through your portal to gauge the effectiveness of the portal, its design, or your process flows. Using this type of behavior-tracking provides information that can validate your strategies or help you make improvements. Additionally, Oracle WebCenter Portal provides an interaction management framework that enables you to create applications that:

- Automatically display user-specific content and portlets based on user profile attributes, user behavior, date/time, and more
- Track interactions that your users have with their applications or portals
- Trigger custom actions when specific events occur

- Deliver a completely unique user experience or site experience for different users that come to the same site

The core difference between customizations and personalizations is very direct. Customizations are changes to the base experience to deliver the right mix of capabilities. Personalizations are driven by rules and user attributes to serve up the most relevant and appropriate experience that is required.

## Oracle WebCenter Portal: Speeds Portal Development

Oracle WebCenter Portal starts with a collection of portal resources that can be created and consumed by any type of deployment whether a targeted portal application, an Intranet portal leveraging Oracle WebCenter Spaces as a platform, or a composite application that requires core “portal-like” features. The best way to visualize the capabilities that are part of Oracle WebCenter Portal is to take a look inside of JDeveloper at the Oracle WebCenter Portal component palette. But these components are all available from inside of the browser and using Oracle Composer as well. First, there are a whole set of site and page templates to speed layout and delivery of information without having to build them directly. These templates provide for fixed page layouts as well as flowing web style layouts to stretch the page both vertically and horizontally depending on the site requirements. Second, there are additional layout components to help expand, collapse, and render parts of the page to get the desired partial page interactions when building portal pages. Third, navigation and menus are key for any type of portal or site and the prebuilt navigation components enable any type of page or resource to be included in the reusable Navigations that are part of Oracle WebCenter Portal. Fourth, there are a whole set of components that can be used to capture user input, present information output, and provide conditional logic to deliver personalized view of the information within the portal.

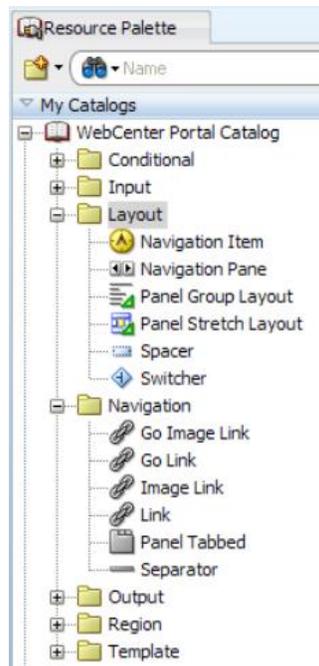


Figure 12: Oracle WebCenter Portal Resources to speed portal development & delivery.

Next, there are a whole set of data controls to Oracle WebCenter Services that can be used to inject any of these services into a dynamic portal or site. These data controls handle the access to information in a secure way and more importantly insulate IT from having to understand the internals of accessing and updating all the different services that might be required in these new dynamic portals and sites. On top of these data controls, there is a long list of task flows to speed UI deployment of these services. The important part is that these task flows or portlets can be customized inside of JDeveloper or inside of the browser using Oracle Composer to provide the end user experience that's required.

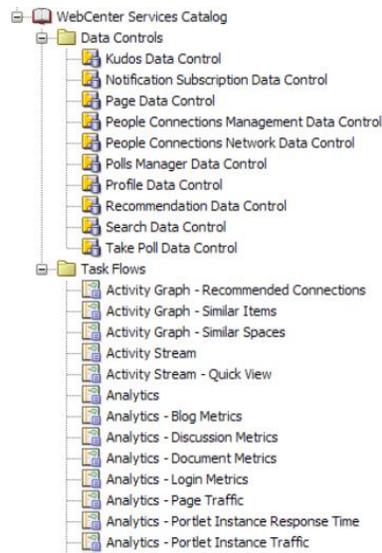


Figure 13: Partial list of Oracle WebCenter Data Controls & Task Flows to speed service inclusion.

Next, Oracle WebCenter Portal treats connections to backend services consistently whether the portal requires data from a database or whether it requires data from a content management system. This simply means that connections can be defined while building out the portal and then changed dynamically at runtime so that systems can switch from testing to production. In this way, whether the site requires the ability to publish content directly on the page or whether there is a requirement to enable team based discussions, the model to add these components into the system remains the same.



Figure 14: Oracle WebCenter Portal Connections for any type of service.

And within the development environment all of the Oracle WebCenter Portal artifacts are directly created as part of the projects that can be professionally managed in any source control management

system. As well, within Oracle WebCenter Spaces, these same portal resources can be created, managed, and customized inside the browser.

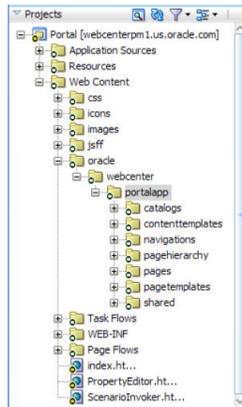


Figure 15: Oracle WebCenter Portal Resources managed In JDeveloper Projects.

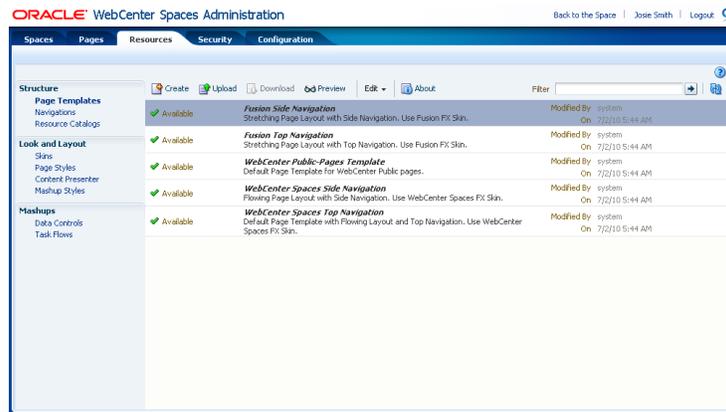


Figure 16: Oracle WebCenter Portal Resources managed In Oracle WebCenter Spaces.

