

LANSA Case Study

Gannett Brings Big Benefits To Newspapers Large And Small

Gannett Co., Inc. is a leading international news and information company with revenues of \$7.4 billion. Gannett is the largest newspaper publisher in the U.S., with 85 daily newspapers, including USA TODAY, and daily paid circulation of approximately 7.2 million. It also has nearly 1,000 non-daily publications, 23 television stations, and a large newspaper publishing operation in the United Kingdom.

Since 1998, Gannett has managed circulation, advertising and marketing for most of its newspapers with a LANSA-based application called Genesys. The newspapers run Genesys and other applications independently, on 56 System i servers. Internal users access the system with green-screen and Windows clients, while external users have Web access, all developed with LANSA.

GANNETT

The need for a Scalable Integrated Solution

Peter Olsen, Manager of Genesys Development at Gannett, explains "Up to this year (1999), most of Gannett's newspapers were using one RPG system for Circulation and a separate COBOL based system for Advertising. In the past, we also had a number of newspapers using a Basic Plus system in a DEC environment. The circulation and advertising systems were not connected in any way."

"We were looking for synergy between the two. The main purpose of Genesys is to maintain a universal customer pool of both subscribers and advertisers that all our newspaper and business applications could use," continues Olsen.

"In addition, the old environment did not support a corporate view of marketing information. Most of the newspapers had PC based marketing databases that were not well coordinated with the subscriber and advertiser databases on the AS/400."

"In evaluating the possible solutions, scalability was also an important issue. Gannett publications range from very large newspapers with a circulation of over a million

copies, down to very small newspapers with as few as 15,000 copies. Therefore the total solution, software and hardware, needed to be scalable."

"Plus from an IT point of view, we were looking for a more portable and productive development environment."

"We compared several development tools. In the end it came down to two tools. We sent people to training classes for both to get a feel for how easy each would be to learn and to use. And as a result we bought LANSA."

Project on Schedule

Most of the development took place during 1997 and then the system was rolled out during 1998.

Gannett replaced two separate systems with an integrated LANSA solution called Genesys that manages circulation, advertising and marketing for most of Gannett's newspapers. The entire project, including implementation at the first 70 newspapers, went according to schedule in two years.

"At each newspaper there has been a three month implementation that includes training and conversion from the old system to the new system. The combined rollout of the system at the first 70 newspapers took one year. We had set that schedule at the beginning of 1997, before we had even written one line of code. And we are still on schedule!"

Genesys comprised two thousand new programs and integration with a million lines of RPG and COBOL code (in 1999). The system was developed and maintained by just 7 programmers, half the number needed to support the preceding circulation and advertising systems.

"With only seven programmers, we cannot afford have specialists in different development environments," says Olsen, Project leader of the Genesys project. "Each team member needs to be able to back up each other. We strongly follow the philosophy that we want to use LANSA everywhere. We develop everything in RDML and let LANSA worry about turning that into PC code, or client server code, or AS/400 code or Web code."

Productivity Allows for Lean Team

"Now, with the system implemented at the majority of the news papers, I can say that we are definitely more



Peter Olsen, project leader of the Genesys project

productive with LANSA. But it is hard to quantify. We do so much more with LANSA than we would have done without it. We wouldn't have done context-sensitive help or pop-up prompting of code fields without LANSA. You get added benefits with very little cost, because they are part of the LANSA system."

"The productivity gained depends on the type of application. To build a simple file maintenance application, we simply run a LANSA template and the productivity gain is enormous. This is up to 50 times faster. But for very complicated code, then the productivity gain may be only 50 percent."

"This productivity in new development and maintenance will allow us to respond much faster to business requests. With RPG and COBOL our small team was not able to deliver timely solutions," says Olsen.

"My advice is to get the repository and your templates right first, than start generating and coding. We didn't even start coding until half way through the project. We spent that time designing and building the LANSA Object Repository and then customizing our LANSA templates."

