



***White
Paper***

January 28, 2000

**WORKPLACE
eCOMMERCE**

INFORTE
E-BUSINESS INTEGRATION

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1.0 Introduction

1.1 *What is Workplace eCommerce?*

In the first year [Microsoft's eProcurement application] handled 250,000 transactions involving more than \$1.6 billion, saving our company at least \$35 million in processing.

- *Bill Gates, cofounder and chairman of Microsoft*

Finding ways to boost a company's effectiveness just two percent could mean an increase of \$100 million in shareholder value for a billion-dollar company.

- *Hackett Group*

The Internet and eCommerce have become significant drivers in eBusiness, helping drive revenues, cut costs, and better serve customers. The infrastructural enablers of eCommerce, the enterprise systems that automate the operations of a company and the Internet, can also be placed in the hands of employees to directly link to suppliers and business partners. This type of eCommerce, *Workplace eCommerce*, is about increasing operational effectiveness and decreasing the costs of eBusiness.

What is *Workplace eCommerce*? Day-to-day business processes around operating resources, like corporate purchasing and expense reporting, are traditionally inefficient paper-driven processes. *Workplace eCommerce* is the application of Internet technologies to drive efficiencies and cut operational costs associated with employee-facing tasks. In the hyper-competitive world of eBusiness, companies are automating costly paper-based processes, and taking the cost savings directly to their bottom line. A 5% decrease in operating costs for a typical "Global 2000" company is equivalent to a 28% increase in profits, according to Killen & Associates.

Examples of *Workplace eCommerce* are web-based employee self-service applications like those that allow retrieving data from a corporate travel card to auto-populate an electronic expense report, managing employee benefits like insurance or 401(k) enrollment, or buying office supplies and other indirect goods and services from an electronic catalog of pre-selected items. It is the automation of all the paper forms around operating resources that require routing, approval, and eventual loading into an electronic system either inside or outside the enterprise. It is the start of fulfilling the reality of the "paperless office" that Xerox PARC heralded back in 1973.

The predictions that we'd have paperless offices were right—just premature by several decades.

- *Bill Gates, Business @ The Speed of Thought*

1.2 Workplace eCommerce vs. Marketplace eCommerce

In the recent past, interest in automated employee-facing *Workplace eCommerce* applications around operating resources such as indirect procurement solutions and expense report management solutions has exploded in the corporate community. Attractive ROIs, as well as the elimination and reengineering of inefficient processes, have caught the attention of most operations and support professionals. In addition, the acceptance of and improvement in thin client applications and extensions via improved networks has generated a viable option for employee-facing enterprise applications.

Evidence of the opportunity of this enabled functionality is found through several recent studies. According to Forrester Research, the business-to-business eCommerce marketplace is expected to exceed the business-to-consumer market by a factor of 8-10 times. This is being driven by the opportunity for corporations to take advantage of the Internet to more effectively communicate with business trading partners in ways heretofore impossible. This new process efficiency promises to deliver significant savings and process improvement over current methods.

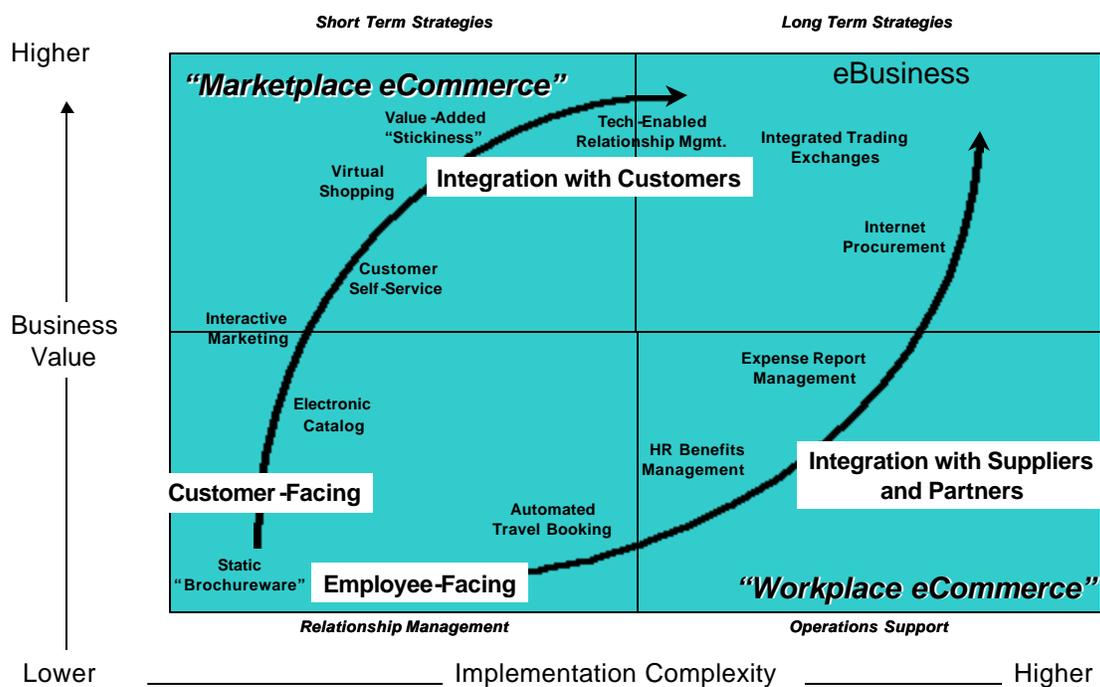


FIGURE 1. TWO eCOMMERCE ROADS TO eBUSINESS (SOURCE: INFORTE)

In general, there are two roads for eCommerce in becoming an eBusiness via the Internet. Today, many people associate eBusiness and eCommerce with online or electronic transactions with customers. Applications such as online ordering as well as online bill payment are examples of *Marketplace eCommerce* transactions. However, the definition of true eCommerce has grown to include the entire selling process, from sales and marketing to manufacturing and fulfillment, procurement, invoice processing, and other employee-facing tasks. Companies have significant opportunities to reduce costs and improve efficiencies throughout their organizations via *Workplace eCommerce* applications.

1.3 Common Solution Types

There are a wide variety of *Workplace eCommerce* solutions available today, and most companies can realize cost-savings from these solutions. Often, these solutions can be broken down into three categories:

eProcurement Solutions

Solutions centered on reducing the cost of enterprise buying are fast becoming the ROI leader of *Workplace eCommerce* solutions. These solutions derive value from enforcing vendor rationalization initiatives that drive purchasing volume from preferred suppliers, as well as from process costs. For most companies, the process around a paper-based requisition or purchase order is a highly inefficient one, usually requiring multiple approval steps.

Typical components of an eProcurement solution are shown in the diagram below.

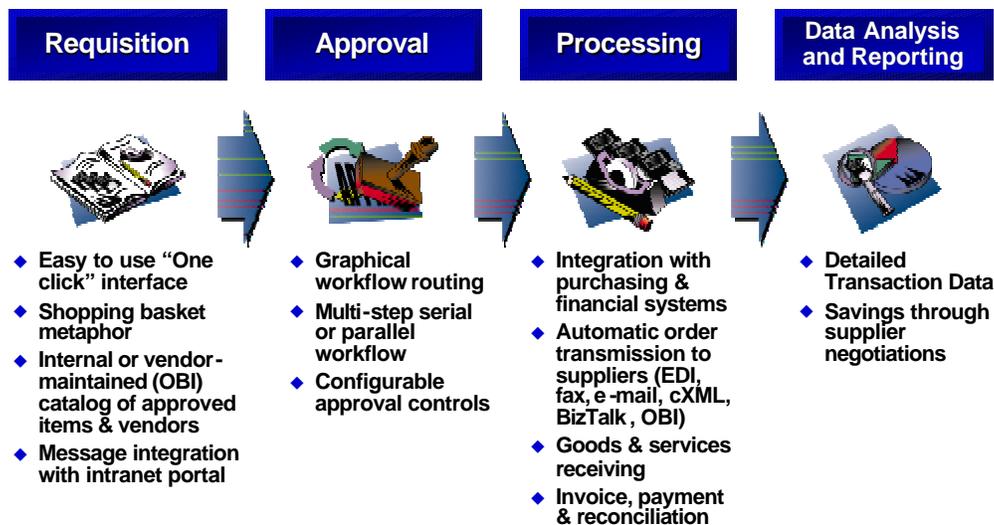


FIGURE 2. TYPICAL COMPONENTS OF ePROCUREMENT SOLUTIONS (SOURCE: CONCUR TECHNOLOGIES)

Often, eProcurement solutions are integrated into existing purchasing systems (for requisitions and purchase orders), and accounts payable systems (for receipts and aggregated payment of multiple orders). Besides internal integration, there is usually some element of external integration with suppliers for data such as catalogs, purchase orders, and shipment notices.

Related functionality such as the ability to generate payment requests and reconcile purchasing card transactions including those made off-system is also often included in eProcurement solutions. In many forward-thinking companies, eProcurement solutions are being used as general procurement portals, allowing employees to have a single place to take care of all procurement transactions.

