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Portals Open Doors to Processes

The latest generation of portals lets users do their work as well as see information.

By Penny Lunt

When portals first emerged, they were a way of consolidating corporate Web sites.

"In the late 1990s Web technology had become so easy to use that little rogue intranet sites started springing up all around companies," recalls Nate Root, an analyst at Forrester, Cambridge, MA. "Some of the largest companies had a thousand Web sites."

Portals were also a place to aggregate information so that employees or customers could go to one place for a unified view or dashboard. Users could customize the look and content of the portal in MyYahoo fashion.

Today, portals are outgrowing that original information consolidation role, most notably by integrating with business processes. Where in the past, portals provided access to information users needed, they're now beginning to integrate the processes users need to do their jobs. One day, many believe, the portal will be a master framework under which all applications and Web services are built, managed and accessed.

In tandem with this trend, the arena of portal players is changing. The earliest portals were built by pure-play portal software vendors (such as Plumtree and Epicentric) or in-house IT staff. Today, process portals can be built using application servers, enterprise application integration (EAI) servers, enterprise resource planning systems or the original pure-play software or in-house routes.

By handling processes through portals, organizations eliminate wasted time logging in and out of multiple applications and gain efficiency by being able to make a change once and have it reflected in all affected applications.

Portal processes can provide much-needed ease of use. "Most enterprise applications have lousy interfaces that confuse users," writes Root in Forrester's "Gear Up for Process Portals" TechRankings brief. "Process portals hide these horrible [user interfaces] from users by delivering just the functionality needed to accomplish specific tasks, embedded in streamlined business processes."

Processes can also be simplified through the personalization features that portals provide; when applied to processes, personalization allows tasks to be customized to specific roles or even levels of experience.

There are three main ingredients to a process portal, Root says. First is a connection to back-end applications. In the past, portal companies produced adaptors or 'portlets' to hook into back-office systems, but the future of these connections, says Root, is in technologies such as Web services and integration standards such as JCA and JMS.

The second major piece of a process portal is business process management (BPM). In addition to facilitating workflows, BPM lets portal developers model and test various pieces of portal functionality. Tibco, for one, recently released a BPM edition of its portal server.

The third building block of a process portal is a personalizable front-end interface. "You don't want to throw up generic, vanilla processes that everybody uses the same way, because that's not like real life," Root notes. "When you personalize processes for employees, you naturally simplify them because you're presenting only the functionality they need to use."

There are various levels at which companies unite portals and processes. Following are descriptions of four common approaches to portal/process integration along with case study examples that fit each scenario. Keep in mind that the sophistication of the integration approach doesn't necessarily reflect the sophistication of the underlying portal: an advanced portal might use a simple means of integration, and vice-versa.

Stage 1: Providing Read-Only Access to Applications

The simplest way to integrate portals with processes, according to Ray Valdes, research director at Gartner, Stamford, CT, is to provide read-only or "read-mostly" access to back-office systems. This type of integration might let users see, for example, their top ten sales leads from the sales force automation system or an inventory level from the enterprise resource planning system. Portals have been providing such windows or links into the back office for a while.

An example of a portal that provides links to back-office processes while aggregating vast quantities of content can be found at IMS Health in Fairfield, CT. This pharmaceutical research firm with 5,000 employees in 63 countries wanted to turn its multiple intranets into a portal that employees would visit every day. Using Multisite Content Manager from Vignette, Austin, TX, IMS Health consolidated eight major intranets and streamlined its process for delivering corporate communications and local news to

Resources

BEA

www.bea.com

Epicentric

www.epicentric.com

IBM

www.ibm.com

Plumtree

www.plumtree.com

Tibco

www.tibco.com

Vignette

www.vignette.com

its staff. The portal also provides links to procurement (via Staples Online), travel registration, expense report submissions and stock information.

IMS Health didn't want to change the workflows people were using in their existing applications, but it did want to provide a way to access some of those applications from the portal. The new IMS Health portal was unveiled in February, and already it's getting six million hits a month. The next step is to add Multisite Content Manager's Virtual Team Room capability to the portal for collaboration.

The IMS Health project cost \$1.3 million in total, including software, maintenance, hardware and training. Returns are already being realized through the consolidation of intranets, the ability to run on just one server rather than many and the ability to redeploy database administrators to other projects.

Stage 2: Performing Simple Tasks Through the Portal

Valdes of Gartner says the second level of process portal development lets users perform transactions, functions or tasks within the portal, rather than having to use a separate application. These are typically small tasks that require only a few steps. An example might be making an address change or a health benefits change in the HR system.

"Enterprise applications can be large and complex, and perhaps 90 percent of users need 10 percent of the features," Valdes points out. "While there are core users who do a lot of their work in an ERP system, other users do a small number of high-value tasks. If you can expose that functionality by integrating an API to the enterprise application, you can do many of those tasks in the portal."

A great example of a portal linked to simple tasks is in place at Palo Alto, CA-based Hewlett-Packard. The company's employee-facing portal, called @hp, is integrated with simple, intuitive processes. Launched in late 2000, the @hp portal first consolidated more than 2,000 intranet sites. "That [alone] saved the HP \$10 million in operational costs," says Root at Forrester.

Over time, more than 250 employee transactions were added to the portal, which is based on Foundation Builder from Epicentric, San Francisco, CA. These include benefits enrollments, time cards, salary administration, employee transfers, travel reservations and ordering supplies — all chores that used to require filling out and routing forms.