"We are happy that in LANSA you can highly customize your templates. We probably spent more than a month customizing our templates to make them exactly the way we wanted. Then we generated literally hundreds of programs from each template. And we never had to revisit the templates or re-do generated code."

"We make extensive use of all of the LANSA Repository facilities except multi-lingual support. We defined help text for all our fields and functions. We make extensive use of triggers and virtual fields. And all edit checking is done by the LANSA Repository."

"Setting up our applications in using the 'LANSA way' makes development much more productive. More importantly, our Genesys programs are of a better quality. They have fewer errors, are smaller and much easier to maintain."

"Of the defects that we found during our rollout of Genesys, 90% of them were in the legacy code we interfaced with and not in LANSA code. LANSA applications are robust and error free."

Effortless Integration with Internal and External Systems

"Customer Service is the main application within Genesys. A large newspaper may have a customer service staff of over 60. Customer service has to deal with circulation issues such as subscription starts and stops and address changes. Genesys also supports our telemarketing systems and staff that contact people and ask them to subscribe."

"As well, the distribution of newspapers to carriers is managed in Genesys. This means the invoicing and all the trucking and shipping reports that are needed to get the right quantity of newspapers to the right carrier at the right time."

"In advertising we have people calling in, wanting to place a classified ad. Although the actual text is not entered in Genesys we do manage all the advertising billing in Genesys. When a text for an advertisement is entered a newspaper's front-end system, the relevant advertisement information gets automatically uploaded into the Advertising Billing module in Genesys."

"Genesys also allows us to keep marketing information on customers and prospective customers, in the same database that we use for circulation and advertising. The marketing module in Genesys also allows us to merge a tape with third party demographic information, in our case from Dun and Bradstreet, into the database. This helps us to better target the advertising and circulation single copy sales market. We also merge data from telephone companies into our database, where information about new telephone connections helps us to find new subscribers."

"We also use LANSA to create simplified front-ends for other packaged solutions," explains Olsen.

"Genesys interfaces with a neighborhood-segmentation system called PRIZM from Claritas. PRIZM assigns demographic cluster codes based on information such as education, income and geographic area. The resulting database file of this application is used by Genesys. This information helps us to focus on better penetration in specific market clusters."

"We use an address-hygiene product Code1, from Group1. We incorporated that address hygiene interactively into our customer service screens, so that when people key in an address in a LANSA screen, it sends this address to Code1, which also runs on the AS/400. Code1 then sends back the corrected address, which is then used in the LANSA application."

"A much more complex interface, because of its many complicated parameter screens and operational requirements, is the Genesys interface to Merge/Purge, also from Group1. Merge/Purge helps to correctly merge the third party demographic information we purchase with our own customer database. A LANSA interface makes this product easier to use, with a step by step series of screens."

"Gone are the days when custom programs had to be written to match each outside database format. Now screens gather information about field position and size and LANSA programs rearrange the data into a standard format."

"Last but not least, about 80% of our old RPG and COBOL system code is still there and we interface to that from Genesys as well. Our ultimate goal is to replace all old code with LANSA programs. This will give us more efficient maintenance and portability to other platforms," says Olsen.

Benefits to Newspapers

"One of the goals we had is to bring to the smaller newspapers the kind of marketing techniques that so far have only been used by the bigger newspapers. These techniques can be so complicated and hard to use that it is beyond the feasibility for a small newspaper. Now with LANSA, we have been able to simplify complex marketing processes in Genesys. We certainly hope to see increased subscriptions rates because of Genesys," says Olsen.



Donna Johnson, Circulation Information Systems Manager at The Idaho Statesman, one of Gannett's daily newspapers, comments. "We want to complete customer requests as quickly as possible. Customer service quality and efficiency has certainly improved since we implemented Genesys."

"The biggest problem with the previous software was that the Circulation and Advertising systems were really two separate applications. The circulation staff couldn't access advertiser information and vice versa. Now when a subscriber calls for an address change, we can see whether they also have an advertising account and if they want to transfer that account as well. Customers can complete several requests with just one telephone call without being transferred to another department."