Self-Service Human Resource Solutions

Human Resource Management Systems (HRMS) have targeted automating Human Resource departments for years, often times the largest producer of paper forms. However, only recently have companies started to turn these systems “inside-out” and put their power directly into the hands of employees through *Workplace eCommerce* front-ends. This has led to a long list of solutions to automate forms and interact with human resource vendors. Some examples of these types of solutions include:

- Benefits Enrollment (Insurance, 401k, etc.)
- Electronic Pay Stub
- Employee Directory and Organization Chart
- Employee Information Update (Address, Emergency Contact, W-2 data, Direct Deposit Routing, Skills Profile, etc.)
- Employee Life Event Management (Birth, Marriage, etc.)
- Managerial Self-Service (New Hire, Salary Changes, Position Management, Terminations, etc.)
- Paid Time Off Request (Sick, Vacation, etc.)
- Recruiting Self-Service (Applicant Requisition, Tracking, etc.)
- Time & Attendance

In addition to integration with an HRMS, these types of solutions may also integrate with payroll systems. Just as eProcurement systems can be integrated externally, self-service human resource systems may also be integrated with external HR vendor systems such as insurance providers and 401k administrators.

Expense Management and Travel & Entertainment Expense Solutions

The process of gaining pre-approval for travel & entertainment expenses, booking travel, building an expense report, routing for approval, and reimbursing an employee is often a deceptively complex process within many companies. In cases where there are many frequent travelers and other heavy submitters of expenses, the processing costs of monitoring these transactions can become very expensive.

Expense management solutions allow automating these tasks, and in many cases drastically improve the process through automated validation of expense policy and integration with corporate card vendors like American Express. This type of integration can help employees drastically cut their time building expense reports, allowing the download of transactions directly from the credit card vendor to populate an expense report. This not only contributes to employee satisfaction, but also reduces errors.

Additionally, many companies have no source of information to capture travel & entertainment cost information. Expense management systems allow gathering this information in a single repository to use this data for both negotiations with travel vendors like hotels and airlines, as well as monitoring compliance for preferred vendor usage.

1.4 Benefits

Under the “new rules” of eBusiness, companies are seeing their traditional competitive advantages erased or even turned against them. More and more companies are competing on operational effectiveness, with the most efficient companies gaining new competitive advantage.

We have a client [Gloss.com] who went from a business plan to being in business in fifteen weeks. Some companies can't even process a purchase requisition in this time.

- *Monty Zweben, founder and CEO, Blue Martini Software*

More and more, speed is a competitive advantage. Without increasing operational efficiencies around traditionally paper-based functions like procurement, finance, and human resources, companies will find themselves in more difficult competitive positions.

Improved Productivity

By taking a paper-based process, and turning it into a more efficient automated process, employees can directly benefit by being able to focus more on critical business initiatives. It's the difference between having employees move information (paper) around, and letting *Workplace eCommerce* systems handle routine process flow.

Improved Policy Compliance

Workplace eCommerce can ensure that company policies and procedures are globally and uniformly enforced, increasing procedural accuracy and timeliness. This can be done with items as simple as required fields, account code selections, and spending limits, or as complex as custom business rules for approvals. Specifically for eProcurement, this helps to control rogue buying by enforcing buys from preferred vendors in an easy-to-use interface.

Better Data for More Informed Decisions

Putting in place a *Workplace eCommerce* system allows for the centralized data storage of employee-facing transactions for corporate procurement, expense reporting, and human resources. In most companies, because these functions are paper-based or decentralized, making decisions such as vendor negotiations around this data can be difficult. In many cases, data from multiple business units has been captured in multiple systems. Placing a *Workplace eCommerce* system on the front-end can result in an enterprise-wide repository for information such as purchasing data.

Typical uses of *Workplace eCommerce* data include transaction summaries and purchasing trends.

Lower Operating Costs

Automating paperbound processes and reducing cycle time, substantial process savings are usually available throughout any organization.

Typical process cost savings are almost 80% for expense reporting, and 90% or more for corporate purchasing or human resource transactions. These process cost savings translate to lower operating costs, not including other cost reductions like reducing maverick spending.

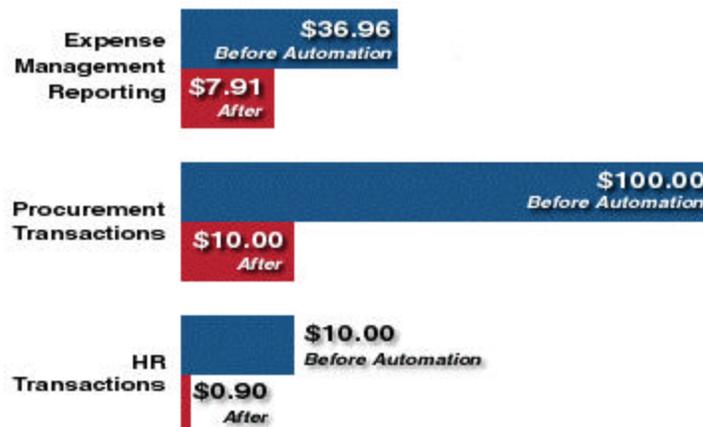


FIGURE 3. TRANSACTIONAL COSTS (SOURCES: AMERICAN EXPRESS, KILLEN & ASSOCIATES)

Employees can be moved from low-value policing and paper-pushing tasks to more strategic work such as vendor compliance, researching suppliers, contract negotiation, and simply establishing volume discounts through strategic sourcing arrangements. Focusing employees on these more strategic tasks allows employees to more directly contribute value to a company.

Higher Employee Satisfaction

Lower turnover is also a common measure of how well a company is performing and is generally considered a measure of employee satisfaction. By allowing employees to focus on more strategic work, such as customer needs versus shuffling paper, employees can find their work more rewarding.

2.0 Components

From a technical perspective, *Workplace eCommerce* solutions are web-based employee-facing applications that have the following attributes:

- Based on *open* Internet technologies
- Incorporate an intuitive user interface
- Require little or no user training
- Can be easily disseminated to multiple desktops via a corporate intranet or extranet

From a functional perspective, *Workplace eCommerce* solutions have three distinct components: a controlled form or document, approvals and workflow, and integration with existing systems.

2.1 *Controlled Form/Document*

The initial interface for *Workplace eCommerce* solutions is usually some type of controlled form or document. This provides the employee a place to populate information that will eventually end up in a computer system.

Often, a “wizard” or other graphical assist can be used to help populate the form. For example, with eProcurement applications, the form is a requisition or purchase order, but often the user interface is a catalog-based “shopping basket” much like a *Marketplace eCommerce* web site.

The form usually has some type of controls, either financial or management, in order to enforce policy or drive approval rules. Typical controls might be coding of general ledger account numbers for purchases, or not allowing entry of business meal expenses beyond a specified amount.

Examples of paper forms often automated with *Workplace eCommerce* solutions:

- Purchase requisitions and purchase orders
- Expense reports
- Insurance enrollment forms
- 401(k) distribution requests

2.2 Approvals/Workflow

Often, after a form is filled out, whether paper-based or electronic, someone else must approve it. Typically, the approver will be the employee's supervisor, but in some cases approval chains may continue up a company's hierarchy.

When the reason for approval is quality assurance for items like general ledger or project coding, these types of approval steps can be fully automated and removed from the process flow. In these cases, forms may be automatically approved and processed without requiring an approval process.

In some circumstances, especially around purchasing transactions, this automatic approval vs. manager approval may be driven by the dollar value of the transaction. In other cases, a higher dollar value may involve a higher approval authority.

For example, a purchase order for a stapler may be automatically approved by an eProcurement system, but a purchase of a new computer may require a manager's approval.

Workplace eCommerce systems route these documents to the appropriate approval authorities automatically, and typically with some type of e-mail notification. Often, these systems are integrated with enterprise directories or Human Resource Management systems in order to establish reporting hierarchies for approval purposes.

2.3 Integration, Internal and External

Integration with existing systems is important not only with internal systems, such as a Procurement system for purchase orders or an Accounts Payable system for expense reimbursements. It is also important for external systems. These external integrations with supplier or partner systems are important for maximum ROI. Examples of internal and external *Workplace eCommerce* integrations include Purchasing Systems, Payroll Systems for Expense Reimbursement, Vendor Order Management Systems, and Insurance Carrier Enrollment Systems.

For both internal and external integration, *Workplace eCommerce* systems usually work on a business document level. This means that a discrete business document (purchase order, AP voucher, etc.) is passed to a system.

For internal integration, most Enterprise Resource Planning (ERP) and Human Resource Management Systems (HRMS) have interfaces that allow for the import of business documents. This is usually done in batch rather than real-time since most *Workplace eCommerce* applications are not mission-critical. It is also considered a best practice to minimize real-time interfaces to these systems.

External integration with supplier or partner systems can take place in a number of different methods. With sophisticated suppliers or partners, the integration may use technologies like an EDI VAN or increasingly, the Internet. However, with smaller firms the integration may work through an e-mail or fax, or even by automatically printing a purchase order to be mailed. Besides the actual transmission method, the format for the document must also be considered, such as EDI ANSI X.12 or one of the XML-based schemas under Microsoft's BizTalk initiative such as cXML. Standards such as Open Buying on the Internet (OBI) are evolving to help make these external integrations simpler.

3.0 Further Reading/Case Studies

3.1 AMD

AMD was the first customer for Ariba's eProcurement system, ORMS. AMD uses their eProcurement system to help streamline the purchasing process across state and country borders and enable the procurement department to focus more on company-wide, strategic contracts with suppliers.

3.2 Cisco Systems

Cisco Systems was also an early adopter of eProcurement, using Ariba ORMS for its self-service requisitioning system. Cisco uses the system to enforce buying from contracted vendors, helping them achieve savings on their nearly \$1 billion/year spend on non-production goods and services.