## Oracle WebCenter Spaces: Multi-Sites & Dynamic Communities

**Oracle WebCenter Spaces** is a ready-to-use application that delivers multiple sites from a single infrastructure along with dynamic Business Communities and pulls together the capabilities of all the WebCenter Social Computing Services. It empowers teams to quickly and efficiently manage their information, applications, projects, and people without requiring IT assistance. It speeds delivery of

Intranet portal sites and enables organizations with a dynamic way of publicizing all the great work their teams are delivering. It brings together the latest technology around social computing, communities, personal productivity, and ad-hoc team interactions with no development effort. Oracle WebCenter Spaces enables users to work more effectively with project teams and work groups, including teams that span multiple geographies and even include external members. It eliminates or reduces duplication of effort and content inconsistencies, and it enables sharing and collaboration on team content to focus valuable resources on solving business problems, tapping into new ideas, and reducing time to market. It exploits the key differentiators of Oracle Enterprise Content Management to provide a robust content platform underneath dynamic document collaboration.

By providing a dynamic foundation for users to work together in teams, Oracle WebCenter Spaces assists your enterprise in addressing many challenges, such as:

- Geographically disperse teams with poor communication
- Slow progress on projects and business initiatives due to lack of coordinated information
- Information locked away on individuals' desktops and unavailable to others
- E-mail overload and too many attachments requiring merging of changes
- Inaccessible business intelligence information at the time when it is required
- Direct integration and support of Enterprise Application transactions
- Client software incompatibility and upgrades (Notes, Outlook, Safari, Internet Explorer, etc.)

Oracle WebCenter Spaces delivers the following powerful features that enable you to deliver Intranet portals in an instant and to provide productive online business communities through team-based sites along with enterprise and departmental portals:

- **Home Space** provides individual users with a dashboard of personally relevant information. Users' Home Space can include links or portlets for critical applications they use every day and can easily include their own personal feeds from a friend's social network pages. It provides all the relevant activities throughout the system and enables the user to quickly see content and information that has been recently posted to the different communities. The Home Space deliver a way for each user to have a set of personal pages with all the privileges for creating, changing, and sharing them with others. Personal pages can provide easy access to users' personal e-mail, tasks, recent documents, and the tags they use most.
- **Business Role Pages** provide a powerful way to communicate with specific types of users within an organization and across the company. As defined in an enterprise, users have specific roles for their

various groups—from administrators to sales representatives and engineers to business managers. Communicating with a specific set of people in these roles can be challenging. Business Role Pages provide an efficient way to attach a page or set of pages to a specific enterprise role so that all users assigned this role are kept up-to-date with information specific to them and their job function.

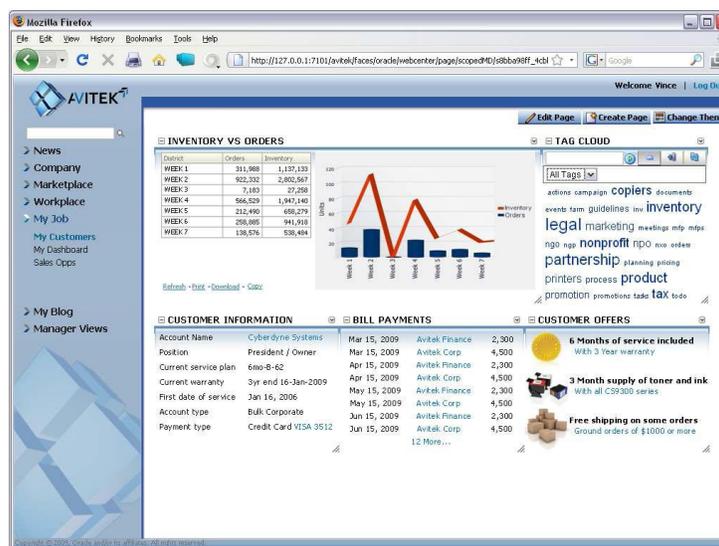


Figure 17: Business Role Pages deliver job function specific information leveraging enterprise roles.

- **Spaces** provide a meaningful way to manage all project details involving any group of users. Oracle WebCenter Spaces also make it easy to deliver a departmental or enterprise portal without having to spend a lot of development time building out the site. By leveraging the Oracle Business Dictionary or Resource Catalog, administrators and end users get a role-based view of what they can add to the project or portal sites. Spaces can be completely customized, including the navigation controls, the color scheme, and the look and feel of any task flow or portlet all from within the browser. All of this is managed in a way that insulates the IT team from application upgrades. With the new Dynamic Business Communities and the large number of pre-integrated Social Computing Service task flows or portlets, teams can start working immediately. Dynamic Business Communities additionally facilitate the rapid delivery of enterprise portals. In this area, what sets Oracle WebCenter Spaces apart from all other offerings is that you can completely embed these Spaces as part of a business process or a modern business application. This enables the capturing of

unstructured activities as part of the business process or application to provide a complete and integrated Process Portal or Executive Intelligence Cockpit.

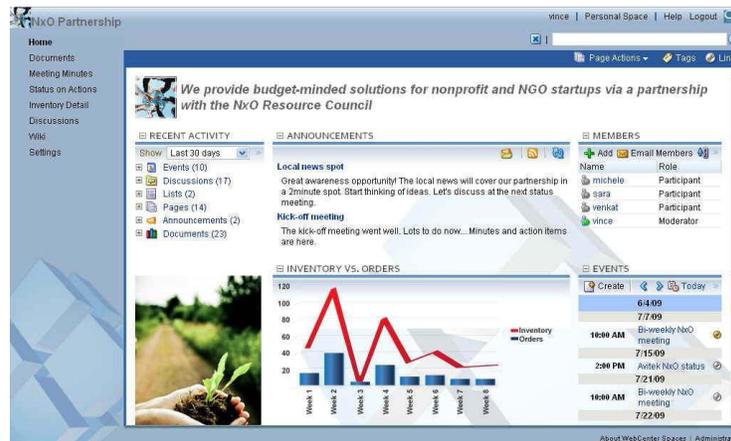


Figure 18: Business Group Spaces allow teams to share knowledge, find experts, and collectively gain consensus.

