

Collaboration Enabling the Enterprise: Leveraging Human Capital by Bringing Collaboration to Business Processes

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EXECUTIVE SUMMARY

People in organizations feel the strain of information overload. Their ability to create information - messages, documents, spreadsheets, designs - is swamped by the information delivered to them daily. Information is often duplicated - stored in email attachments, on desktop computers, on file servers, and elsewhere. One individual may know which version is accurate, but without a way to contact that person in real time, that person's work might have to be recreated. Information gets lost, workers become less productive, and people grumble about the inefficiency.

To handle information overload, smart organizations want to provide their workers with tools that manage information overload. Tools that help workers gain access to content related to a given business process from within the context of the process. Tools that let workers communicate with the right people from within the context of the process. Tools that help workers find the right information and consult with the right people to make better decisions, take action more quickly, reduce errors and improve results. These tools create a collaboration infrastructure.

Many companies have tools that provide pieces of this collaboration infrastructure. Individual departments may use their own file server. Individual users might take advantage of internet protocol communications services, like instant messaging or voice over IP, to communicate with relevant people online. Companies have rolled out email, voice mail, and fax systems. Yet, individual pieces do not make an enterprise-capable collaboration infrastructure.

An enterprise-capable collaboration infrastructure integrates the collaboration tools into common interfaces accessible from any business process. Communications and content tools can surface from within applications or portals to retain the context of the process. This integrated approach can be implemented locally for each line of business, but managed centrally from the data center. And all communications - text, voice, fax, calendar, discussions and conference, are provided through a common interface available online or at the desktop.

An integrated collaboration infrastructure offers key benefits over its piecemeal alternatives:

- Standards-based integration to enable collaboration within any process
- Unified authentication that controls access to enterprise communications and content tools
- Enterprise-driven policy management of content and communications for effective regulatory compliance

Of the various collaboration tools available on the market, only Oracle Collaboration Suite 10g delivers the only integrated platform of leading tools that

meet these requirements and power the Collaboration Enabled Enterprise. Because it is built on Oracle Fusion Middleware, Oracle Collaboration Suite allows you to deploy a highly available and reliable system running on Grid infrastructure.

People across every organization collaborate to address opportunities, solve problems and share their understanding. Some of these collaborative activities like product design or sales management are focused on new revenue, while other activities reduce operations costs by addressing errors, managing risk, or handling exceptions to “normal” activities.

In 1990, many organizations were centralized and people working in the same physical location had less need for collaboration tools. There was little outsourcing or distributed management. When workers wanted to address issues that required collaboration, they got in a conference room (or two conference rooms connected by phone, if necessary) and hammered things out. Today, due to the highly distributed work environment, as well as the move to more agile organizations and a keen understanding of the requirement to be more customer-focused, collaboration has grown to span processes, time zones and continents.

Powering much of this collaboration is a new class of ubiquitous communications tools like email, instant messaging, voice exchange, file sharing, and Web conferencing. Executives understand that connecting the right people with the right content creates an environment for success. People who communicate effectively experience less ambiguity and can work together to create consistent content. In addition, working in real-time allows for faster decision making.

COLLABORATION IN ACTION

Many tools exist to improve productivity and accelerate an organization’s performance. Examples include:

- **Communications and collaboration tools:** These tools are both synchronous, such as Instant Messaging, Web conferencing, and telephone conferences, and asynchronous, such as discussion groups, one-way portals and, of course, email.
- **Group Collaboration:** Group-ware tools have been available for at least a decade. These systems offer the ability to link different information related to a given activity in a single access point while securing access to that content.
- **Content Sharing Utilities:** Because much of collaboration is around developing and reviewing “content,” content sharing tools have evolved from simple shared network drives to richer models that may include locking or even versioning. These tools ensure that users are seeing the latest versions.

The Value of Contextual Collaboration

What happens when there is little or no context around collaboration? Take the example of a customer making a support call to her vendor. In this example, the vendor provides a website which the customer can visit to file a support request. This form goes into a queue where a support person reads the information then calls the customer back if necessary or sends an email with the remedy.