"It's not smoke and mirrors," says Homer Wong, HP's director of business development for B2E solutions. "These processes actually integrate into our enterprise HR and payroll systems (from PeopleSoft) and update information there. This has saved us a lot of money and provided efficient ways for managers and employees to get things done."

HP reports that its \$20 million portal saved \$50 million within its first six months, largely through reduction in paperwork and the elimination of a call center, manual data entry and fax services. Putting benefits information and tasks online allowed HP to outsource benefits administration.

Another reason portal-based HR activities made sense was that 75 percent of HP's workforce is mobile — on sales calls or servicing customers.

"A lot of people don't have offices at HP any more, they just have their cell phones and laptops," Wong says.

HP developers write easy-to-follow steps called checklists. These create a user-friendly interface that

can remain in place even as back-office systems change. For example, when HP first put time cards on @hp, the company was using a third-party time card application. When HP migrated to the latest version of PeopleSoft, which had a time card application built in, the switch was made with no change to the user interface.

By May 7, 2002, the day HP's merger with Compaq was completed, all 150,000 employees of the combined company had access to @hp and could find the latest corporate news there. Every three to six months, HP rolls out new functions on the portal. The most recent addition was an executive dashboard that gives the top 50 HP executives aggregated financial information. The next phase will be an e-learning system that will push alerts to employees about upcoming classes and then let them log in and attend webinars. Another plan in the works is to deliver the portal through handheld devices such as the Compaq iPaq.

Stage 3: The Portal Becomes An Integration Platform

When the portal becomes an integration platform, users can access complex processes and data from multiple apps. E-business systems integrator Perficient Software in Austin, TX, has achieved this by using the IBM WebSphere application server to develop a portal that company consultants use for everything they do.

"We wanted a portal where consultants could do one-stop shopping — using the portal to handle all their processes, from recording and billing hours, handling expense reports and answering email to interacting with clients," says Andy Sweet, Perficient's CTO. "We have consultants spread throughout North America. It's difficult to enforce business flow across consultants who are scattered everywhere. We use the portal to enforce business process flow. We have time entry connected to our back-end financial systems, so we're able to see accurately, in real time, where we're at in the quarter, where we're at forecast-wise and how many billable hours we're going to get."

The first application Perficient integrated with its portal was its QuickArrow time entry system. This is where consultants record all their billable hours. The portlet Perficient wrote not only provides the interface, it provides the workflow that routes time sheets to supervisors for approval or adjustment. The workflow also feeds the data into the back-office systems that bill clients and pay consultants.

Perficient's portal accepts Web services from outside applications. For example, an Atlanta-based incentive company that Perficient works with provides a Web service for accepting incentives orders. Travel services are also handled through the portal using Web services. "Portals are the killer app for Web services," notes Sweet.

Perficient has integrated its portal with collaboration tools including QuickPlace, SameTime, document sharing and workflow monitors. "Since we're so spread out, the portal becomes a virtual water cooler at which people can find out what's happening," says Sweet.

The ability to collaborate virtually has cut travel expenses drastically. Previously, if a consultant at a customer site needed help, other consultants were flown out. Now, instead of going to the physical customer site, the assisting consultants collaborate through the portal. Unreimbursed travel expenses have consequently been reduced by 30 percent.

Other cost savings attributed to the portal include a 10 percent reduction in benefits administration costs and faster turnaround between logging work performed and delivering an invoice to the customer.

"We have gotten back what we paid for the portal software already," Sweet says. "Integrating business process is where you get your ROI. But what's made us excited is that as a virtual company, we've been able to pull people together and integrate all our business processes and activities."

Stage 4: The Portal Becomes a Development Environment

In the portal/process integration nirvana described by Gartner, the portal is used as a rapid application development environment for new applications that didn't exist before, as well as an integration point for legacy systems.

At National Century Financial Enterprises (NCFE), a healthcare receivables financial firm in Columbus, OH, "the portal is a GUI framework," says Kevin Armstrong, vice president of NCFE's technology group. "It's a place for us to deliver applications and company information to customers, investors and employees."

The employee-facing portion of NCFE's portal is where all employee applications reside. "If you want to interact with our customer relationship management (CRM) system, 100 percent of that interaction is through the portal," Armstrong says.

In December of 2001, NCFE deployed the WebLogic Portal from BEA, San Jose, CA, and began writing applications for it, including proprietary CRM and asset tracking systems. NCFE builds Java Server Page portlets that present personalized content and tasks to users based on their roles and rights.

Normally, a CRM system user would have to navigate through various parts of the application to get to the specific tasks and information required. "A portal framework already knows who you are, and based on rights and entitlements, it presents you with just the functionality of the system that you need," says Armstrong. "Instead of navigating through a large, complex GUI, it's presenting you with a very small, exact part of the system that you need."

NCFE is also creating workflow portlets. Instead of building separate workflow interfaces for different users, one portlet can be automatically customized to many different user roles. For example, NCFE recently deployed content management and document imaging software from Stellent. Whereas a company might write as many as 50 to 100 slightly different interfaces into such a system, from the BEA portal NCFE wrote five self-customizing portlets.

In six months, NCFE created and deployed the new CRM and asset tracking systems, and integrated the Stellent software. Armstrong describes the integration as tight — every component interacts with every other component as if it were part of the same piece of software.

"Before the portal project, we were facing a lot of trouble with other applications and spending too much time on architectural issues," says Deven Mehta, NCFE's enterprise architect. "The portal has provided us with a solid foundation for building and running enterprise applications. So our focus has shifted from technical, architectural issues to more delivery focused issues."