- WebCenter Space Templates** provide a consistent look and feel and an efficient way for everyone to get started. While Oracle WebCenter Spaces is optimally configured out-of-the-box so that business professionals can be productive immediately, there are many applications or portals that require business-specific components to be tailored for a targeted use or process. Space Templates enable users to save an existing Space they have created as a template for others to use directly. When creating Process Portals or Executive Intelligence Cockpits, you can create a template for quick delivery and consistent views of all information. For IT administrators, this means that they can create a template that configures the Social Computing Services, Business Intelligence components, Process Management components, Enterprise Application components, and other gadgets exactly as they are required for users to complete a specific process or procedure within and throughout the organization. For developers, this means they can deliver a seamless and integrated experience. And by combining these templates with Oracle WebCenter Personalization Server Scenarios, a complete user experience can be dynamically assembled to match the user's key focus areas.
- WebCenter Site Resources** can all be authored inside of Oracle JDeveloper by professional developers or can be created inside the browser with Oracle Composer and Resource Manager. This means that IT can provide a solution to a line of business manager, but then the business analyst can tailor this further to deliver an exact solution. Then the changes can be saved to a local machine,

sent to the developer in IT, and checked-in to be professionally managed for the next time a fix or change to the site needs to occur. The tools to build sites and communities are designed to facilitate cloud and collaborative development.

### Create Personal Pages and Dynamically Add Content

User's Home Space includes both personal pages that they create and business role pages their administrators create. Business role pages deliver information specific to the role within their organization.

For all of the personal pages, users can customize the information, the content, and the look and feel to meet their specific tasks or tastes. Users can also create new pages very quickly and easily add any combination of resources available to them through Oracle Composer. For example, a user can build their own custom dashboard to surface Business Intelligence reports, mash them up with a Content Presenter or Data Presenter component that pulls from Oracle E-Business Suite, add documents from the Document Library, and display presence information about a set of users and their online status. Users can change and update these pages in a snap: just click Edit Page, and the Business Dictionary opens for selecting from all the role specific information available.

### Stay Informed with Business Role Pages

In addition to personal pages, the Home Space displays business role pages, which are specifically targeted to the user's professional role in the organization. The Oracle WebCenter Spaces administrator can create a set of Business Role Pages for each line of business, and push those pages to all the users assigned a specific role, saving the administrator the time and effort of granting page access privileges to each user individually. Business Role Pages can provide information that is timely and relevant to a specific business role instantly, without the noise of irrelevant information from other lines of business. When end users log in, they immediately see Business Role Pages assigned to them in their Home Space.



Figure 14: Business Role Pages provide targeted information for end users.

For example, an administrator might create a New Hires business role page, give the Newbie role view access, and then assign everyone who joins the company the Newbie role for a period of six months. Similarly, sales people logging in to their Home Space will see the Sales business role page, engineers will see the Engineering business role page, and so on. In this way, site managers can easily push intranet portal pages to users that need specific, targeted information to stay on top of key updates for their area of the business.

## Deliver Dynamic Communities With Oracle WebCenter Spaces

While Home Spaces are specific to each user, Oracle WebCenter Spaces deliver online communities support for discrete communities of users organized around an area of interest or a common goal. They can be organized as a set of independent groups or arranged as hierarchies to help deliver dynamic organizational information. Oracle WebCenter Spaces provide a wide range of Social Computing Services and tools, and enable teams to effectively concentrate their efforts on solving a concrete problem, which often includes: scheduling events, assigning tasks to individual team members, contributing to wiki pages and announcements, linking related information, creating customized lists, and participating in discussion forums. More importantly, Oracle WebCenter Spaces provides the foundation of delivering Intranet Portals to the entire employee population. Simply configure the site in the browser, and the entire organization or company has an instant portal ready to run.

With little effort, users can create sites and pages neatly tailored to the unique needs of their team or community, providing a central access point for group communication and project resources. To edit a page in Oracle WebCenter Spaces, simply click an Edit Page link to open the page in Oracle Composer and display the Business Dictionary for selecting the resources you need. Authorized members at all levels of technical expertise can easily add a variety of resources to a page. Add charts, reports, portlets, business applications, Social Computing Services, lists, polls, links (to discussion forums, documents,

or other pages), announcements, RSS feeds, gadgets, Web clips, content, simple applications, and other ADF resources or views. Take a look at the results, and then save or cancel the changes. Combining relevant information of all types into the pages of a Space dedicated to a specific project creates a unique and useful enterprise mashup. These mashups can then be published to the Business Dictionary for others within the organization to reuse this work and mash it up further.

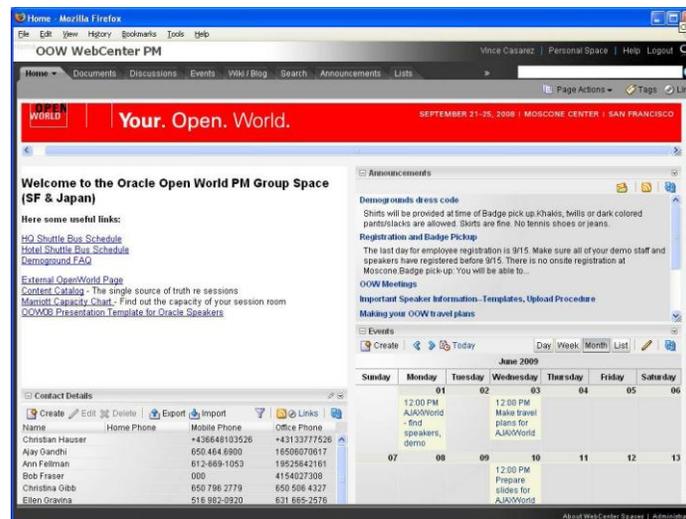


Figure 20: Oracle OpenWorld Group Space to track deliverables & speed deliveries.

