WebFOCUS

Customer Profile

Information Builders enables agile information solutions with business intelligence (BI) and integration technologies. WebFOCUS – the most widely utilized business intelligence platform – connects to any enterprise system or application and enables simple and intuitive interaction with information.

U.S. Transportation Command

Snapshot

Organization
US TRANSCOM provides transportation capabilities for government agencies, including patient evacuation.

The Challenge
US TRANSCOM was operating with two legacy systems that were not integrated. The transport and treatment of wounded and sick soldiers was often met with errors and delays.

The Strategy
Create a system that shares information globally by combining transportation, logistics, and clinical data to manage patient-movement activities.

The Results
Using state-of-the-art BI technology, US TRANSCOM has a patient-movement system that helps to assure positive outcomes. The system provides information about patients' urgent medical needs, available facilities, in-transit visibility, and enterprise-wide cost and performance analytics.

Information Builders Solution
Reporting Server, User Administration Services, Analytical Reporter, ReportCaster, and Professional Services.

Information Builders

U.S. Transportation Command Saves Lives With BI Technology

World-Class Global System Orchestrates Critical Patient-Movement Activities

When wounded soldiers require immediate medical attention, it's critically important to quickly determine their condition and arrange a transport system to move them to the proper facility for treatment. United States Transportation Command (US TRANSCOM) under the Department of Defense (DoD) uses business intelligence (BI) technology from Information Builders to devise optimal patient-movement plans based on urgent medical needs, available facilities, in-transit visibility, and enterprise-wide cost and performance analytics. It's all part of TRAC2ES, a WebFOCUS-based system that helps sick or injured personnel reach the optimal destination via the most expeditious method of transport.

TRAC2ES, an acronym for the TRANSCOM Regulating and Command and Control (C2) Evacuation System, supports patient movement from the battlefield, to definitive care, and, when necessary, to rehabilitative care in hospitals such as Walter Reed. The system also tracks and coordinates patient information throughout the U.S. military's worldwide network of healthcare facilities.

"Lives are at stake here," emphasizes Lieutenant Colonel Keith Lostroh, TRAC2ES functional program manager. "When soldiers are wounded in battle, the military needs to be able to provide efficient medical transport in conjunction with real-time information and pinpoint accuracy. TRAC2ES helps us provide advanced care for our troops."

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In the Call of Duty

Prior to the development of TRAC2ES, the transport of wounded and sick soldiers was often met with a multitude of errors and delays. Missteps during Operation Desert Storm highlighted the need for improved coordination of medical care for injured soldiers. In some cases, soldiers wounded in that conflict were directed to the wrong hospital or ended up in facilities that didn't provide the correct specialties and treatments. The patient-movement process needed to be much more efficient, which led to the implementation of TRAC2ES.

Under the direction of project managers from Booz Allen Hamilton, Information Builders Professional Services worked with the TRANSCOM team to develop a BI system that was easy to use and would easily integrate with existing IT products. Using Information Builders WebFOCUS BI technology accessing an Oracle database, the team developed a decision-support, reporting, and analysis tool to coordinate patient movement on a global basis.

According to Lieutenant Colonel Lostroh, the operational decision-support system provides critical data that is used to minimize the severity of injuries and improve treatment. "TRAC2ES's decision-support information effectively supported the troops during operations Enduring Freedom and Iraqi Freedom by providing 100 percent patient in-transit visibility for more than 73,000 patient movements," he says. "Approximately 13,000 of these patient movements involved Operation Iraqi Freedom battle injuries."

Reporting Up the Chain of Command

Information Builders WebFOCUS BI platform supplies standard, custom, and ad hoc reporting capabilities that are flexible enough for average users to manipulate and understand. A guided ad hoc reporting environment makes it easier for users to select report dimensions, calculations, measures, and other variables. End users can select a drill-down path via simple links in standard Web browser displays.

