



SAP for Public Sector

**INTEGRATING SAP[®]
DEFENSE FORCES AND
PUBLIC SECURITY
WITH GEOGRAPHICAL
INFORMATION**

THE BEST-RUN BUSINESSES RUN SAP



Today, the focus of operations for most defense organizations is on planning and supporting forces in a deployed scenario. For commanders to be effective, it is vital that information regarding resources be highly visible and right at their fingertips.

To meet this need, a new SAP® industry solution called SAP Defense Forces and Public Security gives military leaders the ability to plan and to build up operating forces prepared for action. This enterprise resource planning (ERP) solution is capable of handling complex organizational structures as well as personnel, materiel, and financial resources. The solution is flexible enough to support extensive changes, and it provides a role-based user interface and a system architecture designed specifically for military purposes. All relevant processes are integrated with administration, logistics, and controlling. And not only armed forces can benefit. Most of the functions delivered by SAP Defense Forces and Public Security can also prove valuable to any organization that has public safety and security as its objective – police organizations and fire departments, for instance.

Each part of a military or public security organization, be it a tank battalion, a fighter bomber squadron, or a SWAT team, is represented by a force element in the SAP Defense Forces and Public Security software. Each of these elements connects descriptive attributes, personnel, materiel, and accounting information by way of a single object in the system. The force element includes all the information contained in the table of organization and equipment (TO&E), as well as additional details. Therefore, a military commander can easily view the entire resources of an organizational element and use this information when making decisions.

The SAP software can accommodate with information about the various relationships that exist among deployed units – for example, those that deal with command and control or the various support activities – and takes those relationships into consideration when evaluating logistical and administrative tasks. When called upon to make a decision – many of which must be made on a split-second basis – leaders can take into account all the resources at their command and quickly retrieve information and transform it into action.

A FULL RANGE OF GIS SOFTWARE PROVIDED BY ESRI

A geographical information system (GIS), which provides the functions and tools needed to store, analyze, and display information about the position of physical objects, can be a crucial factor for the effective visualization of military command and control.

Since almost everything military personnel do – particularly on the battlefield – involves some kind of spatial relationship, the ability to manage information about these relationships and perform analyses on this data is critical. To this end, SAP is working with ESRI, the market leader in GIS solutions.

ESRI's GIS products integrate the factors of geography and terrain into IT support for military and intelligence decision making. GIS enables this type of information to be created, queried, analyzed, and displayed in real time – in a variety of formats – and tailored to the specific needs of each user. Spatial data can not only be easily and quickly integrated with other defense-relevant data, but it can also be readily shared and refreshed, ensuring that all concerned individuals have the benefit of the best, most recent, and most valid information. GIS, in short, is integral to the Common Operational Picture.

Whether used as an off-the-shelf application or tailored for a specific mission or individual situation, ESRI's ArcGIS is an excellent solution for the spatial component of defense IT infrastructure. ArcGIS software seamlessly handles both spatial and nonspatial data, is intuitive to use, and is built on open standards.

As a way of getting a handle on today's ever more complex and intertwined military operations, planners and mapping specialists find themselves relying on complicated unit symbology. The current standard, MIL-STD 2525B, has been made an integral, well-defined part of ESRI's ArcGIS Military Analyst solution.

ArcGIS Military Analyst incorporates a suite of tools that are tailored to meet the special needs of the defense user. It maximizes the utility of the standard suite of the National Imagery and Mapping Agency (NIMA) by allowing direct use and rendering of NIMA's vector and raster products, line-of-sight (LOS) assessments, Military Grid Reference System (MGRS) conversion, and Digital Terrain Elevation Data (DTED) analysis. ArcGIS Military Analyst also includes Military Overlay Editor (MOLE), which supports MIL-STD 2525B and custom combat symbol systems.

CONNECTING SAP DEFENSE FORCES AND PUBLIC SECURITY WITH ESRI'S GIS

Comprehensive support for today's military leaders can best be achieved by integrating the geographical and tactical information provided by a GIS with the resource management information of an ERP system. As passive middleware, the SAP GIS Business Connector makes communication between the two systems possible by referencing the business objects of both. Support is provided by both the visualization of ERP data within the GIS, and direct access to the GIS within the SAP system. Moreover, relevant data can be altered from the graphical user interface of the SAP system as well as by using the graphical functionality of ESRI's GIS.

Using SAP Defense Forces and Public Sector, an officer in charge, for example, can select a military unit and display its location in the GIS itself. Alternatively, he or she can display resource data and relationships maintained in the ERP system within the GIS. The order of battle can thus be displayed in a geographical context and dedicated to the user's role, whether that user is an operator or a logistician. In addition, the support relationships among various units can be manipulated graphically within the GIS and

the automatically modified stock levels are handled by the ERP system. Subordinate units can be selected by a drill-down feature within the GIS or by using the hierarchical tree structure of the TO&E within SAP Defense Forces and Public Sector.

The two systems combine all the visualization and analysis of ESRI's industry-leading GIS software while maintaining the advantages of resource transparency and total asset visibility of the state-of-the-art ERP system landscape provided by SAP.