Enterprise teamwork is not limited to the functionality provided by these shared projects and dynamic business communities. Almost every successful project depends on users working together by sharing information. Most of the information resources that users plan to share originate from desktop tools, such as Microsoft Office, Outlook and others. To ensure effective sharing of information in all of these environments, Oracle WebCenter Spaces delivers flexible integration through WebDAV, the Console for Microsoft SharePoint, RSS, and an extensible programming interface that is based on REST and Web services. With the new Oracle WebCenter iPhone application available on the Apple Store, users can track and collaborate via their mobile device directly. And with the integrated WebCenter Analytics, users can get an understanding for the most used and most important documents and content that their team produces. They can track who uses what and more importantly get feedback on what else their team might provide to make their team more valuable to the company. For example:

- Sales people can work together on reports and planning documents linked to a CRM record.

- Accountants can input tasks from Microsoft Project and associate key deliverables with invoices from an ERP system.
- Managers can bring together data from enterprise systems with documents in Microsoft Office and securely share the results with customers and colleagues.
- Users can check-in documents, check-out documents, add personal tags, and send notification links directly.
- People can manage documents and communities using Windows Explorer, create new project documents on the fly with Microsoft Office, and update each other through a team wiki.
- Employees can share tags, or social bookmarks, to make sure they all learn from each other's unique experiences in finding the most efficient ways to get things done.

In many projects and communities, not all users are created equally. Often, there is a project manager who has the ability to delegate responsibilities for the items in the WebCenter Space. Project managers also have the flexibility to restrict the use of different services if the capability is not required for the project. For example, a project manager may disable the built-in Announcements service, if all project updates are tracked in a wiki page. All the required tools are there to exercise complete control over available resources and their use to meet the team's business objectives. And when applied to a set of sub-Spaces or hierarchy, the permissions are respected to all of the lower levels as well.

### Use Templates to Create Uniform Spaces

In Oracle WebCenter Spaces, you can use WebCenter Space Templates to enable your users to start quickly and get the most out of the system. Essential to large projects, often spanning multiple departments, is the need to keep each team consistent in their deliverables and contributions. When creating a WebCenter Space, you can take advantage of an existing Space that already contains mashups of enterprise information. You simply save it as a WebCenter Space Template to speed every other team's success and leverage all that you already know. For example, in annual budget reviews, you can configure a Space Template so that each department delivers the same standardized formats and presentations for review.



Figure 21: WebCenter Spaces delivers 6 pre-built templates to provide teams and departments a fast start.

Alternatively, you can use any of these pre-built templates:

- **Blogger Site template:** Enables individuals to publish their views to others and preconfigures announcements, discussions, documents, events, lists and mail.
- **Discussion Site template:** Enables team discussions to quickly resolve issues, come up with new product ideas, resolve customer escalations, determine new service offerings and more.
- **Document Exchange template:** Provides teams with a document collaboration site to quickly hone in on delivering agreed upon wording and messaging. It also enables checkin and workflow around document approvals and team working.
- **Portal Site template:** Speeds enterprise portal construction and delivery and enables teams to easily provide their unique value to the company and promote their group's charter to all other organizations while securely collaborating within their team or organization.
- **Project Site template:** Provides an optimal structure for supporting a core project team where members might come from different departments to work together toward reaching a common goal.

The focus of a Project Space is to streamline the process of starting a new project, defining the project team, and executing on project deliverables.

- **Team Site template:** Provides an optimal structure for supporting communities of people who join together to communicate, create content, and share ideas to learn more about a subject area.

Another important fact about Space Templates is that they allow third-party Partners and Companies to leverage their domain expertise to deliver starting points for all industries. Oracle's Partner Network is actively working with hundreds of partners to deliver templates online for download and widespread usage.

## Managing Your Oracle WebCenter Spaces Is Easy And Flexible

Oracle WebCenter Space management is fully integrated into the environment. For example, the person who creates a Space is automatically the moderator of the Space, and can grant any other user the appropriate privileges. Users assigned the space moderator role can add and remove members, invite new members, create and update pages and look and feel, and can manage the services available to members.

An Oracle WebCenter Space moderator has several options for adding members: add members directly from the enterprise identity store, provide for self-registration, and allow users to request membership. In addition, Space moderators can delegate specific permissions of the different services to users. For example, a Space moderator might want every user to be able to participate in discussions or prevent users from uploading new documents unless they have specific privileges. The important point to remember is that the flexibility is available; however, no changes are required to get started.

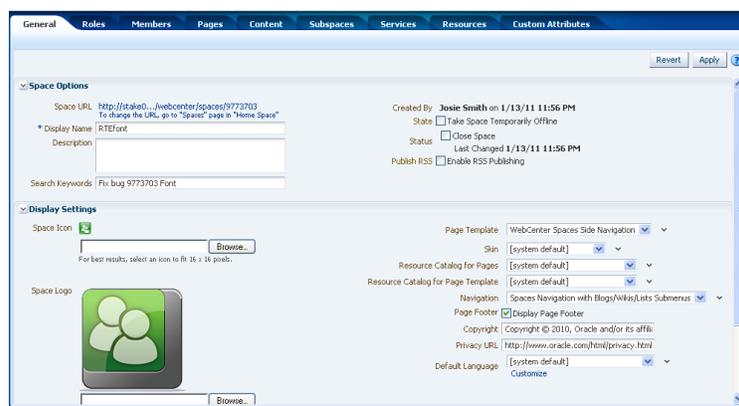


Figure 22: Management & Delegated Administration is built into the WebCenter Space Templates.