3.3 Microsoft

Microsoft is an excellent example of an eBusiness, where internal operational efficiencies have been driven by a number of *Workplace eCommerce* solutions. Some of these solutions are highlighted in chapter three of Bill Gates' book, *Business @ The Speed of Thought*. Three case studies are also provided with this white paper on the following *Workplace eCommerce* solutions at Microsoft:

MS Expense - Microsoft's travel & entertainment expense report management system

MS Invoice – Microsoft's invoice processing and approval system

MS Market – Microsoft's eProcurement system

The Senior Developer at Microsoft who was in charge of creating bolt-on solutions to SAP R/3, like MS Market, later led the team that developed Concur Procurement.

3.4 Visa

Visa uses Ariba's ORMS for eProcurement in acquiring operating resources with the efficiency of the Visa Purchasing card for streamlined payment and management reporting. The result is a fully integrated and automated procurement cycle.

3.5 Visio

Visio, an early adopter of eProcurement solutions, uses Concur Procurement. Concur Procurement has its roots in MS Market, widely considered to be the largest, longest running, and most successful eProcurement implementation today. Visio was able to realize a return on investment on their eProcurement system in just a few months from their cost savings.

About the Author**Darius Vaskelis**

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Mr. Vaskelis is responsible for business development and project delivery of Inforte's Strategic Operations Management practice, which includes implementation of business-to-business marketplaces, *Workplace eCommerce*, supply-chain, and demand management solutions. In this role, he directs the delivery of projects that extend the enterprise using the Internet, enabling clients to outperform the competition by reducing costs and increasing revenues through new levels of operational efficiency. He is also a regular speaker on eBusiness topics at industry events and trade shows. During his tenure at Inforte, Mr. Vaskelis has excelled in various capacities, serving as a project manager and delivery executive for sales force automation implementations as well as knowledge management strategic planning and re-engineering client business processes around Internet technologies. Prior to joining Inforte, Mr. Vaskelis served as the Director of Information Systems at Hospitality Resources Incorporated (HRI). In this position, he was responsible for strategic planning and eBusiness system implementations, including an eProcurement system for an international hospitality management outsource company with over 100 offices.

About Inforte

Inforte Corporation (www.inforte.com) is an eBusiness Integrator, building strategies and solutions for clients as they migrate to eBusiness. Inforte provides a unique combination of eStrategy, eCommerce, supply-chain integration and advanced customer relationship & customer experience management capabilities.

Inforte has developed market-leading project delivery capability, demonstrable by its leading project efficiency metrics and 100% client referenceability. Inforte adopts a client-advocacy approach in planning projects called *Velocity to Value (V2V)*. This approach yields faster business returns to its clients, through rapid phased builds based on business drivers. This is combined with advanced project delivery methodologies including unique risk management processes.

Inforte has offices in Atlanta, Chicago, Dallas, Los Angeles, and San Francisco, and can be reached at (800) 340-0200.



Ariba Operating Resource Management System at Work with:

ADVANCED MICRO DEVICES

"The entire three-part LEAP program—of which the Ariba ORMS is a critical component—is expected to achieve a cost savings of 3 percent to 5 percent on half of the company's annual expenditures, which currently run from \$1 billion to \$1.5 billion. That puts the savings at somewhere between \$15 million and \$37 million annually."



Patrick Guerra

Vice President, Corporate Supply Management, AMD

With annual revenues exceeding \$2.4 billion, AMD is a leading global supplier of integrated circuits for PCs, network computers, and products for communications applications. The company's 12,700 employees work in offices and manufacturing facilities throughout the United States, Europe, Asia, and Japan, as well as in sales offices around the world.

With such far-flung operations and no centralized procurement function, inefficiencies had begun to impact AMD's purchasing process, resulting in higher costs. When a new management team joined the company in mid-1995, it quickly devised a three-part strategy called Leading Edge Advanced Procurement (LEAP) to streamline AMD's procurement process.

A key thrust of the LEAP program was to leverage information technology to eliminate manually processing purchasing transactions. Integral to this effort was implementing Internet-based catalog purchasing. After some preliminary internal design work, AMD discovered the Ariba Operating Resource Management System,[™] a comprehensive,

enterprise solution for acquiring, approving, and managing all the operating resources within the company.

"Our internal programming efforts were coming along," says Patrick Guerra, Vice President of Corporate Supply Management. "But finding a company like Ariba that was totally dedicated to a Web-based ORM solution—there was just no comparison."

The Ariba ORMS[™] not only provided AMD with an Internet-based catalog purchasing system, but also delivered one integrated system that allows AMD to effectively manage all their operating resources, including capital equipment, maintenance, repair, and operating (MRO) supplies, services, and travel and entertainment.

A Common Vision

In addition to the robust, Network Application Architecture of the Ariba Operating Resource Management System, one of the biggest attractions for AMD in choosing the solution was that the two companies share a common vision for how procurement should be done.

SOLUTION OVERVIEW

Business Profile

AMD today is a global supplier of integrated circuits for the personal and networked computer and communications markets. AMD produces processors for Microsoft[®] Windows[®] compatible PCs, flash memories, products for communications and networking applications, and through its subsidiary, Vantis Corporation, programmable logic devices. AMD has manufacturing facilities in the U.S., Asia, and Japan, and sales offices throughout the world.

Hardware and Software Platforms

Server: IBM-compatible PC running

Microsoft Windows NT Server

Clients: Windows 95 on IBM-compatible PCs

RDBMS: Oracle

ERP/HRMS: American Software

Business Benefit

Management of operating resources, including capital equipment and MRO supplies used in semiconductor fabrication and MRO supplies. Result: decreased process costs and a saving of between \$15 million and \$37 million annually.

In the past, AMD had followed a traditional purchasing approach: the requester filled out a form and sent it to purchasing; purchasing reviewed the requisition, added some information, and generated a purchase order; a supplier was selected and contacted; and finally, the order was placed. This approach generated mountains of paperwork that needed to be processed and filed. According to Guerra, this paper-based process required "an army of people."

"The more people that touch a requisition, the more money it costs you," Guerra asserts. "What we wanted was to team internal stakeholders with a group of pre-qualified suppliers, provide electronic catalogs of supplies on our intranet, then allow the end-users to go directly to the suppliers. The Ariba ORMS not only makes that possible, but makes it easy."

Streamlining a Business-Critical ORM Process

In August 1997, AMD became the first company to implement the Ariba ORMS. Initially, AMD used the system to acquire the high-cost precision photomasks and other items used in semiconductor manufacturing and then expanded its use to other goods and services.

Previously, when one of AMD's engineering teams completed a design for a new integrated circuit, they would electronically transmit the data file to a supplier. The supplier would inscribe the design on a glass plate called a reticule and ship it back to AMD. By the time the actual purchase order was created and processed, the custom mask would already be in use on the

production line. This lag time between the ordering and receiving of the goods and the manual processing of the purchase order essentially left \$8 million worth of business-critical operating resources without the appropriate controls.

"What the Ariba solution has done is to accelerate the speed with which we can process these transactions," explains Guerra. "It has streamlined the buying process from days to a matter of hours and helped reduce the costs of our photomask orders."

Leveraging Procurement Professionals

But Guerra says that one of the biggest benefits is that the Ariba ORMS has allowed AMD to re-focus its procurement professionals on supplier and contract management, cost characterization, negotiation, and actively looking for ways to save the company money.

"Historically, the purchasing function has required clerical staff to simply process documents," Guerra remarks. "But that isn't the way we operate. AMD Corporate Supply Management is populated with a lot of MBAs that understand finance and engineering, and that have the teaming and influencing skills to develop strategies to more effectively spend the company's money." The Ariba ORMS has helped leverage the considerable skills of these procurement professionals to concentrate on value-added projects, rather than transactional tasks.

Ariba ORMS: An Attractive ROI

AMD expects to receive a substantial payback on its efforts to redesign its procurement process. The entire three-part LEAP program—of which the Ariba

ORMS is a critical component—is expected to save 3 percent to 5 percent on half of the company's annual expenditures, which currently run from \$1 billion to \$1.5 billion. That puts the savings at somewhere between \$15 million and \$37 million annually.

"That's our goal," Guerra declares. "It will take success in all three parts of the LEAP effort to do it, but that's what we hope to achieve."

The Ariba Operating Resource Management System has worked so well that AMD is in the process of incorporating other operating resources into the Ariba Internet-based purchasing model. These include issuing releases to subcontractors; requisitioning PCs and accessories for company use; requisitioning non-inventoried items from selected super-distributors that supply operating supplies to AMD's semiconductor fabs; and issuing requisitions to chemical suppliers.

"This is really a revolution in procurement—complete Web-based reengineering that will eliminate, not simply reduce, routine processing of purchase orders," says Guerra. "Ariba has been integral in making this transformation happen. They've been simply exceptional in meeting their commitments and really supported us every step of the way."



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Ariba Operating Resource Management System at Work with:

CISCO SYSTEMS, INC.

"The industry is realizing that ORM represents a huge opportunity to increase profits by improving supplier negotiation and cutting costs. Operating Resource Management has become a crucial strategic area for Cisco—one that clearly will enable us to manage our budgets and spending more effectively."



Carolyn DePalmo

Finance Program Manager, Cisco Systems

Not content to be the world's leader in providing end-to-end networking solutions for the Internet, Cisco itself is a prime example of how to leverage networks for competitive business advantage.