In this traditional system, the customer has to know where to find the portal, take time to go enter the information, then wait – not knowing if the message was received or when someone will call back. Moreover, she will likely be working on other tasks when the call is returned. In other words, she will be in a different context.

If this portal included presence awareness for the reps, the customer could have a short chat session directly with the appropriate rep via instant messaging. The IM chat session could have evolved into a Web conference to “show” the support rep the problem. Internally, the support rep could bring other experts to the issue immediately, all the while collecting relevant information for use in creating a knowledge base.

COLLABORATION MUST BE LED BY THE ENTERPRISE

When collaboration tools are provided by the end-users on an ad-hoc basis, many challenges arise when the organization attempts to use these tools when building business solutions on which to incorporate collaboration.

Institutional use demands these tools evolve into a unified suite:

- **Content Management:** It is no longer enough to store a copy of information. Information that cannot be found has no value and requires duplicate work to recreate. Content needs to be automatically searchable, with rich meta-data applied (often times by the system) and rich sharing tools provided.
- **Context:** It is necessary to tie content directly to the people who produce it and to the communications they share regarding it. This “context” gives the content more value, yet is a critical factor lost in the myriad of network shares in many organizations.
- **Compliance & Governance:** When people collaborate, they are often discussing key elements of the business and their communications are often the subject of regulatory restrictions. Policies around storage procedures must be equally applied to the many different collaboration tools available.
- **Integration into Business Processes:** Collaboration that is tied to a business process through end-users who maintain a connection between the business applications and collaborative applications leads to high training costs and even higher switching costs. Collaboration must become part of the business process.
- **Security:** Collaboration spans all aspects of an organization; communications tools need to be secure. Distributing unencrypted packets of text and voice across the Internet must be avoided.

Requirements for Enterprise-Class Content Solutions

“Content,” when discussing collaboration, includes spreadsheets, presentations, email, voice mail, project plans, CAD output, scanned documents – virtually any document or communication result (ex. Email) relevant to the organization. Electronic content has historically been stored in many places – individual computers, file servers, public email folders, dedicated content management systems, and elsewhere.

Unfortunately, this content can be easily lost or corrupted. Content is duplicated via email with no way of ensuring that the original or master file remains unchanged. Content may be accidentally overwritten on file servers when a user forgets to save a changed document separately under a different name. Good business decisions can’t be made with missing or corrupted content, or with multiple versions of the truth.

There is a new wave of content management tools being developed for general-purpose use in organizations. These new content management systems can simultaneously act as traditional file servers and traditional content management

systems. As file servers, they integrate seamlessly into corporate networks as external storage systems. However, as content management systems, they allow content access to be managed document by document.

For content solutions, compliance and security are tied together. Corporate regulations now require organizations to ensure that access to sensitive documents is strictly controlled, and that modification or deletion of corporate records conforms to corporate policy. These requirements translate to ensuring that no one can change corporate records once they have been designated.

While traditional enterprise content management systems can perform these functions related to document security, they are expensive to install and unwieldy to use for most workers. The traditional systems do not integrate easily into the general business network nor are they seamlessly extended into business processes.

Requirements for Enterprise Class Communications Tools

Communications tools include instant messaging and presence, voice chat, Web conferencing email and discussion forums. In isolation, these tools all deliver some amount of value -- to deliver substantial value, however, these solutions require integration into business processes in ways that address security and compliance problems.

The first required capability is business integration. Enterprise-class tools need hooks that allow them to be integrated into various business applications. For example, a web conferencing tool can be used for internal employee training. Workers do not have to travel and assemble in conference rooms to participate. By tying the Web conferencing tool to the electronic learning application, Web conference tools allow better tracking of course attendance – a growing concern for compliance officers.

Similarly, presence, when embedded into a business process can allow instant messaging to move from the individual to a group where just one of a group is required to address an issue. A visitor to an online store does not care that a specific person handles their question – just that someone is available to do so. Presence routing tools allow the IM solution to be integrated into support portals or other support applications.

The second capability is security. Communications tools require both encryption and authentication. For security purposes, enterprise-class tools must allow for encrypted communications and policy controls that mandate encryption in specific applications. Users who should not have access to the system must be kept out.

