



LEADING THE WAY

Metron Aviation is a leader in Air Traffic Management (ATM) systems worldwide. Customers and partners, on six continents, trust and rely on our technologies and solutions to solve their most unique, complex, and ever-changing challenges. Today, Metron Aviation is providing the groundbreaking aviation software the industry needs to deliver automated, secure platforms, and prepare the skies for tomorrow.

Our standards of excellence in engineering, science, and technology are unparalleled. We proudly serve air navigation service providers (ANSPs), airlines, airports, civil aviation authorities, the U.S. Federal Aviation Administration (FAA), National Aeronautics and Space Administration (NASA), and other industry leaders.



MANAGING AIRPORTS AND AIRSPACE

Air traffic flow management (ATFM) identifies and manages demand and capacity imbalances at airports and in airspace. Through the application of ATFM solutions, stakeholders can share accurate and up-to-date information to make informed collaborative decisions. This enables air navigation service providers (ANSP) to react to dynamically changing variables such as weather conditions, air traffic demand, equipment outages, controller staffing, and other planned or unplanned events. For these reasons, ANSPs need the ATFM solutions of Metron Aviation.

Our flow management solutions contribute to the safety, efficiency, cost effectiveness, and environmental sustainability of the entire ATFM system through common situational awareness, strategic automation for implementing traffic management measures, and continual improvement through post-operational metrics and reporting.



HARMONY KEEPING THE SYSTEM FLOWING

HARMONY FEATURES

- Identification of current and future airport and airspace constraints
- Proactive management of constraints through automated solutions
- Optimized solutions through advanced what-if modeling
- Capacity determination and declaration
- Accurate predictive data to support strategic decision making
- Proactive management of imbalances between demand and capacity

HARMONY BENEFITS

- Maximizes utilization of airport and airspace resources
- Improves safety
- Improves environmental sustainability
- Minimizes delay impacts from aviation constraints
- Delivers real-time situational awareness
- Enables platform for collaboration across all stakeholders

The Harmony system is a comprehensive, integrated Air Traffic Flow Management (ATFM) solution that enables aviation authorities to proactively monitor and manage system-wide operations at local, regional, and global levels. Harmony provides stakeholders a common view of current and future air traffic conditions and provides advanced automation for identifying and managing a dynamically changing environment.

The Harmony system fuses data from numerous aviation sources to provide accurate demand prediction for arriving, departing, and overflights to identify current and future constraints. Powerful automated tools enable users to collaboratively model, implement, and revise equitable and timely solutions for determining the best strategy for managing identified constraints and optimizing throughput. The result is improved airspace efficiency and enhanced safety for all airspace users.



HORIZON MAINTAINING THE DEMANDING SCHEDULE

The Horizon system is an Air Traffic Management (ATM) solution that provides a complete system-wide view of air traffic operations enabling stakeholders to monitor current and future demand, and identify constraints related to available airspace and airport resources. A web-based platform, Horizon promotes stakeholder collaboration through a common predictive view of demand for arriving, departing, and overflight traffic based on scheduled, planned, and operational data. Its advanced air traffic flow management (ATFM) solution provides superior visibility and data accuracy for all aspects of ATFM to support better decisions.

The Horizon system presents ATM system data in multiple formats, including a map interface, demand graphs, and flight lists, to provide robust and dynamic demand monitoring capabilities. The combination of common situational awareness with an understanding of future demand supports informed planning and improved strategic decision making in pursuit of aligning stakeholder goals for safety and efficiency.

Horizon provides the strategic, pre-tactical, and tactical predictions for airports and airspaces to improve efficiency and predictability. The benefits of Horizon are more relevant now than ever as the industry works to fully recover from the impacts of the pandemic to air traffic.

HORIZON FEATURES

- Identification of current and future airspace and airport constraints
- Evaluation of future demand at airports
- Accurate arrival predictions for domestic and international flights
- Instant evaluation of user-defined airspace
- Common situational awareness platform for all stakeholders
- Minimization of delays and airborne holding
- Identification of future sector loading in support of staff resource alignment

HORIZON BENEFITS

- Offers system-wide view of current and future operations
- Accurately monitors arriving, departing, and overflight traffic
- Promotes collaborative decision making
- Improves sustainability
- Reduces system and operational costs
- Increases operational efficiency through better decision making

System and Data Integration

- Strategic Schedule
- Airport Schedule
- Local Surveillance
- Global Surveillance
- Airline Schedule
- ANSP Data
- SWIM Compatible

Capacity Declaration and Monitoring

- Airports
- User-Defined Airspace
- Fixes
- Sectors
- Terminal Maneuvering Areas
- Airways

Visualization

- Graphs
- Flight Lists
- Interactive Map
- Detailed Flight Information

Contingency Management

- What-If Modeling
- Impact Modeling
- Dynamic Revisions

ATFM Measures

- Miles-in-Tail
- Minutes-in-Tail
- Level Capping
- Ground Stops
- Ground Delay Programs
- Airspace Flow Programs
- Reroutes
- Fix Balancing

Collaborative Decision Making

- Stakeholder Awareness
- What-If Scenarios
- Information Exchange
- Flight Substitutions

Post-Analysis and Continual Improvement

- Daily Reports
- Post-Operations Analysis
- Continual Improvement
- ICAO ATFM Performance Metrics
- Historical Replay

FEATURE COMPARISON

The Harmony and Horizon systems have common features that support aviation systems. The comparison chart shows the additional features that Harmony provides for a wider array of solutions.

- HORIZON

- HARMONY



BLUE SKIES AHEAD

Together, Metron Aviation's Harmony and Horizon systems are positively impacting the next generation of air travel. These software solutions greatly enhance airport safety, operations, and data sharing, while improving airspace efficiency and effectiveness for all airspace users.

For more information:
MetronAviation.com