In late 1996, Cisco identified an area that offered significant potential cost savings and an opportunity to leverage its own corporate intranet. Each year, the company spends approximately \$475 million on non-production corporate purchases—ranging from office supplies and capital equipment to consulting services. In the past, these acquisitions have been handled through a combination of computerized and manual procedures that were cumbersome, costly, and unresponsive to employees' needs.

After a thorough review of various alternatives, Cisco selected the Ariba Operating Resource Management System™, an innovative, Internet-based solution to streamline the process of acquiring operating resources.

Chasing Paper

In the past, Cisco's operating resource procurement process was not unlike that found at most large corporations

worldwide. Previously, the company used several processes, including a direct order program for suppliers holding pre-negotiated, high-volume contracts and a standard purchase requisition program for other non-production products and services. For starters, Cisco employees had to know whether an item was covered under the direct order or purchase order program. Then, the paper chase began.

"The requester would have to go the corporate purchasing page on our intranet, find the form for the right supplier, and print it out—because it couldn't be completed online," recalls Carolyn DePalmo, Finance Program Manager, who is heading the ORM project for Cisco. "Once the form was filled out in long-hand and signed by the requester's manager, it would then be faxed to the supplier for fulfillment."

Purchase requisitions took an even more twisted path, according to DePalmo. "Requisitions were sent from desk to desk to collect the right signatures before a PO could be issued," she explains. "With paper, it was a bit of a black hole. People didn't know what the status of a request was and it was

SOLUTION OVERVIEW

Business Profile

Cisco Systems, Inc. is the worldwide leader in networking for the Internet. Cisco products include routers, LAN and ATM switches, dial-up access servers and network management software. These products, integrated by the Cisco IOS software, link geographically dispersed LANs, WANs and IBM networks.

Hardware and Software Platforms

Server: Sun Solaris on Sun Enterprise Server

Clients: Windows 95 on Intel-based PCs

RDBMS: Oracle

ERP/HRMS: Oracle Applications

Business Benefit

Comprehensive management of operating resources, including capital equipment, computer hardware and software, consulting services, and office supplies. Result is a decreased process costs and ease-of use for requestors.

difficult to track where a requisition was in the approval cycle. The Ariba ORMS™ is the solution to all this.”

Ensuring a Broad Buy-In

Cisco started its evaluation of ORM solutions by developing a requirements document that reflected the needs and wants of employees across the company.

Cisco evaluated more than ten companies in the electronic commerce industry before selecting Ariba.

“What put Ariba over the top was the close match—better than 90%—between our requirements document and Ariba’s product specifications,” DePalmo remarks. “In addition, we liked Ariba’s efforts to increase its understanding of the purchasing process. Periodically, the company hosts the Ariba ORMS User Group and Advisory Council that enables Cisco and other clients to participate in the actual design of the product.”

One-Stop Shopping

With the Ariba ORMS, Cisco is offering its 9,000-plus U.S. employees one-stop shopping for operating resources products and services. The system provides fast, cost-effective access to computer and communications equipment, office supplies, maintenance items, hardware and software, office furniture, lab machines, test and measuring equipment, large capital purchases, and even a wide variety of consulting services.

To place an order, the user simply launches an Internet browser and logs onto the corporate purchasing site on Cisco’s intranet. He or she then searches illustrated, electronic catalogs for standard items or fills out online requisitions for ad hoc items. From there, the system takes over, routing the requisition

for approvals based on a complex set of rules that model Cisco’s business processes—before transmitting it electronically to the appropriate supplier.

“For end-users, the process using the Ariba ORMS is much easier than before,” DePalmo states. “Using an Internet browser requires little or no training and approvals are simplified because the routing is all handled automatically. People can check on the status of an order at any time, and they receive an e-mail message as soon as their request has been approved.”

Improving Negotiations with Suppliers and Reducing Costs

For Cisco, the benefits of the Ariba ORMS promise to be substantial. The application gives Cisco’s buyers critical information about volume and pricing.

“We expect to receive a very attractive ROI on the Ariba solution,” DePalmo remarks. “The power of information is key. Our buyers are able to negotiate with vendors with so much more rich information behind them.”

Another big advantage for Cisco is how the Ariba Operating Resource Management System streamlines the process of acquiring operating resources. Without an ORM system, the cost of processing smaller orders is often more than the cost of goods themselves. The Ariba ORMS greatly reduces the expense of processing each request. In addition, in a paper-based process approximately 40 percent of the cycle time for non-production purchases is spent in obtaining approvals. “While Ariba’s solution won’t collapse this cycle time to zero, it should decrease it significantly,” says DePalmo.

A Strategic Vision for ORM

DePalmo has helped Cisco sharpen its focus on non-production purchases and give ORM a more strategic positioning on a par with functions such as Manufacturing Resource Planning (MRP).

As Cisco rolls out the Ariba ORMS to all their employees, the company is expanding its strategic vision of Operating Resource Management. The Ariba ORMS will continue to play an important role in the future, streamlining operating resources throughout Cisco.

CISCO’S FOUR C’S OF OPERATING RESOURCE MANAGEMENT

Cost Reduction The Ariba ORMS reduces Cisco’s processing costs and produces higher quality information that enhances buyers’ ability to negotiate favorable contracts.

Cycle Time Reduction Previously over 40 percent of the request cycle time was lost in the mechanics of approval. The Ariba ORMS streamlines the requisition process and eliminates manual data entry.

Control Improvement The electronic solution helps employees complete requisitions properly and automatically routes the requisitions for required approvals. Improved visibility into the process flow further strengthens management control.

Customer Satisfaction With the Ariba ORMS, Cisco requesters know the status of requisitions and receive approval sooner, so they get what they need when they need it.



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MS EXPENSE

Microsoft Eliminates Paper and Waiting with Intranet-Based Expense Reporting

Solution Overview

Industry

Information technology

Scenario

Business Operations

Microsoft Products

Microsoft Excel 97
Microsoft Internet Explorer 4.0
Microsoft Internet Information Server 4.0
Microsoft SQL Server 7.0
Microsoft Visual Studio®
Microsoft Windows NT Server 4.0

Third Party Products

SAP R/3

MS® Expense is an intranet-based expense-reporting application that allows employees to submit expense reports from any location, at any time of the day. The application replaced a paper-based expense-reporting system that was costly to manage and support, and slow to reimburse employees. MS Expense facilitates fast payments so employee reimbursements are processed in an average of three days, rather than waiting up to three weeks as they did before. Microsoft has reduced headcount in Microsoft's expense report processing area significantly, cutting processing and audit efforts by 50 percent, yielding annual savings of nearly \$400,000. Also, because MS Expense links to Microsoft's SAP R/3 financial module, the Accounts Payable department no longer has to enter forms manually, saving time and reducing room for inputting errors.

Microsoft Corporation has subsidiaries in more than 60 countries around the world. Because Microsoft has a strong worldwide presence, employees spend nearly \$200 million a year traveling on business. In addition, they often spend out-of-pocket money on work-related expenses, such as meals, supplies, and entertainment. Microsoft's employees don't want to have to spend a lot of time filling out expense reports. When they find time, they want to be able to submit expense-reimbursement reports easily and be promptly reimbursed. The Microsoft Corporate Procurement Group (CPG) turned to the company's own products to develop an Internet-based solution to too much paper, too little time. MS Expense uses Microsoft Excel on the front end, and Microsoft Windows NT® Server, Active Server Pages technology, and Microsoft SQL Server™ on the back end to give employees a fast and flexible way to make an administrative task easier to bear.

Simplify and Digitize

The old paper-based expense-reporting system at Microsoft did not make anyone happy. Employees typically burned up critical work time filling out expense reports because all the necessary paper forms were at the office. An alternative was to complete one of the many, non-standard Microsoft Excel-based templates. The employee then printed the reports, attached the receipts, and submitted the expense report to his or her manager, who often took over a week to approve it and send it on to Accounts Payable. After the form was approved, Accounts Payable would enter the information manually from the paper form into the financial system, which would process the payment. On average, this procedure could

“Employees wanted to be reimbursed faster. Our challenge was to figure out how to repay them in a timely fashion, without hiring more people in Accounts Payable.”

Clayton Fleming
Director, Corporate Procurement Group
Microsoft Corporation

take up to three weeks to complete, often putting employees behind on paying their corporate credit-card bills.

“Employees wanted to be reimbursed faster,” explains Clayton Fleming, Director, CPG Process Design. “Our challenge was to figure out how to repay them in a timely fashion, without hiring more people in Accounts Payable.”

Accounting wasn't happy, because the process consumed a lot of manpower and expense. The expense-report template had been duplicated, changed, and stored many times throughout the company. At one point, there were 136 different expense-report templates on various network servers. The multiplicity of forms slowed processing in Accounts Payable, since the people processing the forms had to take time to transfer data from different formats. Also, outdated forms often had old account codes, obsolete mileage rates, or classifications that were incorrect or missing, such as airfares and entertainment expenses. These issues posed a problem for the Corporate Procurement Group, which is responsible for Accounts Payable.

The Solution: Prompt Payments Using Fewer People

To solve these problems, CPG developed MS Expense, an Intranet-based expense-reporting application that links directly with the Microsoft SAP R/3 financial module. Once an employee fills out and submits an expense report to MS Expense, it's automatically *parked*, pending management approval in the SAP module, without any manual uploading or dual entry. At the same time, approval notification is sent directly to the employee's manager through e-mail. When the manager approves the expense report by means of the MS Expense Web site, its status changes to *posted* in the SAP module, which means that it is ready for payment. At this point, the SAP module processes the payment. Since all these steps directly create and update transactions in SAP, no manual processing is required. The automated procedure thus cuts costs, speeds up the payment cycle, and eliminates the possibility of errors in rekeying data.