The third capability is policy control over communications archives. This control logs the participants in a communication and the content exchanged for a specified period.

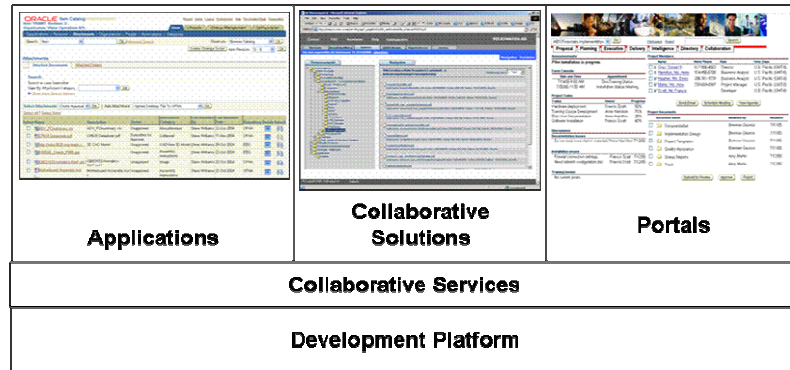


Figure 1 – Oracle Collaboration Suite as a platform

An Integrated Platform for Collaboration

Enterprise-capable collaboration tools meet the unique needs of each line of business by allocating centrally managed capabilities that are integrated into relevant business processes. With an enterprise-wide collaboration infrastructure, IT managers can set consistent policies for content and records, manage and audit communications, and deliver consistent collaboration interfaces for each unique line of business implementation.

Compare the benefits of enterprise-wide collaboration against the likely incumbent – ad-hoc collaboration infrastructure. In many instances, collaboration tools have been deployed ad-hoc, each tool is a silo of stored information that is inaccessible to users of other tools. As opposed to an integrated solution, ad-hoc implementations require individuals to move information between tools, maintain the collaborative context, and administer and support multiple tools and inter-tool communications. In the ad-hoc environment, the content remains separate, with independent or non-existent policy management. Clearly this is a threat to an organization’s ability to comply with regulations, manage security, and collaborate.

Figure 1 shows an integrated collaboration infrastructure. This integrated system is built on a unified data structure of corporate content, and resides in a single database. The content file management and communications tools access this common database of unstructured information.

From the user’s perspective, the integrated approach offers benefits that the silo approach either cannot attain or would require a very costly integration process to achieve. This platform for collaboration allows organizations to collaboration-enable many different business processes. Relevant documents and emails can be linked with invoices for later review. Discussions are linked to events, email, documents and tasks. Online presence awareness can be used to manage escalation

issues quickly using secure instant messaging. In business applications that require presence awareness, content control, or built-in communications, the collaboration infrastructure eases integration and facilitates the collaboration-enabled enterprise.

From an administrator's perspective, the integrated solution addresses key security and compliance issues simultaneously:

- A common single sign-on system manages user access to information.
- Central policies ensure that users access only the information for which they are authorized.
- Administrators can create and enforce policies for tagging content with metadata to ensure that the content can be found more easily through search.
- With a single interface, administrators can provision and manage user permissions for all their content and communications needs.

With common administration and security, administrators gain control over corporate content, at less cost.

ORACLE COLLABORATION SUITE 10g: THE PLATFORM FOR THE COLLABORATION ENABLED ENTERPRISE

Oracle Collaboration Suite is true collaboration infrastructure, built on Oracle's Fusion Middleware -- a family of standards-based, customer-proven products that includes Oracle Application Server, Oracle Collaboration Suite, Oracle Content Services and Oracle Data Hubs. This allows enterprises to setup comprehensive enterprise information architecture.

Collaboration Suite provides a common data model with common authentication and a single administrative interface for all elements. With Oracle Collaboration Suite, organizations build an information infrastructure on a platform that manages business content, while simultaneously delivering business efficiency, risk mitigation and cost reduction.

