



A Search for New Services



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GSA ADVANTAGE!

2005 COMPUTERWORLD HONORS CASE STUDY

GOVERNMENT & NON-PROFIT ORGANIZATIONS

GSA LAUNCHED ITS ONLINE, ePROCUREMENT SYSTEM, GSA ADVANTAGE!, IN 1995. WITH MORE THAN EIGHT MILLION PRODUCTS AND SERVICES AVAILABLE ON THE SITE THE SERVICE SAVES THE TAXPAYER ABOUT \$20 PER GOVERNMENT ORDER PLACED, OR WELL OVER \$42,000,000. [20055323]

SUMMARY

At the dawn of the Internet age, when the World Wide Web was still in its infancy, the United States General Services Administration (GSA) launched an online, eProcurement system called GSA Advantage! This was in 1995 – two years before Amazon.com went online. With more than eight million products and services now available on the site, GSA Advantage! offers government employees – both civilian and military – a powerful alternative to earlier paper-based catalog systems. Not only does it streamline the procurement process, it also allows purchasers to buy in confidence, knowing they are leveraging contracts that provide best prices. To date, GSA Advantage! has processed more than two million orders worth \$1.2 billion. In doing so, it has saved the government – and ultimately the American taxpayer – \$42 million, or about \$20 per order.

APPLICATION

If you were to look for innovative, indeed pioneering, uses of information technology you would not likely begin your search among government agencies. And yet, the GSA – the centralized federal procurement and property management agency created by Congress to improve government efficiency and help federal agencies better serve the public – has been and continues to be a pioneer and leader in eProcurement.

Since the launch of its GSA Advantage! online procurement system in 1995, it has grown into an online marketplace that features more than eight million products from over 14,000 vendors. Its user population has grown to 400,000 with 300 new users registering every day. On a typical day, more than 2,000 orders worth more than a million dollars are placed using GSA Advantage!

At any given moment, there are more than 2,000 users on the site, conducting as many as 25,000 searches per hour. This one-stop, online shopping resource allows customers to purchase a panoramic range of supplies and services including office products, furniture, information technology solutions and electronics, apparel, tools and machinery, vehicles, watercraft and much more.

The system is designed to facilitate shopping as well as market research. It allows users to:

- search by keyword
- browse by category
- use a powerful advanced search
- research and purchase items
- view order history
- check the status of orders
- reorder
- park and email carts while shopping

A recent innovation -- e-Buy – is an electronic Request for Quote (RFQ) system designed to allow Federal buyers to obtain quotes for services, large quantity purchases, big ticket items, and purchases with complex requirements.

Additionally, the GSA has developed a number of customized interfaces to GSA Advantage! Two of these – virtual stores for the U.S. Air Force and the USDA – are already up and running with more to come. (A virtual store is an agency-specific procurement site that features customized content, business rules and services to promote centralized control over purchasing.) To provide interoperability between various government organizations' back-end purchasing systems and GSA Advantage! GSA has

also created “PunchOut” capabilities that allow employees in government agencies to access GSA Advantage! from their eProcurement systems, enabling them to shop local catalogs as well as GSA Advantage! catalogs, obtain approval at their respective agencies to enforce internal procurement policies, and seamlessly integrate their financial systems to automate the reconciliation process.

With hundreds of new users registering on GSA Advantage! each day, and with projected sales for FY2005 of \$375 million, it is clear that the site is an unqualified success. Success, of course, breeds ever-growing customer expectations, and to that end, GSA Advantage! is a constant work-in-progress. The GSA Advantage! team makes an average of 1,000 changes to the system each year, employing the latest technology to ensure that customer satisfaction remains high.

Several years ago, Forbes magazine called GSA Advantage! “the mother of all digital marketplaces.” Given the growth of the system since then, even that lofty praise may turn out to be an understatement.

A video overview of the project may be found at: <http://www.sybase.com/detail?id=1019176>

BENEFITS

Prior to the implementation of GSA Advantage!, government personnel were limited to conducting procurement research and making purchases using a limited number of hard copy vendor catalogs. There were two key problems with this process. It was manual, and therefore labor intensive, and there was no guarantee that the purchaser was getting the best possible price.

GSA Advantage! changed that.

The development and implementation of GSA Advantage! constituted nothing less than an overhaul in government procurement processes. By creating this comprehensive, online marketplace, government agencies as well as taxpayers benefited from a single, streamlined procurement process and from the discounted prices that could only be achieved through the combined buying power of federal civilian and military customers.

Specifically, GSA Advantage! replaces:

- direct contact with multiple vendors
- manual placement and tracking of orders
- offline use of other systems to reconcile orders
- retention of paper copies of GSA schedule documents and catalogs
- manual, time-consuming research using paper catalogs to find products and services.