## Centralized Administration For Oracle WebCenter Spaces

There are two elements of administration within Oracle WebCenter. First as a business owner, there is a need to get web analytics so that the impact of the content and information that the team is delivering can be assessed and enhanced. The second element is for system administrators to track the overall performance and usage of the system to provide an optimized user experience for all that have access to the sites and communities.

**The new WebCenter Analytics** components are delivered directly for each WebCenter Space. The moderators can see all the web analytics they need to determine the relevance and importance of the site. In addition, there are over 50 different supplied portlets or task flows that can be added and tracked by any page or any user. Often this analytic data needs to be combined with other information to provide a more complete view of the effectiveness. With the WebCenter Business Mashup Tools, these Analytics components can be combined with any other service to provide the exact dashboard that the users require.



Figure 23: WebCenter Analytics Dashboard for all WebCenter Space moderators.

As an Oracle Fusion Middleware administrator, you can perform the complete range of security-sensitive administrative duties for all Oracle WebCenter components, as well as all installation, configuration, and audit tasks. All of these capabilities are integrated into a single **Oracle Enterprise Manager Console**. It's the only product available on the market that allows for complete manageability across all usages of Social Computing Services, Dynamic Business Communities, and

deployed applications. To administer and monitor the Oracle WebCenter Spaces component, the Oracle Fusion Middleware administrator can:

- Stop and start Oracle WebCenter Spaces
- Configure back-end services (such as mail servers, worklist connections, discussions server connections, mail server connections, instant messaging and presence connections, Oracle Secure Enterprise Search connections, and the database connection for group space events, links, lists, notes, and tags)
- Maintain external applications and data sources (such as content repositories, external applications, and portlet producers)
- Configure the identity store to allow for enterprise single sign-on
- Configure global options (such as SOA connection for group space subscription workflows, wiki services, and worklist items)
- Import and export Oracle WebCenter Spaces and Space Templates, or an entire Oracle WebCenter Spaces application, to enable back up or to move content between Oracle WebCenter applications and stage or production environments
- Use log files to identify and diagnose issues or problems
- Analyze the performance of Oracle WebCenter Spaces and monitor its current status through Oracle Enterprise Manager

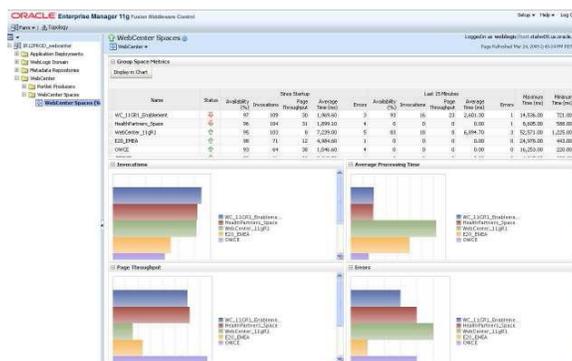


Figure 24: Oracle Enterprise Manager provides a single console to manage all Social Computing Services, WebCenter Spaces, Web applications, and enterprise portals.

As part of the delegated administration capabilities, within Oracle WebCenter Spaces the highest application privileges are given to the Oracle WebCenter Spaces administrator. To perform administration and monitoring tasks across all Home Spaces and group Spaces, the Oracle WebCenter Spaces administrator can:

- Modify application-wide settings: Name the application, customize the default look & feel, choose a default language, set up discussion forums and RSS news feeds, disable personal spaces, manage group space services, and much more
- Manage users and roles: Assign default roles, create custom roles, define role permissions, and manage user access and approval requirements
- Manage Home Pages: View, edit, and delete pages, set up page defaults, copy pages, and manage page security
- Manage Business Role Pages: Create and manage pages specific to a particular business role, roll out pages to a common audience, and remove unnecessary pages
- Maintain external application links: Add, modify, and delete entries in the external application links list in the Application pane in the Sidebar
- Manage WebCenter Spaces and WebCenter Space Templates: Take a space temporarily offline and bring it back online, close down or reactivate a space, delete a space or template, and publish or hide a space template and work with other system wide resources directly.

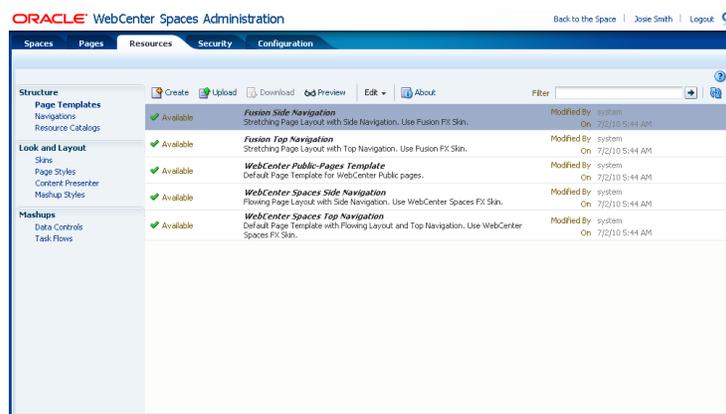


Figure 25: WebCenter Administrators can manage all resources inside the browser.

## Oracle Composer with Oracle’s Business Dictionary

**Oracle Composer** is an innovative component that enables any application or portal to be customized after it has been deployed and is in use. Oracle Composer is designed to be easy to use—business users and end users can edit any page with a few simple clicks of the mouse. Oracle Composer runs in all modern browsers and provides a rich, dynamic way to edit JSF application and portal pages by selecting information and components from the **Business Dictionary or Resource Catalog**. It provides the assembly location for pulling together any type of mashup.