TRANSCOM reports frequently make their way from senior command officers to the President and Congress. These reports include information about the number of patients and movements, the number of missions, and the costs. Authorized users can generate more detailed reports to monitor the status of patients from the beginning of transport to the outcome of treatment.

"Approximately 2,500 users have access to the system, which provides three different domains through which to access personal, medical, and movement data," explains Lostroh. "They can generate ad hoc reports through a visual interface that helps them identify pertinent data.

Users simply select the records they want to look at, then extrapolate and chart the data. WebFOCUS then builds SQL queries to access the database."

To protect sensitive and private medical data, WebFOCUS enables data-level and role-based security to partition the data based on each user's needs and requirements. Users can range from the clerk who arranges the patient's transfer, to the doctors and nurses who determine the patient's eligibility and fitness for movement, to the supporting agency personnel who arrange the aircraft and determine when the flight will leave and where it is going. Commanders can track each facet of the movement and watch the mission as it unfolds. Timers built into the system analyze how long it takes from start to finish.

"The goal is to provide good medical care, not simply move people around," says Lostroh. "Our utmost concern is for patient safety, quality of care, and efficient use of resources, just like any healthcare facility."

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An Emphasis on Safety and Care

TRAC2ES not only orchestrates patient-movement operations but also provides critical metrics related to patient safety. It begins by ensuring that an injured person won't be adversely affected by a long flight. Dispatchers use the BI environment to collect data on the condition of the patient so the flight surgeon can determine if the patient is ready to be transported. Once medical personnel decide the patient is well enough to be moved, the TRAC2ES system is called upon for further help.

An Air Force system locates the aircraft and crew to care for the patient. Operators can then dispatch a mobile team for the exclusive care of the patient, tantamount to a flying ICU. All of this is tracked and managed in TRAC2ES system.

For example, when a 21-year-old active duty Army Specialist sustained blast and burn injuries related to a car bombing on the Iraqi battlefield, the system helped ensure he was rapidly evacuated and received advanced patient care. Using TRAC2ES the military team transmitted vital patient information from the 31st Combat Support Hospital (CSH) in Baghdad to surgeons at Landstuhl Regional Medical Center (LRMC) in Germany, then on to the USAISR Burn Center in San Antonio, Texas. The well-orchestrated process of communication and evacuation ensured the patient received critical care at each step of the evacuation process.

TRANSCOM is in the process of further enhancing the system to track the outcome of problems related to safety and quality of care. "Travel time used to be our biggest limitation, but the new system provides data to all pertinent personnel to assess the situation, get crews and aircraft

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moving, and get the patients to where they need to be to save lives," says Lostroh. "Today we can move a burn patient from Iraq to the burn center in San Antonio in much less than 24 hours. We can, in fact, move a patient anywhere in the world within 24 hours."

TRACE2ES provides one system for the entire DoD, enabling complete in-transit visibility. "While the patient is moving we know when he entered the system and when he left," continues Lostroh. "Commanders know at all times where their soldiers are. The health system can know where the patients are. Even before we schedule transit, we can determine whether moving a patient will make his or her condition deteriorate."

Mobilizing Data in the Field

Occasionally the military finds itself in locations with no Internet access or with limited bandwidth. To address the situation TRANSCOM has added a standalone application called TRAC2ES Mobile that runs on a portable computer. It allows operators to input data via a portable device and relay the information as soon as a connection is available. "We can download the data into the system directly or export a file and e-mail it to another mobile application," Lostroh explains.

TRAC2ES has also been instrumental in supporting other organizations, both in war and in peacetime activities. For example, the technology has helped authorities move patients out of the way of hurricanes, resolve logistical issues, provide a team to check facilities and bed availability, and move citizens to other receiving sites.

Supported by TRAC2ES, TRANSCOM will continue to provide the most effective mobility capability the world has ever seen. The system has transformed the organization's distribution network with an extensive information-technology backbone. Evacuation and care activities are more efficient, minimizing suffering, improving care, and saving lives.

Information Builders

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