Thanks to MS Expense, employees are now paid in three days, instead of the old three weeks, for expense reimbursements to be processed. This dramatic improvement in expense reporting processing saves Microsoft approximately \$400,000 a year in headcount costs alone, because CPG was able to redeploy 50 percent of its expense-reporting group to other positions. Now there are only four people managing the expense reporting and audit processes. CPG expects that number to diminish even further.

The Best of All Worlds: Fast Delivery, Great Usability, and Easy Manageability

Using the Microsoft intuitive development platform and leading-edge programming tools, a lean team of one product manager, one program manager, two programmers, and one tester developed MS Expense in only four months. Launched in June 1997, MS Expense is already supporting itself. According to CPG, 91 percent of all reports are completed without any helpdesk support. The goal is to increase that percentage to at least 98 percent.

Employees have used Microsoft Excel expense-reporting templates as an alternative method to paper-based expense reports for several years. It was, therefore, a natural step to make Excel the front-end application for MS Expense. Since Excel is such a familiar environment, employees can navigate easily through their expense reports. Also, employees can complete their Excel expense report form both online and offline. This gives

"One of our primary design goals was to create minimum stress on users. Excel offers a great solution because people already know it, so they don't need to be retrained. Also, it's a great development tool that integrates easily with the Web so users can use it both online and offline."

Dale Christian
Director, Corporate Procurement
Microsoft Corporation

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them the flexibility to work on expense reports any time and anywhere, whether they are on a plane, in a hotel, in the office, or at home.

"One of our primary design goals was to create minimum stress on users," says Dale Christian, CPG's director of Corporate Procurement Information Technologies. "Excel offers a great solution because people already know it, so they don't need to be retrained. Also, it's a great development tool that integrates easily with the Web, so users can use it both online and offline."

MS Expense uses Active Server Pages on Microsoft Windows NT Server to localize information for different countries without creating duplicate pages. This will be helpful as the application continues to roll out to Microsoft international subsidiaries over the next year. For example, when users in Ireland select their country on the home page, the expense report template and instructions for that country are automatically localized and displayed. A Microsoft ActiveX® control uses Excel's Component Object Model (COM) automation features to extract data from the submitted expense-report file, store the data in a Microsoft SQL Server database, and upload it into Microsoft's SAP financial module.

With the old paper-based system, employees had to choose from numerous versions of the expense-report template, residing on various servers throughout the company network. They were never sure whether they had the most up-to-date form, and if the form they were using was even valid for submission to Accounts Payable. Now, with MS Expense, employees can feel confident that they are using the most current expense-report template, because all the information on the template is managed from one central location. And, thanks in a large part to MS Expense's link with the Microsoft SAP financial module, error free and prompt reimbursements can be processed in a fraction of the time.

The End Result: A Solution that Makes Sense for Everybody

Currently, 90 percent of Microsoft United States employees use MS Expense. Throughout 1998 and early 1999, the application is scheduled to roll out to all major Microsoft subsidiaries. By the middle of 1999, CPG expects that nearly everyone in the company will be using MS Expense.

MS Expense has greatly improved Microsoft's expense-reporting function, saving the company significant sums of money and hours of work, while eliminating errors that occur when processing paper forms. And MS Expense has improved employee satisfaction with the expense-reimbursement process. Now employees get reimbursed in just days, not weeks, and they have the freedom to complete their expense reports wherever and whenever they want to.



MS INVOICE

MS Invoice Streamlines the Accounts Payable Process

Solution Overview

Scenario

Business Operations

Microsoft Products

- Microsoft Active Server Page technologies
- Microsoft ActiveX® technologies
- Microsoft Component Object Model technology
- Microsoft Excel
- Microsoft Exchange Server
- Microsoft Internet Explorer
- Microsoft Internet Information Server
- Microsoft Windows NT Server

Thousands of suppliers and independent contractors meant thousands of paper invoices—which meant too many opportunities for an invoice to be misplaced or processed improperly. Microsoft needed a way to process invoices more efficiently, which it found with MS Invoice, a Web-based application that has not only streamlined the Accounts Payable process while improving process controls, but has also reduced internal processing costs—from \$19 per invoice to less than \$4 per invoice.

A company's ability to bring money *in* is what most people think of first when considering the company's profitability. But just as important is how the company pays money out—to the suppliers and independent contractors that provide the company with the goods and services that help support the products the company sells. The more efficiently and effectively a company can manage its Accounts Payable (AP) processes, the more profit it reaps from a given net income.

But with the number of active vendors at 20,000 and growing, Microsoft managers knew that the company's paper-based AP process would become more inefficient over time. AP had nearly 30 people dedicated to processing invoices. These individuals would receive the invoice, scan it in, log its arrival, check for a valid purchase order (PO) to bill the invoice against, then forward the invoice on to a business manager for approval. When the business manager returned the approved invoice, AP would enter the invoice into SAP R/3, and eventually a payment would be sent to the supplier.

Independent external auditors determined that this paper-based AP process cost Microsoft nearly \$19 per invoice. And costs were likely to increase. As the number of vendors increased, Microsoft would have to employ more people to facilitate the AP process. There were also far too many points at which the integrity of the process was vulnerable. Paper invoices were easily misplaced or destroyed, which meant costly processing delays. And if a vendor inquired about a late or missing payment, it was often impossible to discover just where the process had failed that particular invoice.

Microsoft needed a solution that would both reduce its processing costs and reduce the vulnerabilities inherent in the existing process. With MS Invoice, it gained all of this and more.

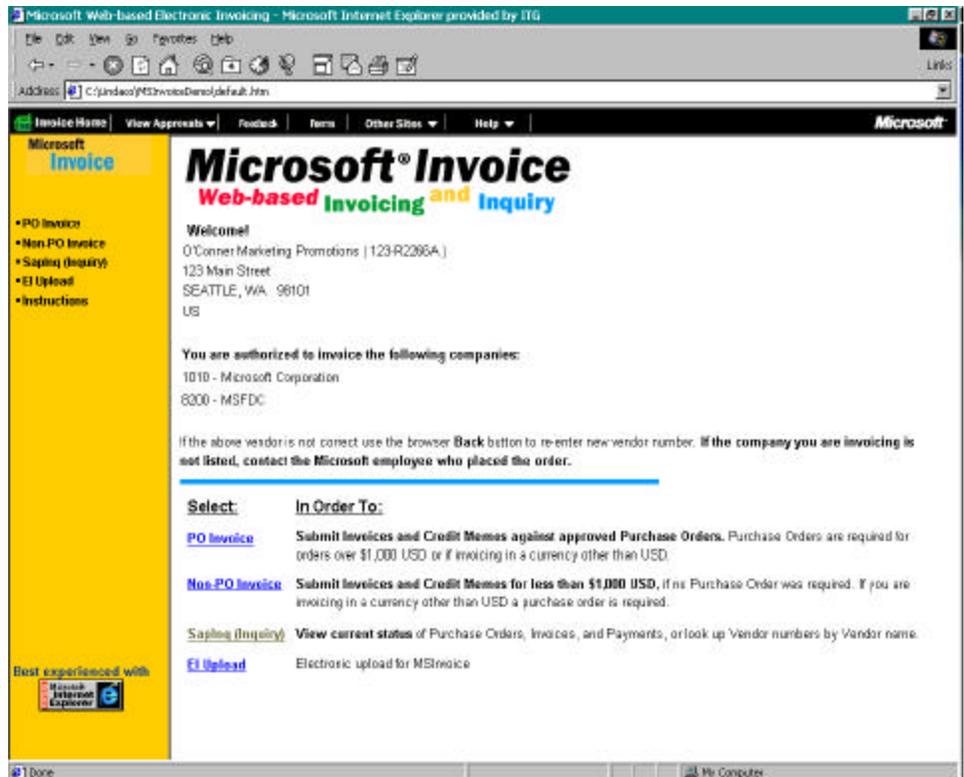
“Our ultimate objective is to get to the point where there are no paper invoices coming into AP.”

Lisa Haistings
Senior Process Manager
MS Invoice
Microsoft Corporation

Invoicing Through the Net

MS Invoice is a Web-based application that enables vendors and suppliers to invoice Microsoft electronically. It eliminated the paperwork associated with invoices and reduced Microsoft's costs from \$19 per paper-based invoice to less than \$4 per Web-based invoice. Currently, MS Invoice is used throughout the United States. As the application is enhanced to accommodate different reporting and tax rules, MS Invoice will be used in Microsoft's international offices. Once this happens, Microsoft managers anticipate that MS Invoice will drive per-invoice processing costs below \$2.

“Our ultimate objective is to get to the point where there are no paper invoices coming into AP,” says Lisa Haistings, senior process manager for MS Invoice. “The essential functionality is there now, but there are still some challenges we have to overcome. Some of our domestic vendors still don't have Internet access, so they send their invoices to the Microsoft business managers, who key the invoice into the system through Microsoft's intranet. Elsewhere in the world, the Internet is not as widely used as it is in the States, and there are some places, such as Germany, where local regulations still require an original paper invoice. We're still evaluating some of these statutory issues to determine if they really are roadblocks. But our goal is to eliminate all paper-based invoices coming into AP.”



