Streamline Your Business Processes With Workflow & Extranet Solutions

Connie Moore and Gig Graham, Giga Information Group, USA

From Giga research meetings and conferences, we're following a new trend in the way an enterprise delegates and manages business processes in its extranet, and a new role for workflow technology.

First, some background:

ELECTRONIC VALUE CHAINS

Outsourcing is a conventional practice routinely used to substitute nonstrategic business processes with less expensive or higher-quality products and services from specialists. But outsourcing engagements have tended to cluster around back-office and stand-alone processes, such as specialized tax and legal services, payroll, health care and areas of IT. Except for transportation services, business processes that are thought to be strategic to producing or servicing products are still "insourced"—often to sustain a traditional culture, or to protect confidentiality or to maintain control over the visible aspects of an organization's business.

One of the revolutionary concepts made possible by the Internet is "electronic value chains" of carefully sequenced insourced and outsourced business processes for delivering and servicing products. In economic terms, the Internet enables the *disaggregation* of internal processes and *reaggregation* of specialists into a modern workflow, often at new price points or with higher-quality products.

Recently, we're seeing that innovative enterprises are deciding that their real competitive advantage is the ability to quickly assemble business knowledge and then apply it to managing a series of projects—sometimes with specialists that are also competitors—to deliver new products and services to market. These businesses have a renewed interest in workflow technologies to automate the rules for connecting and sequencing activities for those projects. In fact, workflow technologies may be essential in building inter-enterprise value chains.

Workflow in medical insurance extranet

Here's how we're seeing workflow applied in a medical insurance company's extranet. During the selling process, an independent agent gets a quick, nonbinding quote from several carriers for medical coverage and asks a specialist (doctor) to evaluate the customer's condition. The evaluation is stored with the proposal and submitted to the carriers. One carrier underwrites the risk, at a new price point, and records it in its policy system.

Two years later, the customer suffers bodily injury, and there is a dispute about coverage. The policy terms and the original evaluation are submitted to a new specialist for review. Those findings are also disputed, and a case is submitted to the carrier's attorney and the customer's attorney for adjudication. Information is exchanged and the parties settle. Workflow technology manages the sequence of these events, the interaction with the transaction systems and the bits of information that are added to the case over time.

Workflow in retailing

Another example is retailing. A retailer typically exchanges contracts, purchase orders, shipped goods, receiving documents, freight bills, invoices and checks with its suppliers. There are many occasions for something to go wrong—such as late payments, under payments, returns, short shipments and not-as-ordered items. Resolving these problems is an extremely manual process, relying heavily on phone, fax, e-mail and voice mail. In the meantime, the retailer suffers because the delay may negate a discount; the supplier suffers because it's not getting paid as quickly.

One large retailer that processes 250,000 pages per day to/from 10,000 suppliers found these problems occur five percent to 10 percent of the time, multiplying the cost by five to 10 times. By installing workflow that is integrated with electronic data interchange (EDI), the enterprise resource planning (ERP) system and Web-based e-forms, the retailer can not only more fully automate the ordering process, but also identify problem situations, trigger external processes that notify the supplier that something is wrong and automate the problem resolution.

Workflow in banking

The last example is banking. A customer applying for a loan could access an e-form from a bank's Web site, fill out the loan request and submit it electronically. When it arrives at the bank, workflow would direct the loan request to a credit-scoring system, receive the results, initiate funding requests, receive the approval decision, update databases and merge loan information (e.g., terms and conditions, rates, payment terms, consumer information, etc.) into a personalized, compliant loan document.

Workflow would then automatically create an e-mail message to the loan applicant with the loan document as an attachment. Most consumers would then print the loan application, sign it and mail it to the financial institution; however, when digital and digitized signatures are more widely adopted, the entire process could be approved online.

CHALLENGES

Some of the obstacles companies have encountered include business, technical and cultural challenges. Recommended approaches for addressing these obstacles include the following:

Aggressive time frames:

Use project management software; staff with experienced managers; avoid simultaneous projects that draw on the same resources; produce incremental deliverables; and track progress with metrics.

Need for best practices:

Consider the Big 5 firms for best practices in business processes within specific industries; establish incentives for sharing best practices; and build a community for maintaining them.

Impact of mergers on workflow projects:

Have a strong business reason for the workflow project in the event a merger (or changes in management) occurs.

