The Organization
ASM Research, Inc., is a leading provider of application, software, system, network, database, and reporting solutions to U.S. government customers.

The Challenge
To modernize an outdated reporting environment, allowing military training personnel to track the training activities of U.S. Army individuals within the training and developing programs of the Army, Navy, Air Force, Marines, and other federal agencies.

The Strategy
Deploy a BI environment that provides more than 28,000 training personnel with fast, easy access to information needed to manage the training programs within the U.S. armed forces and the DoD.

The Results
A broader base of users has improved access to key training metrics — such as needs, success rates, and utilization — for a more effective military training program and more efficient use of resources.

Information Builders Solution
WebFOCUS, Professional Services, and Education.

ASM Research Uses WebFOCUS to Create Military Training Management Application

Information Builders Modernizes BI Environment for U.S. Department of Defense

ASM Research is a Fairfax, Virginia-based information solutions integrator and a leading provider of innovative technology solutions and advanced analytical services for the public sector. In a market flooded with local contractors, ASM has clearly differentiated itself, achieving growth in both revenues and its customer base through a winning combination of stability, a team of capable and success-motivated professionals, and unwavering dedication to providing services that effectively blend quality and innovation. For more than 30 years, this employee-owned company has provided application, software, system, network, database, and reporting solutions to a variety of government customers, primarily in the Department of Defense (DoD).

Because military training programs are so crucial to the safety and security of the American public, ASM wanted to empower the U.S. government to better manage them, so it could ensure the skills and versatility of its fighting force. Unfortunately, the Army had an antiquated, difficult-to-use reporting system that posed numerous challenges. 

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.
challenges when it came to tracking training-related events and monitoring how resources were being allocated and funds were being spent. There was an urgent need to update and modernize the environment, without disrupting training services.

The organization turned to Information Builders’ WebFOCUS platform to create a Web-based reporting capability for the Army Training Requirements and Resources System (ATRRS), a business intelligence (BI) environment that tracks the training activities of Army graduates within the training and development programs of the U.S. Army, Navy, Air Force, Marines, and other federal agencies. Information about training programs, courses, schedules, student enrollment, and all pertinent certifications and credentials awarded upon course completion, can now be easily accessed by more than 28,000 training personnel, allowing them to more efficiently manage training performance and resource requirements across 30 military functional or technical communities.

The modern, intuitive, Web-based BI environment has eliminated the hassles of the mainframe-based reporting systems, helping ATRRS customers to more rapidly and accurately determine training needs, assess success rates, manage training seat utilization, and more. WebFOCUS now provides the insight needed to build the world’s most elite military force.

People Reconnaissance: the Road to WebFOCUS
Previously, ATRRS users relied on a mismatched system comprised of hundreds of legacy reports that had been constructed using a diverse set of software technologies to manage training activities. Some reports were written in COBOL while others were based on Web reporting technologies. In many cases, users had to login to a mainframe reporting system and then manipulate the data to put it into a format they could use.

“The old reporting system was cumbersome and difficult to use,” says John Fraser, senior vice president at ASM. “Users could determine the order of columns and they had some limited sorting and filtering capabilities, but the interface was difficult to work with. It needed a complete overhaul and modernization – yet it had to be done without disrupting the Army’s critical training services.”

ASM evaluated several BI tools that could potentially help them rewrite this aging reporting system, but found most of them to be too rigid and difficult to use. “When our developers began this project, they quickly discovered that it would be difficult to find Web-based reporting software that would meet their needs,” Fraser explains. “They were discouraged – until they learned about Information Builders’ WebFOCUS.”

Basic Training: A BI Environment That Anyone Can Use
WebFOCUS met all the requirements: rapid deployment, a modern look and feel for users, next-generation capabilities for presentation and drill down, and the ability to connect to IBM DB2 and Microsoft SQL Server data sources for real-time reporting. ASM’s developers can create reports that maximize flexibility at runtime. Users can select parameters from within these reports and then save these variants so common reports can be reused easily or scheduled automatically. Output can be sent by e-mail or stored in a report library.

“WebFOCUS is capable of integrating data from virtually any data source,” Fraser says. “That was a big factor in our decision to use it for this project.” WebFOCUS also supports automated monitoring and alerts for key performance indicators (KPIs), automatic creation of standard
briefings, and “what if” data analysis through statistical scoring applications. The system can expose reports via Web services, making it easy to provide ATRRS data to external systems in a service-oriented architecture (SOA).