Streamlining the AP Process

MS Invoice is one of the newest tools to join a suite of Web-based applications that streamline internal operations at Microsoft. In late 1997, the company implemented a worldwide business operations solution built around SAP's R/3. This single global solution consolidated the more than 30 separate solutions that had been in place to support finance, operations, human resources, and other departments. Now, R/3 handles all accounts

“We really wanted MS Invoice to interact with the SAP system directly, without any middle layer, and the COM objects enable MS Invoice to do that—and with an acceptable response time. Our goal was to be able to create an invoice over the Web in less than three minutes, and we’re well below that.”

Sal Merchant
Program Manager
MS Invoice
Microsoft Corporation

receivable and accounts payable for all of Microsoft’s operating groups, including the more than 50 subsidiaries around the world.

The challenge for Microsoft officials, however, was this: SAP R/3 is a very powerful system, one that comes into play whenever anyone executes any task involving a purchase or payment. But R/3 is *not* a system Microsoft officials want everyone to access. Management did want employees to execute certain financial transactions (to order certain types of supplies, for instance, without having to go through procurement). However, it also wanted to find a way to enable those transactions without having to train users throughout the company to use R/3 or without having to give them direct access to R/3 to perform those transactions.

The solution to this challenge has been to create a series of intranet applications that enable users to execute and manage certain transactions that ultimately end up in R/3—without interacting directly with R/3 to execute those transactions. MS Market, for instance, is an intranet application that enables users throughout Microsoft to order goods and services directly from vendors. Users fill out a Web-based form indicating what they need, and MS Market processes the request transparently. Requests that require managerial approval are automatically routed to the appropriate parties; requests that require no approval are sent directly to the vendors that have negotiated purchase agreements with Microsoft. MS Market interacts with R/3 to make a record of the purchase—neither the individual making the request nor anyone in purchasing has to interact directly with R/3.

MS Invoice provides a similar Web-based application that interacts with R/3—altogether transparently to the user. Indeed, when a vendor submits an invoice through MS Invoice, the application first checks the R/3 database to see if there is a valid purchase order to process the invoice against—a purchase order that a Microsoft business manager would have created using MS Market. If there is no valid purchase order in the R/3 database, MS Invoice immediately informs the person who completed the invoice (the vendor or the Microsoft employee) that the invoice cannot be processed, because there is no valid purchase order on file.

Under the old system, between the time it took for a paper-based invoice to arrive at Microsoft and to be entered into the system, several days might pass before a vendor was notified that no valid purchase order was in place. If there was no purchase order *and* if the vendor was not already an approved Microsoft vendor, it took even longer to resolve matters. “We’d have to back-track to find the Microsoft business owner that authorized the work,” says Haistings, “and give them the right paperwork. Then, they’d have to go back to the supplier to complete it—and then maybe the supplier would not meet the approval criteria. There was a lot of back and forth before the vendor got paid.”

Once the invoice has been completed and submitted, MS Invoice “parks” it in R/3, where it is held in a “pending” status. While pending, MS Invoice creates and sends an electronic mail (e-mail) message to the Microsoft business manager listed on the purchase order and informs the manager that there is an invoice pending approval. The manager can then approve, reject, hold, or reassign the invoice by using the URL link provided in the e-mail message. When the manager approves the invoice, R/3 takes the invoice out of its parked status and posts it for processing. R/3 then processes the invoice for payment according to the terms set forth in the purchase order.

"The number one benefit of MS Invoice is that it is creating efficiencies and controls that are world-class."

Clayton Fleming
Director, Corporate Services Product
Management
Microsoft Corporation

"MS Invoice creates a great deal of visibility," says Haistings. "Everyone can use MS Invoice to see right where an invoice is in process." For vendors in particular, that is one of the greatest benefits. "I love MS Invoice," says Mark Curtis, president of Curtis Consulting. "Now I control the timing of my invoice processing. I submit the invoice by means of the Internet, my customer receives e-mail notification, approves the invoice, and I get paid—fast! Using MS Invoice has reduced my company's need for a line of credit. This is the fastest way to collect accounts receivable and is a cost-effective approach from both my perspective and my customer's perspective. It is a win/win solution. In addition, MS Invoice provides information at my fingertips—I can see my purchase order balances and view my invoices as they move through the approval and payment cycle. I even know, in advance, the exact day the payment will be electronically deposited to my company's bank account!"

MS Invoice is also self-auditing. If the value of an invoice is less than \$1,000, and if the Microsoft business owner has not approved it within seven days, MS Invoice will automatically approve the invoice and submit the approval on to R/3. If the value of the invoice is greater than \$1,000 and MS Invoice has not received a response from the Microsoft business owner within seven days, it automatically sends out a reminder notice. Then after 14 days if there is still no response, it automatically escalates the approval request to the Microsoft business owner's manager and the Microsoft customer service center. "We want to make sure our vendors are paid within the agreed-upon terms, and MS Invoice facilitates that," says Haistings.

Rapid Application Development

For all of the sophisticated functionality built into MS Invoice, the application did not require a large development undertaking. A team of two developers and two testers, led by one program manager, developed the entire application in a relatively short period of time. "We developed a proof-of-concept prototype in three weeks," says Sal Merchant, the program manager for the project. "The first release of MS Invoice was three months later."

MS Invoice runs on the Microsoft® Windows NT® Server network operating system and its built-in Web server, Microsoft Internet Information Server 4.0. With the initial release of the application in November 1997, vendors had to submit their invoices either as paper or Microsoft Excel files to the Microsoft business managers, who could then enter the invoices via the corporate intranet. A subsequent release of MS Invoice in January 1998 gave vendors Internet access to the application, enabling them to use Microsoft Internet Explorer 4.0 to enter their own invoices.

"The initial challenge," says Merchant, "was to make sure that the purchase orders in R/3, which were created in MS Market, were available to MS Invoice users." To accomplish this, Merchant's team created a series of remote function calls in SAP's ABAP (Advanced Business Application Programming) language. "That allowed MS Invoice to query SAP as to what kinds of POs are sitting out there for a particular vendor or what dollar amount still remains to be invoiced against a particular PO. All of this information is pulled into MS Invoice live by these remote function calls, so all of the information we work with in MS Invoice is real-time information," Merchant says.

Then, Merchant's team used Microsoft's component object model (COM) technology to create an object that encapsulated all of the business rules for creating an invoice. "We really wanted MS Invoice to interact with the SAP system directly, without any middle layer,

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and the COM objects enable MS Invoice to do that—and with an acceptable response time.” Merchant adds, “Our goal was to be able to create an invoice over the Web in less than three minutes, and we’re well below that.”

Indeed, most users working with MS Invoice can create an invoice in less than *one* minute.

World-Class Efficiencies

“The number one benefit of MS Invoice is that it is creating efficiencies and controls that are world-class,” says Clayton Fleming, Microsoft’s director of corporate services product management. And the efficiencies are not just measurable in dollars and cents or even in an ability to track an invoice more closely than ever before. The process itself can scale efficiently, which paper never could. “Our transaction volume,” says Fleming, “is growing at 30 to 40 percent each year. We’re a growing company and we’re entering into an increasingly diverse set of complex businesses. It is of paramount importance that we have a scalable solution.”

Because the MS Invoice application can be distributed across multiple server systems, it can be quickly and easily scaled to meet the increasing transaction demand. Also, because the application attends to the details associated with invoice processing, the individuals that previously had been managing the transaction stream can be redeployed elsewhere to add even greater value to Microsoft.

“One of the fundamental goals here is to reduce the transaction cost in finance and procurement organizations within Microsoft worldwide so that people in those areas have an opportunity to perform higher level functions that will further reduce total costs related to those processes,” says Fleming. “They can step out of the transaction stream and start focusing in on negotiating great deals with preferred suppliers as well as work to reduce the number of vendors that get added to our ever-growing vendor database. This gets them more into vendor management so that we can consolidate our streams into a set of very well-managed vendors either through outsource models or other vendor management models. All of these activities add a lot more value to the company.”

And adding more value to Microsoft is ultimately what MS Invoice is all about. By lowering AP transaction costs and creating higher levels of processing efficiency, MS Invoice helps Microsoft improve its profitability. By improving the visibility of the invoice process, which increases the accountability of Microsoft business owners, MS Invoice fosters stronger relationships with suppliers and vendors. And that puts Microsoft in an even better position to negotiate agreements with those vendors and suppliers. MS Invoice is an important part of an ongoing business evolution at Microsoft, and that evolution promises to contribute to the increasing profitability of the company.



MS MARKET

Microsoft makes corporate procurement easier with the help of MS Market

Solution Overview

Industry

Computer Software

Scenario

Commerce - Corporate Purchasing

Products Used

Microsoft Internet Explorer 4.0
Microsoft Internet Information Server 4.0
Microsoft Site Server 3.0
Commerce Edition
Microsoft SQL Server 7.0
Microsoft Windows NT Server 4.0

Third-Party Products

SAP R/3

MS® Market is an intranet-based corporate purchasing application that allows Microsoft employees to easily place orders for any goods or services in less than three minutes and receive them on their desks the next day. The application saves the company almost \$3 million a year in reassigned employees. It has also contributed to simplified administration—reducing costs from \$60 to \$5 per order—and has helped streamline the billing process. It makes it easy and efficient for employees to order supplies and services and cuts down on administrative and management involvement in the process. MS Market facilitates efficient billing by linking directly to Microsoft's corporate SAP R/3 accounting system.