GSA Advantage! delivers an abundance of benefits including:

- online access to the latest product information and prices
- reduced research time (an average system search takes two seconds)
- automatic calculation of lowest product cost and quantity discounts
- online review of delivery options
- online selection of payment method and tracking of credit card thresholds
- online ordering and re-ordering of products and services
- automated order confirmation via e-mail
- online access to order history and tracking of order status
- online vendor contact information
- online cancellation of orders
- integration with other systems to automate the reconciliation of invoices and credit card statements

This Internet-based system also provides 24x7x365 access, which is critical given the number of civilian and military organizations located around the world. In the past, time zone differences and problems placing international telephone calls have made it difficult for non-U.S. based federal and military personnel to contact vendors or government supply depots to order products and services essential to meeting agency mission needs. GSA Advantage! eliminates these problems by making communication easy for government personnel throughout the U.S., Europe, the Far East, and zones throughout the world because it is always available over the Internet.

IMPORTANCE

The importance of technology in the development and evolution of GSA Advantage! cannot be overstated.

GSA Advantage! exists because early on, the GSA understood the potential of the Internet to streamline and accelerate business processes. In the nine years since its implementation, the GSA Advantage! team has understood that the key to enduring customer satisfaction lay in the ongoing use of new information technology as it emerges.

From its initial implementation, based on CGI technology using C++, GSA Advantage has evolved into a J2EE-based, service-oriented architected system.

Availability, performance and security are the three most critical success factors that determine customer satisfaction. Ordering on GSA Advantage! is a seven-step process (from search to checkout). Customers expect that no step will take more than a couple of seconds. At any moment there are over 2,000 customers on the site. Customers typically conduct as many as 25,000 searches per hour. Currently, GSA Advantage! can handle about 7 searches per second. In order to maintain performance as the user population continues to grow, the GSA Advantage! team knows it will need to more than double this search performance within the next 6 months just to keep pace with growth.

The system now comprises over 100 high-performance Unix servers (including R&D, development, testing, production and backup servers), and Sybase Adaptive Server Enterprise 12.5, 64-bit databases.

To maintain the flexibility it needs for continuous improvements to the system, the GSA Advantage! development team has more recently adopted an Open Source Struts framework (based on standard J2EE technologies) in conjunction with a service-oriented architecture.

This provides the team with an extensible development environment that allows it to respond to ever changing customer expectations.

Another example of GSA's innovative use of technology involves its development of an agency e-procurement communication capability called "PunchOut." This capability enables a government agency e-procurement requisitioner to access and enjoy the GSA Advantage! shopping experience from within the agency's own e-procurement application. Agency users "Punch-In" to GSA Advantage! to create a shopping cart with their desired items. Upon completion of the shopping experience, the cart is transparently returned to the agency's e-procurement application for approval. Upon completion of the agency approval process, the cart (now a purchase order) is passed to GSA Advantage! for order fulfillment.

The "PunchOut" capability is accomplished through a combination of technologies including an "integration server" that acts as the front end to the existing GSA Advantage! system. The integration server handles all protocol and authentication issues providing a level of abstraction to GSA Advantage!. In this way, all the unique e-procurement application and communication needs of each "PunchOut" enabled agency remains transparent to GSA Advantage!.

By "PunchOut" enabling their e-procurement applications, agencies gain greater control over maverick purchasing, realize lower costs associated with purchasing from the government price schedule, and enjoy increased levels of purchasing reporting and tracking while retaining their customized interfaces.

ORIGINALITY

GSA Advantage! is the first and only tool designed expressly for Federal Government employees to support the purchasing needs of the entire government. Its efficiency and effectiveness have drawn the attention of other government organizations at the state and local levels that want to streamline their own procurement processes and benefit from the contract pricing on the GSA Advantage! site.

SUCCESS

GSA evaluates the success of GSA Advantage! in terms of sales volume, number of new registered users, system performance and availability.

In each of these respects, GSA Advantage! has met or exceeded expectations and projections. Customer satisfaction is very high.

Sales are projected to increase from \$277 million in fiscal 2004 to \$375 million in fiscal 2005. Virtual stores and PunchOuts are planned for a number of additional agencies. The GSA Advantage! customer population is

expected to grow to 425,000 by June 2005. And in spite of the rapid growth of the system, GSA has maintained an enviable system availability level of 99.9%.

DIFFICULTY

The biggest challenge facing the GSA is keeping up with the pace of technology advances in order to maintain the system availability and performance that are so critical to customer satisfaction.

As is the case with any successful IT system, success breeds ever-increasing expectations and demands. That means GSA must ensure that its GSA Advantage! development team is always ahead of the curve as new hardware and software technologies emerge.