



TEKSOUTH
CORPORATION

A CASE STUDY

A FINANCIAL MANAGEMENT PROJECT THAT DIDN'T "SOAR INTO THE WILD BLUE YONDER"

The success story of one of the largest, most actively used data warehouse systems in the Department of Defense

INTRODUCTION & BACKGROUND

Imagine the challenge facing the United States Air Force: Manage an operating budget of nearly \$40 billion affecting the programs, administration and combat operations of personnel and facilities worldwide. Not only is the amount staggering, but consider that these dollars support more than 400,000 civilian, military and contractor employees working around the clock in more than 100 global locations. Each unit receives a share of the funds to manage and perform its mission, while the Air Force leadership requires daily, near real-time insight into how various organizations are handling their portion of the allocated dollars. The work environments are fast-paced, and requirements change often. The minimal tolerance for errors in the accounting process requires a capability to consolidate and integrate financial data faster and more reliably, measurably reducing the time required to produce a budget and report on the performance. For example, since the beginning of the “war on terror” spending priorities throughout the Air Force operational chain have undergone multiple revisions. The process is dynamic, requiring close coordination from top to bottom of the decision management process, while drastically improving the relevance of information needed for executive decisions and reducing the turnaround time for action. This is the daunting task facing the Air Force financial community in today’s world.



SITUATION

The U.S. Air Force needed to integrate financial data from disparate systems, and provide geographically-dispersed financial managers with the tools to manage day-to-day operations. In addition, senior leaders at all levels required a real-time snapshot of how operational entities were performing. The solution required a financial data management system capable of scaling initially from a few hundred users to more than 15,000 users around the world. The system had to be operational 24/7 to users and managers in every time zone around the world. System users at all levels needed instant access to information in order to make timely decisions. With limited resources, the USAF needed to keep development and deployment costs for any solution to an absolute minimum.

SOLUTION

Teksouth Corporation of Birmingham, Alabama, stood ready to meet this daunting challenge – producing a system that met all of the Air Force’s requirements including on-time delivery and within the Air Force project budget. The solution: the Commanders’ Resource Integration System (CRIS). CRIS has become the largest financial data warehouse in the U.S. Air Force and one of the most active financial data warehouses in the entire Department of Defense.

During initial requirements analysis, Teksouth consultants realized that CRIS would push the limits of typical data warehousing solutions. Users needed ad-hoc control of their queries. A few canned, stock reports would be insufficient. The system’s security model required unprecedented access controls since it

dealt with highly sensitive financial data. Data had to be available for analysis within minutes to worldwide users, and the system required scalability without information flow disruption.

The first phase of CRIS was deployed in 2001 on a small scale as planned, with a limited number of users. The Air Force's Financial Systems Office (FSO) was quite pleased. *"The tool has been a huge success – it has continuously met or exceeded our expectations since it was turned on,"* said Glenna Gonzalez, the Senior Technical Advisor for the Air Force FSO.

Because of the scalable architecture designed by Teksouth, the move from a few hundred users to thousands of users was relatively straightforward and non-disruptive. CRIS was readily scalable and thus the expansion took place much faster than planned. As more people realized the power and ease of use of CRIS's analytical capabilities, they wanted access. Widespread use quickly followed. CRIS now has more than 15,000 users performing an average of more than 600,000 ad-hoc queries each month. Peak requirements are nearly double that average with a record 1.2 million ad-hoc queries executed in September 2006.

Many organizations restrict or even disable ad-hoc query capability due to performance problems and the negative impact it has on system resources. CRIS actually *promotes* ad-hoc queries giving users at all levels the information they need in a timely manner. Remarkably, 82% of ad-hoc queries are processed and results returned in 10 seconds or less with an extraordinary overall average of 23 seconds for all queries.

The real power of CRIS lies in its capability for all users, no matter what seat they hold in the Air Force structure, to work at their level of expertise. For lower management, CRIS provides the capability to "slice and dice" information and have it presented in a format that fits their analytical needs. CRIS' Executive Web View (EWV) was developed by Teksouth to provide a browser-based analysis resource for Air Force top management at the Pentagon to strategically analyze high-level summary data and charts with the ability to drill all the way down to a single transaction if necessary. With this "dashboard" capability, executives can see at a glance all the information available to make timely and wise decisions. *"Executive Web View has dramatically increased productivity by bringing real-time financial information to the decision makers,"* noted Don Henney, Comptroller and A8 Director of Programs and Resources for Headquarters Air Force District of Washington. EWV leveraged Teksouth's modular CRIS architecture utilizing the same data sources, metadata, security model and infrastructure that were already in place, thus keeping overall costs down.

The core component of the CRIS architecture is a star schema-based data warehouse that employs Microsoft® SQL Server 2000 technology. The warehouse contains nearly three terabytes of data, and continues to grow, receiving 250 daily data feeds from 19 systems worldwide.



EVALUATION

CRIS continues to demonstrate fundamental and essential lessons for mission critical decision support systems. These include:

- A **customer focused** solution is the preferred way to achieve real success. The best technologies and architecture will fail if they do not meet the needs of the users.
- **Performance** is a key to user adoption. As query response times improved, dropping to less than 10 seconds, the use of the system increased threefold both in the number of users and the number of queries.
- A **scalable** architecture can dramatically reduce start-up costs and allow for incremental growth. This should be exciting to many organizations that have not been able to justify the traditional price tag associated with a data warehousing project.
- High **availability** is crucial for meeting the customer needs. CRIS availability averages 99.97% uptime attributable to its modular architecture that allows redundant subsystems.
- **Agility** to meet the ever-changing business needs of the users. Two indicators predominately found in agile systems are ad-hoc query capability and a modular, redundant architecture.
- True business **value** is obtained through widespread adoption of a solution. This step begins the move from a system that improves efficiencies to a system that is a strategic asset.

SUMMARY

Ultimately, the Teksouth-designed CRIS has yielded a strong return on investment for the Air Force and taxpayers by reducing demands on manpower and better focusing fiscal assets with various programs. Ms. Gonzalez of the Air Force FSO further notes, “*CRIS gives our users instant results they can view in a very user-friendly fashion. They now can spot and eliminate problems in advance instead of doing damage control.*” The need to provide insight into every aspect of its finances in a secure and timely manner – both combat and non-combat oriented – is critical to the Air Force. Teksouth provides the systems that help the Air Force achieve those goals.

If you would like information about Teksouth’s data warehousing and business intelligence solutions, contact us at sales@teksouth.com, or call 1.800.842.1470.