



AMP Integration into the AT21 Program

A team of government analysts from the United States Transportation Command (USTRANSCOM) Joint Distribution Process Analysis Center (JDPAC) provided groundbreaking and innovative work in support of the Agile Transportation for the 21st Century (AT21) Program. The JDPAC team used information technology to support an enterprise-wide business process transformation associated with optimizing on-time delivery of forces and sustainment at lowest cost. Their efforts inspired cross-functional collaboration, mirrored complex human cognitive processes, merged multiple lines of business, sparked innovative solutions, and improved credibility of operational planning processes.

The team demonstrated creative technical innovation in multiple areas to integrate the Analysis of Mobility Platform (AMP), the Command's long-standing mobility programmatic analysis simulation model of record, into the AT21 Optimized Delivery (OD) process. Today, USTRANSCOM passes transportation-feasible requirements to Air Mobility Command based on conservative subject matter expert assessment within the context of isolated requirements lines of business. The OD process is designed to apply analytical simulation and optimization tools within an automated business process management (BPM) framework across multiple requirements lines of business to produce an optimized airlift plan that balances global movement requirements with known daily airlift capacity. USTRANSCOM determined adapting AMP to the OD operational use case provided an effective, cost efficient solution for the OD process optimization engine. Historically, AMP has been used to support programmatic analyses focused on 7-20 years in the future. The challenge for the JDPAC team was adapting the existing AMP model to support "real world" operations 10-21 days in the future. Integration efforts focusing on airlift mission quality led to significant improvements in data, process, and model output and greatly improved trust and confidence among enterprise partners. Integration of AMP within the OD process provides the foundation for USTRANSCOM to produce a credible enterprise transportation plan that improves operational efficiency and effectiveness.

To support this integration effort the JDPAC team developed an innovative balanced score card approach to measure and compare model results. By combining on-time delivery and resource efficiency into a single metric they were able to repeatedly approximate complex subject matter expert assessment of airlift mission quality. This groundbreaking work is a first for USTRANSCOM and now permits planners to rapidly review and assess multiple airlift mission plans based on quality, reducing overall workload. The metric also provides a deeper understanding of objective mission quality measures that inform continuous improvement and streamline production. Additionally, the team developed reliable cost metrics that tread new ground in establishing cost-based decision metrics and goals for operational processes – another USTRANSCOM first. These innovative quality and cost metrics moved beyond data, model, and process to improve collaboration across the enterprise. The combined efforts of the JDPAC team have provided a catalyst for cultural change with profound consequences on improving performance and value for our nation.