Oracle Collaboration Suite Benefits

Improve Efficiency

- People, Teams, Processes
- Increased Customer Touch
- Efficient Decision Making

Mitigate Risk

- Enforce Policies
- Easier Search and Discovery

Reduce Costs

- Consolidation
- Single Architecture
- Leverage Oracle Investment

Oracle Workspaces

Oracle Workspaces provides services to manage team activities, coordinate member participation with different access roles, and to organize and share information among team members. Within a Workspace, a user is able to share documents, hold discussions, administer meetings, and manage tasks. Workspaces can help manage ongoing processes or be custom-tuned to meet shorter-term project requirements. Oracle Workspaces leverage all Collaboration Suite services (including Mail, Calendar, Content, Discussions, Presence, Web Conferencing, and Instant Messaging) and make them available to users, as they need them. Oracle Workspaces enables organization of content without making copies of information. End users access their Workspace content using familiar clients such as Outlook™ and Thunderbird for email, Calendar desktop and Web clients, or WebDAV file browsers. Oracle Workspaces provides transparent interactions with the deployed services, while maintaining consistency, relationships, and appropriate access privileges for all team resources.

Oracle Content Services

Oracle Content Services is the file and content management component of Oracle Collaboration Suite. Oracle Content Services delivers a new level of functionality, usability, and expandability. Oracle Content Services provides the tools and facilities needed to manage the content explosion, reduce risk associated with information discovery and information loss, and establish a broad range of content compliance policies. This new functionality is seamlessly surfaced in familiar environments, when and where users need it, and without changing the way they work.

Oracle Content Services is both an end user tool and a services-oriented platform for content management solutions. Users access content through familiar desktop productivity tools via Oracle Drive, which seamlessly presents Content Services to the desktop as a network drive, automatically makes content available offline, and provides access to advanced management functionality via right-click menus. Oracle Content Services also provides a dynamic, familiar, and easy-to-use Web interface. For development of custom content management tools, a comprehensive set of Web services allows other programs to access all of Content Services' rich functionality. Oracle BPEL Process Manager, used in conjunction with Content Services enables enterprises to orchestrate Web services and human interaction in content-centric business processes. Finally, Oracle Records Management delivers policy driven management, retention, and disposition of business-critical records.

Oracle Real-Time Collaboration

Oracle Real-Time Collaboration is an integrated real-time collaboration solution designed to meet the needs of an enterprise – cost-effectively and securely. Oracle Real-Time Collaboration provides a broad array of collaboration services that provide enterprise context, meet user and line-of-business requirements and extend into business processes.

- **Individual and Group Presence:** Presence provides information about a person's availability to every person or application that subscribes to that person's status. Even groups can have presence. When integrated into business applications, users can communicate instantly with other users for increased productivity and efficiency. Group presence can be extended beyond the borders of the enterprise with Live Help. Live Help lets external individuals enter a request queue and manages the process for allocating requests to available personnel.
- **Instant Messaging:** Improve end-user productivity by enabling them to instantly locate individuals and groups across the entire enterprise and collaborate with them in real-time, and to seamlessly transition from an instant message to a voice chat or to a Web conference.

- **Web Conferencing:** Oracle Web Conferencing brings real-time online meeting capability to any enterprise, enabling employees, customers, and partners to meet online in a common, flexible environment capable of supporting online meetings of all types across the extended enterprise. With a single installation, organizations can easily tailor Oracle Web Conferencing to comply with specific lines of business flows and preferences, resulting in improved productivity, enhanced operational efficiency, and reduced costs.
- **Voice:** With computer-to-computer connections, individuals can exchange voice along with text information. Attendees can listen to Web conferences on their computers, and, using a PC microphone, chat with colleagues to reduce phone and teleconference charges.
- **Integration services:** Allow applications to incorporate Oracle Real-Time Collaboration services seamlessly with any business application using SOAP- and XML-based integration services for contextual collaboration.