With just over 25,000 employees, and revenues in excess of \$11.3 billion in 1997, Microsoft Corporation prides itself on running an efficient operation. Like any profitable company, part of the Microsoft success stems from its ongoing efforts to contain costs, while providing employees with the materials, services, and support they need to do their jobs well.

Using its own suite of commerce tools, Microsoft built an application called MS Market that makes it easy and efficient for employees to order supplies and services online, dramatically reducing administrative work. MS Market facilitates efficient billing by linking directly to Microsoft's corporate SAP R/3 accounting system.

Low-Dollar, High-Paper Problem

Until 1996, Microsoft relied on dozens of paper forms and a wide range of custom applications for procuring goods and services. The process was slow, costly, and prone to human data-entry errors. Moreover, processing these forms was manually intensive, inefficient, and confusing for both end users and vendors. The lack of automated and standard procedures also made it difficult to create and track payables.

The process was especially cumbersome for the Microsoft® Corporate Procurement Group (CPG), which handles thousands of requests weekly for purchases under \$1000 each. High-volume, low-dollar transactions represented 70 percent of Microsoft corporate procurement, but only 3 percent of the total dollars flowing through the Accounts Payable department. As a result, CSG had to dedicate several resources to processing requisitions into purchase orders (P.O.s), resolving problems, and trying to clearly articulate business rules and processes for an increasingly complex and growing business.

"It was hard to keep up. We wanted to streamline these processes, and we did not want to put so many resources into managing low-risk P.O.s. We decided the best way to deal with this was to create a requisitioning tool that would take all the controls and validations that the requisition personnel were dealing with and push them onto the intranet."

Clayton Fleming
Director of Technology
Corporate Procurement Microsoft
Corporation

"It was hard to keep up," says Clayton Fleming, CPG's director of technology. "We wanted to streamline these processes, and we did not want to put so many resources into managing low-risk P.O.s. We decided the best way to deal with this was to create a requisitioning tool that would take all the controls and validations that the requisition personnel were dealing with and push them onto the intranet."

Making Sense Out of the Procurement Dilemma

In July 1996, CPG implemented an innovative new application called MS Market. An online ordering system that works on Microsoft's intranet, MS Market provides easy-to-use online forms for ordering office supplies, PCs, business cards, catering, or creating contracts to hire vendors. It also validates information such as pricing and availability, ensures that each order is linked to the appropriate accounting code, and automatically routes orders to managers for notification or approval.

Today, MS Market handles well over 250,000 transactions a year, and more than \$1.75 billion a year in orders. Microsoft uses this volume of transactions to negotiate unbeatable prices with select suppliers of office supplies, books, computer equipment, and catering services. In return for a consistent flow of orders, these suppliers offer steep discounts on goods and services.

Within the first year of operation, MS Market reassigned 17 of the 19 headcount that had been responsible for processing P.O.s, allowing them to focus on more important procurement functions, such as analyzing procurement data and negotiating volume discounts with vendors. In less than two years of operation, MS Market has saved the company almost \$3 million in headcount costs, improved volume discounts on supplies by streamlining the supplier base, and reduced administrative costs from \$60 to just \$5 per order. MS Market facilitates efficient billing by linking directly to Microsoft's corporate SAP R/3 accounting system, so that requisitions are automatically uploaded as purchase orders. Employees can now place orders in under three minutes, and MS Market gives them a quick, easy way to order materials without being burdened by paperwork and bureaucratic processes.

A Leading-Edge Solution

Using Microsoft's intuitive development tools, innovative Web technologies, and a solid suite of server applications, it took three programmers just four months to develop and release MS Market. A team of two developers, two testers, one program manager, and one product manager are responsible for taking user feedback and improving the site on a quarterly basis. From its inception, MS Market was optimized for ease of use, which is why, despite its high usage, there are only two people dedicated to supporting it.

Microsoft Site Server Commerce Edition, a Microsoft® BackOffice® family member, serves as the main building block for MS Market. Site Server Commerce Edition runs on top of Microsoft Windows NT® Server and Microsoft Internet Information Server.

Using Active Server Pages, a powerful scripting capability of Internet Information Server, Microsoft created different online order forms for specific kinds of requisition requests. The forms, which employees fill out using the Microsoft Internet Explorer Web browser, are easy to understand and typically take under three minutes to complete.

“The biggest boon from this kind of application is that it removes the rules, paperwork, hidden procedures, and other obstacles that keep our employees from doing their jobs. Instead of dealing with this process, they can focus on making and selling Microsoft products.”

Clayton Fleming
Director of Technology,
Corporate Procurement
Microsoft Corporation

Microsoft Site Server Commerce Edition, also provides the ability to process orders at the vendors' Web sites. MS Market uses Site Server Commerce Edition's Order Processing Pipeline to manage the order process workflow, with more than 30 default components that allow price look-ups, product and price promotions, inventory assessments, shipping and handling information, and other functions. All of MS Market's data is stored in Microsoft SQL Server™, which supports the high rate of transactions worldwide.

Putting It To Work

MS Market has been deployed in 26 countries. In the United States, Microsoft employees use it to complete almost 100 % of their requisitions.

Here is an example of how the application is typically used: An employee wants to order a book on business-management practices. First, he types the MS Market URL onto the browser address line. MS Market automatically identifies him and his location through his Microsoft domain logon I.D., which every employee needs to gain access to the corporate network. He then selects the *Books and References* link, which brings up an order form and the option to search for books by category or by name. He selects his book from hundreds of titles—prices have been negotiated between Microsoft and the vendor—and it is automatically entered into the order form. He continues to add books using the same process, then completes the order by entering his department number and the required delivery date. His manager's name is dynamically displayed in the order, as is the appropriate account code for book expenses. He clicks the Submit button to complete the process. Upon submission of the order, MS Market generates an order tracking number for his reference, sends notification via e-mail to his manager, and sends the order over the Internet to the book supplier for fulfillment. The next day, the book arrives at the employee's office.

Perhaps this employee also needs a new computer. Instead of resorting to the old process of manually completing and routing a paper form, which could take 20 minutes from start to finish, he can now use MS Market to order a PC in less than five minutes. He selects the hardware section of MS Market, then the subcategory *Standard Systems*, which displays preconfigured, fully-loaded systems that Microsoft has selected. This preconfiguration saves time by helping people make purchases based on standard business requirements.

MS Market has similar categories for all the items employees need, such as catering, business supplies, telecommunications, business cards, software, and contract requests. The key to success has been creating an intuitive front end for users, allowing them to easily order low-cost items in a controlled fashion, without going through a complicated P.O. process.

Revolutionizing the Way We Do Business

MS Market has had a dramatic impact on the way employees deal with requisitions and on the company's resource allocations, as exemplified by the number of people in CPG who have been reassigned to more strategic tasks. Financial controls in MS Market protect the company from fraud so that unauthorized people can't order goods. Orders are automatically routed for management approval in minutes. Once orders are approved, P.O.s are automatically generated by the SAP accounting system and sent to the supplier or are routed directly to the supplier for non-P.O. purchases.

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MS Market's success has prompted Microsoft to add a scaled-down version of the solution to future releases of Site Server Commerce Edition, along with other *Sample Sites* templates that businesses can use to set up custom commerce-enabled Web sites.

"The biggest boon from this kind of application is that it removes the rules, paperwork, hidden procedures, and other obstacles that keep our employees from doing their jobs," says Fleming. "Instead of dealing with this process, they can focus on making and selling Microsoft products."



Ariba Operating Resource Management System at Work with:

VISA

"By integrating the Ariba Operating Resource Management System and the Visa Purchasing card, we demonstrated significant efficiencies. The potential time and cost savings that companies can achieve with this combined solution is substantial."



William Schoch
Director of Visa Purchasing® Visa U.S.A.

Visa thrives on making purchases easy to pay for. Long recognized as the global leader in the payment card industry, it is not surprising to find Visa at the forefront of what Forbes Magazine calls "the last frontier" of business automation, Internet- and intranet-based electronic purchasing. In fact, Visa is moving beyond simple electronic purchasing to implement Operating Resource Management (ORM) as a natural fit with its Visa Purchasing card program and other payment services it offers to business customers.

Crying for Efficiency

From computers to cubicle partitions, most companies today use manual methods to manage nearly all of their operating resources. For these organizations, the acquisition of operating resources is a cumbersome, costly process that's "crying for efficiency," according to William Schoch, Director of Visa Purchasing.

"In a paper-based environment, purchasing is time-consuming, frustrating, mistake-prone, and expensive," Schoch says. "If a requisition gets hung up somewhere in the approval or ordering

cycle, the person who initiated the request is in the dark and has no way of knowing where the problem is."

ORM takes advantage of the Internet and corporate intranets to consolidate and automate traditional methods of acquiring operating resources, including everything from capital equipment and office supplies to services and anything else that is not considered factory raw materials. With ORM, companies can integrate and automate the entire acquisition process: selecting items, obtaining the necessary approvals, placing orders, generating payments, and receiving the ordered goods.

Buying with Ariba

Visa initially implemented an ORM solution in its Foster City, California, and Denver, Colorado offices, using the Ariba Operating Resource Management System™ (Ariba ORMS™).

Ariba ORMS offers Visa users an easy-to-use, reliable interface that, in Schoch's words, "makes the whole purchasing process visible and puts information right at your fingertips."