Technical complexity:

Consider using an integrator with a strong background in complex systems integration, workflow and e-commerce; companies with these skill sets include EDS, Andersen Consulting, Cambridge Technology Partners and IBM Global Services.

Lack of skills in IT architecture:

Train internal staff by using external consultants as mentors.

Lack of skills in workflow tools:

Participate in training programs from workflow vendors; consider bringing a workflow expert or boutique firm to assist in the workflow implementation.

Local vendor support for newly announced products:

Share the risk and rewards with the vendor; ensure the support issues are not deeper than local limitations; choose the project carefully to have minimal downside impact; and undertake load testing early in the project.

User resistance to change:

Empower early users to become internal missionaries; disseminate information about how the system has made work easier; open communication channels between management and users about upcoming changes to business processes; provide users with guidance on how to apply the new technology to their daily work routines; within the IT organization, only use the staff members who are on board.

ENABLING TECHNOLOGIES

Giga sees six enabling technologies for modern workflow solutions:

1. Presentation platforms that make it feasible to interact with external suppliers and customers. Presentation services are organized in four areas: a) they work natively in browsers to provide consistent behavior of business processes in another company's environment; b) use HTML as their base document type; c) use Extensible Markup Language (XML) for defining, packaging and sharing data; and d) use other Web browser plug-ins, such as Real Audio, for attaching explanations to business processes, VRML and JPEG for visually representing parts or whole products, and FTP for transferring large files.
2. A messaging platform based on e-mail standards, such as SMTP and MIME. More advanced messaging products like Notes and Exchange can be used where the entire supply chain agrees to use one or the other. Other important services include Secure Sockets Layer (SSL) and encryption for secure transmissions.
3. A queuing platform, such as **IBM**'s MQSeries or **BEA Systems**' MessageQueue. These technologies are responsible for guaranteeing delivery of messages in the proper sequence. **Microsoft** is beginning to position MSMQ for integrated enterprise applications, but it is a first-generation product and needs to mature from real-world deployment.

4. A persistence/state change platform, such as a database management system (DBMS). It's not critical that the entire supply chain uses a DBMS, but it is critical that your workflow engine is based on one.
5. A scripting platform, such as Java for programming flow control logic.
6. Design tools, such as Workflow.BPR (**Holosofx**), ProcessWise Workbench (**Teamware**), Workflow Analyzer (**Meta Software**) and Aris **IDS Scheer**). An interesting development is that some of the modeling tools now have bidirectional integration with workflow software so that changes to the workflow process definition are reflected in the process model. In a further development, the Holosofx/IBM integration enables a workflow monitor to look at all the cases going through the workflow environment and apply measurements defined in the modeling tool, allowing business managers to modify the process as necessary based on real-world results. This is an improvement over the simulation capability in many process-modeling tools that use theoretical data.

DELIVERING EXTRANET WORKFLOW SOLUTIONS

Vendors that are well positioned to deliver extranet workflow solutions are IBM, Teamware (division of Fujitsu), Staffware and, potentially, Hewlett-Packard (HP). IBM has made significant improvements to MQ Series Workflow, its workflow product formerly known as Flowmark. HP's workflow product is Changengine and has been deployed for a large-scale internal project with 125,000 workflow users. Staffware is the leading stand-alone workflow vendor. Teamware's i–Flow has a flexible design (individual process instances have their own process models and don't create cascading changes to an underlying model), exploits Java and has broad integration capabilities. For example, i-Flow has adapters for linking with document management systems, directory servers, databases, Web-oriented forms and scripting languages. Vendors Ariba, Clarus, Commerce One and Intelisys offer workflow-enabled procurement products.

We find that enterprises that have successfully integrated workflow with their extranets tend to follow these processes:

1. Define objectives for the automation project and the metrics and their baselines against which you will measure success, i.e., number of supported partners and transaction types, number of nonautomated tasks, cost for processing customer/supplier transactions, quality processes (level of rework and mistakes) as defined by tolerance ranges, level of clerical support with greater customer/supplier self-service, number of problem/resolution calls per customer to a call center, and elapsed time to change/modify a process in response to a business changes;
2. Implement one process at a time, i.e., purchase orders, then invoices, then advanced shipment notice, then payment notification; and 3) start with a limited number of suppliers (less than 10 total) and then expand.

With emerging extranet-workflow technologies becoming available, companies can now automate inter-enterprise business processes reflecting the new, Web-based economy. Now is the time to "go with the (work)flow."