"In addition, Genesys is easier to use and more flexible. The pop-up screens enable us to take shortcuts when we are searching the system. We have several options available to search for a customer, the screens are expandable and allow for a kind of zoom-in for more information.

The system is very flexible and doesn't have to be set up each time, because it remembers the interface preferences based on my user-id."

"The marketing information the system retains helps us increase our sales efforts, both to advertisers and subscribers. Before we didn't have the structure in place to keep lifestyle and other marketing information. We can now market very specifically to specific groups of people and companies."

Tom Willet, from the IT department of Florida Today, another of Gannett's daily newspapers, comments "Genesys has made it possible for FLORIDA TODAY to develop our customer intelligence. We can now fully realize the customer as a customer of the newspaper, instead of separating a customer into an advertiser or subscriber. Genesys has allowed us to combine resources and streamline operations."

The Future

Olsen continues "Once we have re-developed our other systems with LANSA, we will have portability which we may decide to use or not. We feel it is important that we can go to our hardware vendors and say we have a choice. Even if we don't move to another hardware vendor, we like to have the choice. At this point, the AS/400 is by far the better machine and the total cost of ownership appears to be the lowest. But will that still be true 5 years from now? We want to have the option to move to a different platform in the future."

"Bigger newspapers will easily have over 200 people simultaneously working on the Genesys system and run an AS/400 model 640 or 530 and may have a small programming staff. Small newspapers may have just a handful of users

Company and System Information

- Gannett Co., Inc. is a leading international news and information company. In the United States, the company publishes 85 daily newspapers, including USA TODAY, and nearly 900 non-daily publications. Along with each of its daily newspapers, the company operates Internet sites offering news and advertising that is customized for the market served and integrated with its publishing operations. USA TODAY.com is one of the most popular news sites on the Web. The company is the largest newspaper publisher in the U.S.
- Genesys integrates with Address hygiene and merge/purge products from Group 1 Software, Lawson Financials and Cyborg for payroll and HR.
- For more information visit: www.gannett.com

and run Genesys on an AS/400 model 170, 20/S or 40, with no programmers.

"Web or not, I am not too worried about what languages or platforms may be hot in the future. LANSA insures you against change."

"Right now we are using the same scaleable LANSA software and a range of very scaleable AS/400 hardware for all newspapers, large and small. Someday, as we replace RPG and COBOL modules, we might use an NT server for some of the smaller newspapers. All this is possible with LANSA's portability."

"We are currently familiarizing ourselves with LANSA for the Web, but have not yet decided on the first Web application. We are considering giving advertisers online access to account information. Our advertising invoices are incredibly complicated, so giving our customers an online answer to the question, 'Tell me exactly why this is the price?', would be very useful. And since an individual newspaper generally has only about 2000 big advertising customers, it is easy to target them."

"Web or not, I am not too worried about what languages or platforms may be hot in the future. LANSA protects our investment in business logic against changing language and operating system platforms. As a small team we should focus on the business benefits. That is what we are paid for. I feel confident that LANSA will take care of the technical implementation, be it AS/400, Windows NT or Web with C, Java or RPG and any choice of database engines."

RAMP (2008 Update)

In 2007/2008 Gannett used RAMP as a temporary solution to enable a rapid consolidation to three customer service call centers, allowing time to create new custom call center software. RAMP gave over 300 customer service representatives access to all newspapers and System i servers with a single sign on and a single application window.

"We picked RAMP from LANSA because no other solution could have done the job. The first center was opening as soon as the phones could be installed. All we had was a cryptic, code-based green-screen application that used almost every available function key and could only handle one newspaper. Yet RAMP managed all that potential chaos, providing a tree view to select newspapers, using simple drop-down lists instead of codes, spelling out abbreviations, and automating screen navigation. RAMP reduced training time and errors. It also reduced call handling time, which was a major part of this project's ROI," says Peter Olsen, Manager of Genesys Development at Gannett.