SOLUTION OVERVIEW

Business Profile

Jointly owned by its more than 21,000 member institutions, Visa is the global leader in the highly competitive payment card industry. Visa cards are accepted at more than 15 million locations around the world, with companies and consumers using its services to purchase more than \$1.3 trillion in goods and services annually.

Hardware and Software Platforms

Server: IBM-compatible PC running Windows NT Server operating system

Clients: IBM-compatible PCs running Windows NT or Windows 95

RDBMS: Microsoft SQL Server

ERP/HRMS: Dun & Bradstreet Millennium

Business Benefit

Comprehensive, integrated solution for operating resources, including capital equipment, MRO (maintenance, repair and operating) supplies, and business services. Result: Streamlined procurement and reduced administrative costs by 50-90 percent.

The solution integrated seamlessly with Visa's existing IT infrastructure and the systems used by participating suppliers. To request operating resources, Visa employees use the Ariba ORMS client application in a browser on their desktop PCs to submit purchase requisitions. They select from items in an online catalog, which shows what goods and services are available, for what price, and from which vendors.

If required, the system gives managers the ability to quickly and efficiently review and approve requests. Then, once the order is finalized, it is placed electronically over the Internet. Payment is automated as well by integrating the Visa purchasing card. During the purchasing process, managers can rely on the spending controls provided by the Ariba ORMS and the Visa Purchasing card to ensure that employees do not exceed their spending authority.

A Win-Win Program

The initial implementation of Ariba ORMS has been well received by users and business managers in addition to Visa's purchasing professionals.

Employees have better visibility over the order process and can track the progress of their orders through the system. In addition, goods and services are received significantly faster. For example, during Visa's pilot program, purchases of computer hardware that previously took three days of administrative handling were completed in as little as 32 minutes. Further, managers have found it easy to access the system and review items needing their approval. They also like the fact that there is no paper to keep track of.

Equally impressive are the cost savings. By automating the procurement process from selection through payment, Visa reduced its administrative costs by an average of \$100 per order – a 50% to 90% reduction.

Purchasing professionals are among the most enthusiastic advocates for the program. "Visa prides itself on developing professional buyers who are skilled in supply base management and negotiation. In the past, however, they have spent much of their time on tactical, paper pushing instead of managing supplier relationships and associated cross-functional teams," says Brian Hall, vice president of procurement at Visa International. "Operating Resource Management is a win-win program because it enables and empowers our procurement specialists by shifting their focus to strategic initiatives as opposed to paper-shuffling processes."

The Ariba solution also makes information more readily available to Visa's procurement organization as well as to cost center managers. With the reporting capabilities of the Ariba ORMS, buyers can readily track purchasing patterns, analyze purchasing practices, and determine how well vendors are meeting their service-level agreements. The software also creates a solid base of information on which to negotiate better prices in future contracts.

Exploiting Intranets

Visa initiated its ORM project after conducting in-depth interviews with 25 Fortune 200 companies. Visa found that companies had three critical needs: they want solutions that provide a great deal of relevant information, help to

lower administrative costs, and enable more effective supplier relationship management.

After a comprehensive survey of available software, Visa determined that Ariba was, says Schoch, "the right solution for Visa to use in automating the process of acquiring our operating resources and expanding our Purchasing card program."

The companies surveyed also saw great value in a solution that expands the utility of corporate intranets. "So many companies have a great intranet infrastructure that they're using primarily to push information out to their employees," Schoch notes. "Operating Resource Management offers a meaningful way to move beyond online phone books and cafeteria menus, and really exploit a company's intranet investment to bring greater efficiency and automation to its employees."

Company-wide Roll-out

Visa is rolling out the production application to all domestic-based employees. Visa also has extensive plans to integrate the Ariba ORMS with its other business systems to even better leverage the information in its purchasing database.

In addition, the company has worked with Ariba to develop an automated reconciliation capability that allows companies to reconcile an electronic statement of Visa Purchasing charges with the information in the purchasing database. "Operating Resource Management is a great beginning," says Schoch. "It's an exciting area for Visa as a buying organization and for our customers."



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Concur Procurement™ at Work for Visio Corporation



[the problem]

Process was a paper-laden system so slow that employees often hand-carried requisitions from one person to the other to speed things up.

Additional staff was required to accommodate the building queue of purchase orders.

The average cost to process a single requisition was a staggering \$49 - an amount sometimes exceeding the value of the goods being bought.



Visio saves \$500,000 and realizes return on investment in under four months

[the solution]

Concur Procurement streamlines procurement by employing a simple, browser-based interface

Employees enabled to easily order supplies and track information directly from their desktops.

Concur Procurement allowed Visio to establish approval levels, control products and catalogs, define ordering limits, and streamline workflow.

With Concur Procurement, companies can gain control over the processing costs of MRO supplies.

[the benefits]

Visio has slashed its procurement processing costs from \$49 per requisition to \$5.17.

Savings totaled \$500,000 in the first year alone, translating into an incredible return on investment of less than four months.

Concur Procurement has freed Visio from the need to add purchasing-related staff, and detailed order data is now available, allowing for more accurate budgeting and tracking.



At most companies, processing a requisition for office supplies is not only excessively time-consuming, but sometimes more expensive than the goods themselves.

At Visio Corporation, however, completing and approving a requisition is a quick, convenient, and inexpensive experience thanks to an intranet-based procurement automation application called Concur Procurement from Concur Technologies. Concur Procurement has dramatically reduced the time and money that Visio spends when it processes a requisition.

Visio, the largest developer of drawing and diagramming software, is a rapidly growing company of nearly 700 employees. Before March 1998, Visio processed all of its requisitions manually using a paper-laden system. To expedite orders, Visio would use its "sneaker-net" system, hand carrying the requisition from one step in the process to the next. Typically, though, it took up to 10 days to process an order, at a cost of \$49 each.

Moreover, the people processing the orders received numerous phone calls inquiring about the status of orders and the expected time to receive the order. As Visio grew, it needed additional staff to accommodate the building queue of purchase orders (POs).

“Concur Procurement’s intranet-based front end is very user friendly, with features that provide all of the controls we were looking for in a system.”

Mark Estberg
Director of Information Systems
Visio Corporation



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To solve this problem, Mark Estberg, Visio's director of Information Systems, and his team worked with Visio's Finance team to begin identifying and evaluating electronic intranet-based procurement systems.

Because Visio has hundreds of employees buying a wide variety of products, Visio wanted a purchasing system that was user friendly, yet flexible. Estberg's team added the requirements that the software be able to route orders for approval, that it automate the signature authority tree, and that it also check the progress of POs without requiring significant manual labor.

In Concur Procurement, Visio found the solution it was seeking. Observes Estberg, "Concur Procurement's intranet-based front end is very user-friendly, with features that provide all of the controls we were looking for in a system."

Concur Procurement streamlines procurement by employing a simple, browser-based interface that enables employees to easily order supplies and track information directly from their desktops. The product allows companies to establish approval levels, control products and catalogs, define ordering limits, and streamline workflow. With Concur Procurement, companies can gain control over the processing costs of MRO (maintenance, repair, and operations) supplies.

"We are a corporate culture that likes to do things quickly and efficiently," explains Estberg. So it was only fitting that the implementation of Concur Procurement was completed in 6.5 weeks using only 27 days of Visio employees' time. The company immediately realized efficiencies in PO processing and product delivery.

"Now Visio employees can enter purchase requisitions over the user friendly intranet without having to learn how to use our SAP system," says Estberg. "This is a particular benefit to those employees in international offices that have little or no onsite IT support."

The product allows for the aggregation of multiple supplier catalogs, providing a consistent look and feel. Orders can then be transmitted to suppliers through a variety of mechanisms, including email, fax, and EDI (electronic data interchange). Corporate purchasing departments can reduce total procurement costs, analyze the vendor base, define approval controls, improve employee productivity, and increase the speed with which items are ordered and received, as well as enhance visibility into funds committed.

"Concur Procurement gives us real-time information so that we can make better decisions," comments Estberg. "Because the product interface is easy to use, we are now able to give our users more control while improving their productivity. We run a lean IS [Information Systems] staff, so having end users access their own information is important to us."

Thanks to Concur Procurement, Visio has slashed its procurement processing costs from \$49 to \$5.17 for each purchase requisition. Total cost savings in the first year alone were \$500,000, translating into an incredible return on investment in under four months. Moreover, detailed order data is now available, allowing for more accurate budgeting and tracking.

Visio is now spending smarter by customizing its suppliers' catalogs. Plus, the time it takes to process payables is now shorter and the amount of time budget managers spend gathering financial data has been slashed. Together, these benefits create a win-win situation for Visio in automating its procurement process.



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About Concur Technologies

Concur Technologies, Inc.™ (www.concur.com) is a leading provider of workplace eCommerce solutions that automate costly and inefficient business processes among employees, partners, suppliers, and service providers. Its flagship products, Concur eWorkplace™ and Concur eWorkplace.com™ (www.concureworkplace.com), integrate Concur's suite of workplace eCommerce solutions – business-to-business eCommerce, human resource self-service, travel and entertainment expense management, and travel booking – through a common business portal. Both products enable users to access critical information and services thus reducing operating costs, increasing productivity, and improving supplier management. Concur has licensed its workplace eCommerce solutions to more than 275 companies worldwide, representing over 2.1 million employees. Customers include AT&T, Baxter International, DaimlerChrysler, Exxon, and Pfizer. Concur's Global Alliance Network is comprised of over 50 world-class organizations including ADP, American Express, Exodus, KPMG, and Microsoft.

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