Scalability and deployment flexibility were two other important factors in the decision to use WebFOCUS. ASM can scale the BI software from small agency requirements to multiple military enterprise communities, easily supporting tens of thousands of users. “Not only is its capacity scalable; its functionality is scalable as well,” Fraser says. “We can add modules that plug into the base technology. So we can deliver online transaction processing reporting to some communities while delivering advanced analytic capabilities to others.”

One of ASM’s first BI missions involved migrating hundreds of legacy reports to a Web-based platform that offers business intelligence and analysis capabilities to casual computer users. The new WebFOCUS interface is intuitive, which makes these reports available to a much broader user base. “We don’t need an active training program to teach users how to run reports,” Fraser continues. “Anybody who knows how to use the Web, e-mail, and Microsoft Office can quickly pick up WebFOCUS without training because it uses those tools to deliver information.”

The WebFOCUS reports are also much more extensible than the old mainframe ones, enabling people to refresh the information within an existing report instead of running a new report each time. They can save report definitions along with specific parameters, which is another huge time saver. They can also drill down through the data to get to the underlying data elements. “WebFOCUS offers a huge improvement over the mainframe system that delivered rigid reports with little or no drill-down capabilities,” Fraser sums up.

Safety Measures: Defending Crucial Data

Security is a critical issue for nearly all DoD information systems, including who has access to the training data. “The most important obstacles this project faced were the technical aspects of the security issue,” says Orlando Ferreiras, director of Security, Information Assurance Services at ASM Research. “Until we learned about WebFOCUS, we were having difficulty finding reporting software that would meet our needs without requiring us to rewrite security modules or user interfaces.” WebFOCUS met the requirements of the Department of Defense with a role-based security environment that restricts users so they can only view those parts of the data set to which they are authorized access.

This was no small task, since ASM wanted a BI solution that could create reports for external users who sent requests via the Internet. “Many of the reporting tools we analyzed were designed to be inward facing – that is, they were intended for users within an organization who had accounts on the network,” Ferreiras continues. “Exposing the solution externally would involve developing a custom security module or a custom front-end that communicated to the reporting server via application programming interfaces.” Ferreiras and his team created ATRRS with levels of security that allows users to access certain areas of the database and keep them from entering other areas. The restrictions are enforced whether they are viewing data through an internal portal application or via a simple Web browser over the Internet.

The WebFOCUS portal interface simplified the process of providing access to both external and internal users. The security module is granular enough to allow ASM to exchange information with

“Anybody who knows how to use the Web, e-mail, and Microsoft Office can quickly pick up WebFOCUS without training because it uses those tools to deliver information.”
several ancillary applications that use ATRRS data without having to create separate instances of the reporting server. Through the use of security domains, groups, and group views, users from various applications can be directed to the reporting environment where they see a reporting portal customized to their needs.

**Intelligence Gathering: Intuitive Dashboards Deliver Instant Stats to Instructors**

More than 28,000 people now use this business intelligence system to acquire information and statistics about training needs, success rates, training seat utilization, and other variables. WebFOCUS enables ASM to define and monitor KPIs customized to various types of users. For example, Army courses are typically taught at training centers, called schoolhouses, on Army posts. Each schoolhouse teaches several courses for which they must project training and budget requirements years into the future.

“Many of the courses are quota-managed,” Fraser explains. “That means the seats for each class are divided up across Army organizations based on projected need. Quota managers within each organization are responsible for using their training allocations to reserve seats for soldiers within their units. Unused training quotas go into an open pool 45 days before a class starts and are distributed on a first-come, first-served basis.”

In this scenario, school managers and quota managers need to know the fill rate for upcoming classes, as well as whether certain classes might be cancelled due to not meeting the minimum number of student reservations. ASM created dashboards and KPIs to help them monitor supply and demand for these courses, with displays tailored to each type of user. Each KPI can be portrayed graphically so the user can easily see upcoming issues and then drill down through related reports to discover the root cause of problems and possible solutions. The system will automatically alert users when certain conditions are met and generate exception reports to draw attention to important tasks and issues.

**Mission Accomplished: Empowering Users With Hands-On Tools**

With modern warfare changing rapidly, it is more important than ever that military leaders have the best available tools to efficiently train their personnel. ATRRS fosters self-reliance within a large, functionally diverse community. It presents this community with an intuitive Web environment to run reports and conduct analyses – so that the DoD’s training budget is well spent.

“The reality of today’s technology-rich world is that users will continue to become more and more tech-savvy,” says Willie Kelly, program manager at ASM Research. “As a result, they will be far more inclined to want to do things for themselves. Ease-of-use and minimal redundant actions and processes are critical user interface requirements for today’s user population. This WebFOCUS-based system empowers our user community and extends information to leaders throughout the DoD as well as to several federal agencies.”