Oracle Unified Messaging

Oracle Unified Messaging forms the core of Collaboration Suite communications, offering a unified Inbox for mail, calendar, voicemail, faxes and threaded discussions to help users manage information overload and increase their productivity. Oracle Unified Messaging enables organizations to offer powerful, pervasive desktop, Web and mobile access enterprise-wide, designed to match today's diverse work styles, and ensuring that users are always able to get to their critical email, meeting invitations and documents – wherever they are, whatever they're doing. And because Oracle Unified Messaging is built on the Collaboration Suite infrastructure, it extends communications seamlessly to new services today – by real-time enabling productivity tools with imbedded presence and instant messaging, and tomorrow – with the ability leverage a single VoIP infrastructure for voicemail, voice chat and “click-to-dial” functionality.

Multi-platform desktop support: From the unified Inbox of Oracle Connector for Outlook, to Calendar desktop clients for Windows, Mac and Linux, to support for popular IMAP and POP mail clients like Mozilla Thunderbird, to content that can be accessed through Windows Explorer, Oracle Collaboration Suite's desktop support is second to none.

Rich browser access: The Collaboration Suite portal offers full access to all Suite components from a wide range of browsers, including Internet Explorer, Mozilla and Mozilla Firefox. New in release 10g, Collaboration Suite mail, contacts and directory is available via the new Web Access client, offering desktop-like functionality such as drag-and-drop and quick sorting and search via a fast, browser-based client.

Enterprise-wide mobility: Mobile Collaboration offers support for all networks and device types – from mobile phones to PDAs, Blackberrys and Smartphones. In addition to existing over-the-air (OTA) calendar and contacts synchronization, and SMS, browser and voice access to the Collaboration Suite, a new push email

service is offered in release 10g. And new device management capabilities make wide deployments of Mobile Collaboration services easier, enabling administrators to leverage OTA functionality to install and configure clients on a fleet of mobile devices.

THE COLLABORATION ENABLED ENTERPRISE WITH ORACLE COLLABORATION SUITE 10g

Businesses need to migrate from ad-hoc or poorly integrated communications and content tools to an integrated collaboration toolset. The integrated toolset must offer ease of administration for policy control, as well as a common authentication scheme for controlling user access to services and content. Without these capabilities, businesses face security obstacles and risk being out of compliance with the latest corporate regulations.

Integrating Collaboration into business flows

Oracle Collaboration Suite 10g offers the leading development platform for integrating with business applications through the OCS Development Platform. Integration with these applications can be driven from custom Java or Microsoft .NET applications or through a higher level of workflow processes, such as BPEL processes.

Enable Regulatory Compliance and Reduce Legal Risk

To mitigate risk, organizations also need the ability to find content and ensure that its availability and storage meet policy requirements. Sensitive information may need to be moved, reclassified, or deleted. Organizations also need to ensure that inappropriate material or copyrighted documents to which the organization does not have rights are not kept anywhere within corporate storage. Both of these requirements demand an integrated search tool that can identify content by keywords, file types, formats, creator – as well as internal content and structure. Oracle Collaboration Suite incorporates integrated Oracle Ultra Search. With Ultra Search, managers can root out inappropriate or sensitive content and take appropriate action.

Reduce Administrative and Integration Costs

Oracle Collaboration Suite reduces operating and administrative costs through consolidation and a unified infrastructure, as well as leveraging organizations' investments in Oracle technology and skills. With Collaboration Suite, organizations can consolidate distributed file and communications servers to a set of centralized locations, dramatically reducing hardware, software, and maintenance and policy administration costs when compared with distributed systems. The net result is better control of content, reduced costs, and increased organizational efficiency.

A True Suite Solution for Collaboration

Oracle Collaboration Suite was designed from the ground up to provide customers with an integrated and adaptable collaboration infrastructure for higher productivity with reduced cost and risk. Oracle Collaboration Suite provides a powerful content management system for content creation, access, storage, and retention, as well as key communications capabilities including email and voice mail, calendar management, presence awareness, web conferencing, and mobile access. In addition, Oracle Collaboration Suite incorporates the access control, content security, scalability and reliability of Oracle Database 10g – delivering a highly robust and secure collaboration infrastructure.

Find out more about Oracle Collaboration Suite. Call Oracle today at 1-800-ORACLE1 (1-800-672-2531) or visit <http://www.oracle.com/collabsuite/> for more information about how Oracle Collaboration Suite can provide a seamless collaboration infrastructure for your organization.



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