Automated Workflow Goes Enterprise

The latest software allows workflow systems to do much more than manage the logistics of passing a task from one individual to the next. Capabilities for decision support, audit ability, and real-time process monitoring all add considerable value to these applications, making them far more powerful than the manual processes they replace.

To say that businesses today approach technology with caution is an understatement. Grandiose visions are out and practical, no-nonsense business value is in. Automated workflow, nevertheless, is one area where emerging technology is likely to make the cut.

Workflow solutions provide a "win-win" by reducing stress and errors for line workers, and at the same time giving management the tools to make measurable improvements to the business. The prerequisite, however, is considerable clarity around the processes being automated.

Almost every business has to execute a number of collaborative tasks that flow from one person to another. In insurance, it might be the processing of a claim that has to receive several levels of approval.

In telecommunications, it might be the routing of a trouble ticket from the help desk to the technical expert, and finally to the field technician who goes up the pole to fix the problem. And for almost any company, it can be the approval of payments or expenditures.

Automating processes of this sort is nothing new; many applications, notably ERP systems, have workflow components that operate within the limited scope of die application they support.

However, with the improved interoperability that middleware and standards have created, it is becoming increasingly practical to automate workflows that span different applications.

This means that automated workflow can be implemented as a platform-independent utility, able to support enterprise level processes, and also collaborative processes involving customers and business partners.

The latest software allows workflow solutions to do much more than manage the logistics of passing a task from one individual to the next. Capabilities for decision support, audit ability, and real-time process monitoring all add considerable value to these solutions, making them far more powerful than the manual processes they replace.

The attractiveness of automated workflow is that its benefits are felt at many different levels in the organization. The advantages include the following:

- Co-ordination of activities is improved, because the system manages the complexity of all the interactions. The system "knows" when a manager is out of town, for example.
- Accessibility over the Web creates easy access for employees or authorized associates.
- Line workers are empowered with better tools that involve them more intimately in the process. This gives them more opportunity to participate in improving their business process, rather than blindly following it.
- Managers can make better decisions regarding approvals and other actions by having more and better information, which can be drawn in real time from a variety of applications throughout the enterprise.
- There are many opportunities to eliminate task replication, and therefore reduce costs.
- The ability to audit functions is valuable for a number of reasons. It allows the organization to comply with Sarbanes-Oxley and other governance standards (see CMA Management's feature article in the June/July 2004 issue, "IT and Sarbanes-Oxley"). But perhaps just as important, this enables the organization to exercise internal governance, monitoring compliance with the process.
- Last but not least, the ability to audit and the visibility of the process taken together help management continuously improve the workflow process. When an enterprise approach is used, the result is that continuous improvement is possible at an enterprise level, transforming workflow into a source of competitive advantage.

Implementing automated workflow at this level requires a well-established and documented process. Gary Basson, director of Calgary-based system integrator Logic Curve, explains the challenges. "This is not a technical issue, this is a business issue," he says.

"When you're developing workflow solutions, in essence what you're doing is automating a process. And if you don't understand your business process, or you don't have buy-in to a specific business process, it's almost impossible to automate."

Conversely, says Basson, "once you have clarity around the analysis, developing the solution is fairly straightforward."

A case in point is Calgary-based energy giant EnCana, a Logic Curve customer that has taken proactive steps to develop an enterprise approach to workflow. One such action was to establish a workflow competency centre, dedicated to ensuring that workflow projects are properly scrutinized, and reflect some of the lessons learned from past efforts.

According to recent CMA recipient Lanis Shannon, business and software analyst for EnCana, it is essential here to "know and understand extremely well what your workflow process is expected to do." Shannon has found that staying close to the process at the grassroots level was the critical success factor.

"There is the 'user factor,' where users will do things the developers, testers, and business analysts would never consider. The closer you are to the actual business activity, the less chance of having things that fall between the cracks."

Another prerequisite for automation is a very high compliance level for the process that is being automated. Getting user buy-in requires time and patience, according to John Robertson, senior adviser for supply chain management at Petro Canada.

Recently, Petro Canada developed a standardized, organization-wide procurement process, parts of which were subsequently automated. The most critical part of the change management process, according to Robertson, was to teach users "what's in it for them."

According to Robertson, "it's a question of going out there and communicating that this is good for the company, and their department." Wide compliance was achieved, but the process took several years.

Like Petro Canada, EnCana's most recent workflow project was built on an existing process that had matured for approximately two years. It functioned within their existing ERP installation, but was cumbersome to use on several levels. For example, the system was awkward to use from remote locations, particularly for managers that only had to use it occasionally.

The use of Web-based technology has improved both the performance of the solution, and given the user screens a more familiar look and feel. It is also worth noting that the new workflow solution, enabled EnCana to implement a process outside of the JD Edwards application that did not change the logic of the core process itself.

By moving the process itself outside of the application, however, it was possible to add significant refinements, such as the ability to handle escalations when an approver is not available.

The EnCana project follows an example of what Logic Curve's Basson calls an "architected approach." This means that workflow designs can be broken down into components, which can subsequently be re-used in other processes.

For example, the process component that supports the approval of an expenditure for an oil rig in Engineering could be used to support a requisition to hire a new employee in HR.

This can result in significant savings when other processes are introduced, both on the IT side and the business process side. Furthermore, it allows the organization to develop enterprise wide consistency in the way particular issues are handled.

Smaller enterprises that don't have the resources of an EnCana or a Petro Canada will find that there are workflow tools available that address the so-called mid-market.

Like smaller scale ERP, supply chain, and CRM products, workflow products have their downsides, as Gary Basson explains: "If you can find an off-the-shelf workflow solution, what you give up in terms of flexibility around customizing to your specific needs, you gain in terms of process automation. So that's die trade-off. The smaller you go, the bigger the trade-off."

Given the focus of IT vendors on the mid-market, this will be an interesting area to watch, and it is reasonable to expect that there will be rapid product development in this sector as enterprise workflow becomes a mainstream phenomenon.