Software developers will be interested to learn how easy it is to add Oracle Composer to their applications and portals during development, without writing a single line of code. Because many applications require “portal-like” features so that they are customizable, Oracle Composer can simply be dragged and dropped onto a JSF page to enable this powerful capability.

In addition, Oracle Composer has been enhanced to allow for any development resource to be edited in the browser. No longer do developers have to use an installed IDE. They can edit their JSF pages and artifacts in the browser, save them to their local machine, and check them into the source control system they use to manage their projects. Oracle Composer takes cloud based development beyond what any products offer today.

### Unparalleled Layered Customizations: Oracle Metadata Services

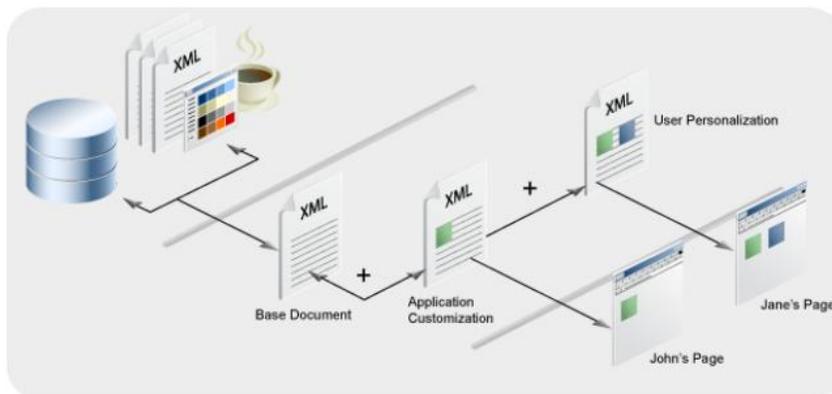


Figure 26: Layered Customizations through Oracle Metadata Services.

Customizations change everyone's view of an application or portal and are typically required to "brand" a delivered application or portal for a specific customer or purpose. Customizations include simple changes such as inserting a logo or altering the colors to match those of your company. They can also involve adding items to a page, changing the layout of a page, altering a supplied process, and specifically tailoring the delivered application or portal to meet any business need. Oracle WebCenter Suite 11gR1 and Oracle Composer provide a flexible model for storing these customizations in the file system or directly into any database through Oracle Metadata Services (MDS) repository. For example, to store customizations in a database, Oracle Composer creates a copy for pages as they are being edited. This is a temporary storage area to save a group of runtime page customizations before they are either saved and pushed to other users or discarded. In this way, others can preview and approve customizations before they are visible to all users.

Traditionally, customizations are inserted directly into the application source code, and are lost when a patch or upgrade to the base application is deployed. With Oracle WebCenter Suite 11gR1, all base application definitions and customizations are stored in the Oracle Metadata Services (MDS) repository as a layer on top of the base application. This centralized metadata strategy facilitates the joining of design-time and runtime efforts into a single, complementary development lifecycle. As a result, you can develop and deploy new versions of applications without losing the customizations that were added over the life of the product. When you add Oracle Composer components to a page, information is automatically stored to and retrieved from MDS, alleviating the need to spend time writing logic to manage these customizations.

Oracle Composer has been leveraged extensively inside Oracle WebCenter Spaces to enable users to customize their Home Space and Spaces or communities. The Oracle WebCenter Spaces application provides a working example of how end users can take an active role in managing and altering their work environment to match their specific needs and requirements.

## Oracle WebCenter Social Computing Services

Oracle WebCenter Suite 11g Release 1 exposes Web 2.0 services and personal productivity features through a comprehensive set of Social Computing Services that make integration easy with enterprise information and business processes. Integration means you can use these services together (for example, you can add an Instant Messaging and Presence link to a discussion forum to talk with a product expert directly from a forum topic), manage them effectively, and model relationships between users and information to discover new experts and new ways to improve your business' performance.

All Oracle WebCenter Suite 11gR1 Social Computing Services have a complete set of ready-to-use task flows or portlets to speed their adoption, making developers and end users immediately productive. For example, the Documents service is exposed through the Documents task flow, the Document List Viewer task flow, and the Document Library task flow. Then the Content Presenter task flow allows for presentation of the content to be paired with templates to shape the information in the best presentable way. You can add any of these task flows to an application or portal when you are building it, and users can add these service task flows to a deployed application or portal with Oracle Composer.

If the pre-built task flows do not meet business requirements, developers have two additional choices:

1. Directly customize the pre-built task flows to match the requirements. These customizations are created inside JDeveloper or in the browser using Oracle Composer and provide developers with a productive and fast way to deliver their required functionality.
2. Use the pre-built data controls, and bind their own user interface to meet the requirements, without having to build the back-end integration.

Oracle WebCenter Services are built to industry standards, such as IMAP for e-mail, JSR 116 for presence, JCR 1.0 and CMIS for content integration, JSR 168, JSR 286, WSRP 1.0 and 2.0, JSR 301, and many others. The Social Computing Service tasks flows have an adapter-based model for easy connection to any of the most popular back-end systems.

For ease of understanding, we've separated the WebCenter Social Computing Services into two categories: social computing services and personal productivity services.

## Empower Users With Oracle WebCenter Social Computing Services

At the heart of Oracle WebCenter is the concept of group participation and social computing, linking users and services together in useful ways. For example:

- Sales people can contribute to reports and planning documents linked to a CRM record.
- Managers can bring together data from enterprise systems with documents in Microsoft Office, and securely share the results with customers and colleagues.
- Users can manage documents and projects in a WebCenter Space, create and edit project documents in a wiki, and send related announcements to team members.

