

# RampMap™

## Automated Aircraft and Asset Tracking and Planning

Aviation maintenance, repair, and overhaul (MRO) work involves more than simply turning wrenches or stripping and repainting. Before MRO work can begin on an aircraft, large numbers of MRO assets both big and small, have to be in the right place, at the right time and must be moved in coordination with the aircraft they'll be servicing. For large-scale MRO facilities like the Air Force's Air Logistics Centers, the inability to track the location of aircraft and ground support equipment (GSE) makes it difficult to quickly locate, stage, deploy, and coordinate aircraft, GSE, and critical resource movements among the busy ramps and hangars. This inability causes persistent schedule delays, increased MRO flow times, and mounting aviation repair costs at a time when most military organizations are looking for better resource efficiency and utilizations. Working with the Aircraft Maintenance Operations Control Center (AMOCC) at Tinker AFB, KBSI customized its generic asset visualization technology, providing a knowledge based visualization and management application used to track aircraft and GSE across the air logistics center.

### Innovative technologies for asset tracking and management

Designed as a replacement for the white board used to manually track movements of maintenance assets—a process that was limited by its one-dimensionality and by the temporal gap between fast-paced status changes on the real-world ramp and their representation on the board.

RampMap™ provides automated real-time visibility of MRO assets on site: an electronic “ramp map” that shows the current physical location of assets at the center. This type of visibility is critical to streamlining aircraft, GSE, and resource deployments and in improving collaborative planning, resource allocation, and the dispatching and stusing of MRO assets and work.

The RampMap™ web-based interface allows users to visualize the location of assets—aircraft and all types of GSE—and to plot, track, and view the impact of aircraft and GSE moves across the repair facility. Using a simple drag and drop command, users can move assets from one location to another, dynamically updating aircraft and GSE locations on screen and providing depot personnel with the real-time location of all aircraft and GSE at the center.

### Automated aircraft and GSE move planning and decision support

RampMap™ has dramatically reduced the man-hours required by AMOCC to monitor and plan for MRO asset movements, and greatly improved the accuracy and speed of AMOCC decision making in support of their day-to-day resource management. AMOCC controllers are now able to identify, at a glance, the status of aircraft on the ramps as well as to visualize projected aircraft moves. Non-essential aircraft moves have been reduced, giving AMOCC a more streamlined and effective movement schedule. In addition, capturing aircraft and GSE location and movement data in RampMap™ not only make this data more accessible for management (RampMap™ automatically compiles and generates a wide variety of aircraft reports), but it also automates the use of this data for other decision support tools (e.g., simulation modeling tools), expanding the potential for this data in management decision making. RampMap™ is also assisting in meeting the depots' heightened security requirements of “round-the-clock” surveillance of Air Force assets.

The success of RampMap™ at Tinker has yielded the latest Air Force Standard for Depot Asset Visualization, with implementations across the country including OO-ALC/LAP at Hill AFB, AMARC at Davis-Monthan AFB, and WR-ALC/MAB at Warner Robins AFB.