The services that support these group concepts are:

- **Announcements service:** Offers an effective group communication mechanism for important information around activities, events, processes, and overall updates.
- **Discussions service:** Enables community discussions on a set of topics, facilitates quick resolution of issues, and provides a searchable knowledge base. In addition, there are many different Task Flows or portlets for hot topics, favorite or watched topics, and more recently updated topics.
- **Blog (Web log) service:** Provides the means for an individual or a community to share personal insights with online audiences. This service supports two types of blogs: personal blogs for individual users, and community blogs that enable members to share their views on a particular topic. Blogs are stored directly in Oracle UCM to provide robust content management features around Blog content.
- **Instant Messaging and Presence service:** Enables users to see who in their community is online and provides instant access to interaction options, such as sending an instant message, writing an e-mail, and displaying a peer's profile. There is also a task flow or portlet that displays the user's list of buddies. The Presence service also is available as a tag that can be added to any page to quickly "activate" any username on the screen. It works directly with Oracle WebCenter Real-Time Collaboration and other SIP-based platforms like Microsoft Office Communications Server.
- **Wiki service:** Provides a means of working simultaneously on documents and sharing ideas, either in the context of communities or as individuals. Use wiki syntax directly, or edit wiki pages as you would with any word processor. All changes and versions are tracked within Oracle UCM. In this way, wiki content becomes a true enterprise content resource.
- **Document Library service:** Enables users to display and manage their documents and files in a content repository. The Document Library Task Flow or portlet surfaces many features of the underlying repository including versioning of content items, tagging items, checking items in and out, linking content to other services, and connecting with the author of the document directly. It enables workflow to be attached to documents, apply document level security, and render content in-place without requiring office productivity applications on client user machines to review the material. The Document Library service leverages third-party adapters to connect to different backend repositories. As part of Oracle WebCenter Suite 11gR1, an embedded use of Oracle's Content Management server is included and is delivered as part of the integrated install of Oracle WebCenter.
- **Events service:** Provides group calendars to enable users to schedule meetings, appointments, and any other type of team event. Additionally, a dedicated Events page is available to every space where the moderator has enabled the Events service.

- Comments & Like service:** Allows for any user to comment on information they have access to and provide feedback to the author and other readers through the Liking service. Users can say whether they like or don't like and item so others only read the most relevant content in the system. It also provides content owners with key feedback to improve the overall usefulness of any particular content item.
- Links service:** Provides an easy way for users to share their knowledge with others. Often, there are many tasks that require users to remember the relationship between different items. For example, an employee might have to remember where to file their expense reports and where the document describing the accounting rules for expense reports is stored. Using Links, users can connect items together. In this way, they do not have to rely on memory. Just as important, new users receive the benefit of their work, thus saving significant amounts of time. Developers can add the Links service to any application or portal as a backend service. The Task Flows or portlets provide a rich user experience that enables users to manage their links.
- Lists service:** Provides a means for users to create and manage all types of lists. This is an extremely powerful capability for keeping track of meeting action items, open issues, new product or project ideas, project status, and more. Lists support specific types of data, including a person, string, number, Boolean, and datetime. Data-types take full advantage of the richness of the environment, including built-in values validation and presence. For example, when a user's name shows up in a list, it is automatically enabled with the Presence service.

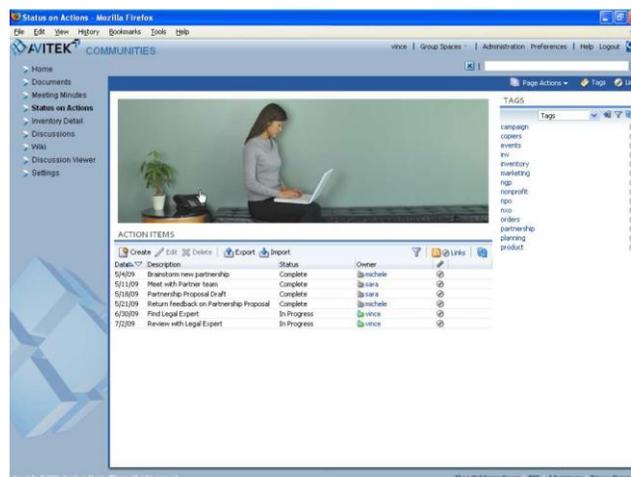


Figure 27: Lists can be used for tracking open issues, team tasks, and project status, for example.

- **Polls service:** Enables any user to take a poll of their constituents and users to gather consensus, get their feedback and make informed decisions. The Polls building environment is a wizard based approach at determining the list of questions with the different responses. At the end of taking a poll, users can be presented with a graph of the results as well so that they can understand the overall results as well.
- **Tags service:** Provides a way for users to mark items so that they can find them quickly when required. Additionally, tagging enables users to find items based on their own labels instead of a corporate taxonomy. The capability to tag items delivers a better organization of information based on how users really access and label the items, often called a folksonomy. Since tags are directly integrated with Searching, users can immediately find what they need using personally relevant search terms. The Tags service includes Task Flows or portlets for creating and maintaining a tag, deciding if the tag is shared or private, favorite tags, tags used by others, and a Tag Cloud view. Again, you can add the Tags service to any application or portal to enable this powerful new way of sharing information and knowledge.

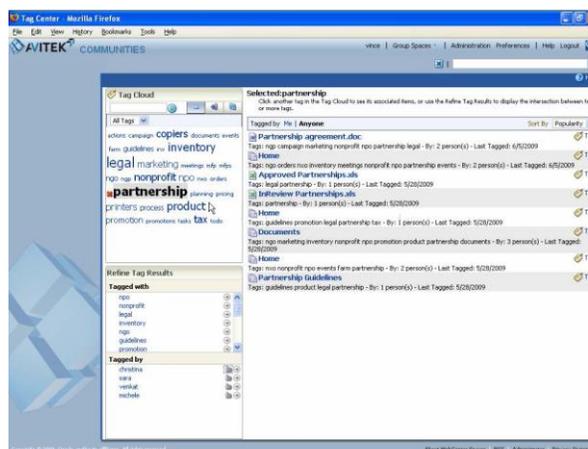


Figure 28: Tag Center provides access to experts and collective intelligence within a single screen.

- **Activity Stream & Sharing service:** Enables users to discover actions and activities that are relevant to them. It goes far beyond just collaborative sharing of documents and content, when used with the Oracle Applications Unlimited and Fusion Applications connectors, the Activity Streams turn into Business Activity Streams. These provide users with insights into the business activities

that are happening within the applications that they have access to. They can find expert sales representatives that close key deals in their space or they can find exceptional customer service engineers to help their customers when needed. And with the enhanced WebCenter Sharing service, users can share information with a single click to any WebCenter Space without having to navigate around. With the REST interfaces, even something like a Google Chrome plug-in can deliver sharing services that don't require the user to navigate around or away from a site that they are interested in understanding.

- **Activity Graphs & Recommendation service:** Enables tracking of any kind of activity that the user performs in order to influence results and recommendations from other services. For example, most Social Computing sites today provide a means for users to post their own information about their personal activities, accomplishments, thoughts, and friends. However, when used in a business context the work that a user does (posting documents, resolving customer escalations, winning a sales bid, developing a new product or service, etc.) must influence the user's expertise as seen by other users. The Activity Graphs service provides an extensible engine to log, track, analyze, and recommend a user's items and actions that the person might find helpful. For example, if you wanted to resolve a specific customer complaint, then you would like to find another person in the organization who has dealt with a similar problem. The Activity Graphs services allows for these experts to be identified and surfaced to any user's network. And with the pre-configured integration with Oracle Applications Unlimited and Oracle Fusion Applications, the recommendations get even richer as they are provided with a "business" context.
- **People Connections service:** Enables users to quickly assemble their business networks. The People Connections service includes Task Flows or portlets that show off a user's profile, visualize the user's connections list or network, display all the invitations pending and accepted from others, deliver a whiteboard (often called a "wall") to project out relevant information about one's role or self, and provide a means to monitor and manage received and given kudos. As part of the Activity Graphs service, the People Connections service provides a view of these activity streams and includes filters for the user to determine the type of activities that are of interest.

Together these three services make Social Computing services significantly more valuable within and across enterprises.



Figure 29: Social Networking features can now be embedded directly into any portal or application.

- Oracle WebCenter Analytics:** Enables users to create usage reports for any custom application or portal. Use Oracle WebCenter Analytics to determine the most important pages of the deployed application or portal, the most used content items, the most active Spaces, and the number of users visiting these different sites and services. Oracle WebCenter Analytics additionally provides recommendations to make the Activity Graph service even more valuable. Oracle WebCenter Analytics delivers the type of information business users require to determine how they allocate their resources to enhance and improve the most important areas of the site. And the pre-built WebCenter Spaces Analytics Dashboard provides Space moderators with a tailored view of their overall team interactions and effectiveness.
- Oracle Pagelet Producer (formerly WebCenter Ensemble):** Enables the creation of mashable components that you can surface through the Oracle Business Dictionary or Resource Catalog. Oracle Pagelet Producer is a mashup engine that provides a light proxy and security management system that facilitates users adding portlets as UI widgets or gadgets to any page or site and on any platform, integrating external content into any portal, and enabling mashups from just about any source. When combined with Oracle WebCenter Content Presenter & Oracle WebCenter Data Presenter, business users have a wealth of mashup tools to get at all their required information without having to wait for IT to provide them with a solution. They can also publish their mashup components to the Business Dictionary for enterprise reuse of these key assemblies.

## Services to Enhance Personal Productivity

Many Oracle WebCenter Social Computing Services are specifically designed to work with standard personal productivity tools, offering functionality focused on the individual rather than the group. These services include:

- **Mail service:** Exposes e-mails from any IMAP-compliant mail server and enables users to perform basic e-mail interactions, such as view, read, create, and delete messages, send attachments, and reply to or forward an existing e-mail. Often, emails contain a list of people working together to resolve an open issue or complete a project. A user can create a Space that leverages the message's list of recipients for its membership. In this way, users focus on the task at hand and not on how they create an area to manage the task. And with the WebCenter Outlook plug-in, email discussions can be quickly moved into a Discussion Space for more effective tracking and resolution of key decisions.
- **Worklist service:** Surfaces business processes in the context of the current business scenario and enables users to view and take action on all tasks and notifications from a central place.
- **RSS (Really Simple Syndication) service:** Exposes the content of many different Web sites in a news feed viewer and provides an RSS feed for others to consume as well. It provides a quick way of publishing internal information out and consuming external information from many sources to get an aggregated view of what is occurring around the task, process, or activity that is being tracked.
- **Notifications service:** Enables users to register interest in different items within the environment and then get a notification delivered to them when and where they want.
- **Search service:** Assists users with locating data, documents, experts, and information that are stored anywhere within the enterprise. Oracle Secure Enterprise Search (SES) is integrated with this service.

## Conclusion

Oracle WebCenter Suite 11g Release 1 is the only complete, open, and integrated set of components that leverage the full power of the Oracle Fusion Middleware foundation. It delivers a modern user experience platform for the enterprise and the web in Oracle WebCenter Portal Framework that provides advanced and differentiated features to speed delivery of Process Portals, Business Intelligence Dashboards, Dynamic Online Communities that leverage Social Computing Services, and modern Business Applications. The new release of WebCenter delivers of the promise of converging the best of all the features of Oracle's portal portfolio products into one user experience platform. Oracle Composer, WebCenter's Business Mashup tools along with Oracle's Business Dictionary provides unmatched role-based facilities for enabling business users to seamlessly unify many all of their enterprise applications and deliver Executive Cockpits. Oracle WebCenter Spaces delivers mutli-site and Dynamic Online Communities that orchestrate a complete suite of Social Computing Services to enable organizations to finally tap into the critical thinkers within and across their organizations and leverage their resources like never before without having to wait for IT to deliver them a usable solution.



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