



technology opportunity

NASA Aircraft Management Information System

For authoritative, real-time data on aircraft operations, logistics, and assets



Researchers at NASA's Johnson Space Center have developed a modular software suite that provides comprehensive, precise, real-time aircraft operations, maintenance, and logistics support. The NASA Aircraft Management Information System (NAMIS) tracks grounding discrepancies, inspections, aircraft configurations, and crew flight status; provides continuous and active control of all assets, including materials, parts, and equipment; and provides data and metrics to support business decisions and financial reporting. Originally developed for the aviation community, it can be used by any large organization in need of information management.

Benefits

- **Cost savings:** The system provides an extraordinary return on investment in terms of cost savings and more efficient operations and business processes.
- **Increased efficiency:** NAMIS provides Web-based, authoritative, real-time data on aircraft, personnel, and assets.
- **Reduced waste:** The system's tools manage materials, parts, equipment, and labor hours, thereby reducing waste and further lowering costs.
- **Increased productivity:** The automated systems eliminate paper-based records, improve productivity and accuracy, and reduce duplication of efforts.
- **Scalability:** The system is made up of seven distinct software modules, and each one can be implemented separately for a variety of uses.
- **Versatility:** The NAMIS modules can benefit any large organization or corporation in need of information management software.

Commercial Applications

- Commercial airlines
- Asset management and maintenance
 - Buildings
 - Vehicles
 - Tools
- Business intelligence
- Data warehousing

The Technology

The NASA Aircraft Management Information System offers a cost-effective, streamlined, efficient, data-driven system for handling flight operations and business management.

How it Works

NAMIS is composed of seven stand-alone modules, and each module is designed to interface with any or all of the others to create a seamless work flow. The seven modules have the following capabilities: flight scheduling, flight records and currency, flight data capture, Web-based reporting, logistics, aircraft maintenance, and a work cards system. The centralized database connects seamlessly with existing applications and the Web-based user interface allows all personnel to access real-time information on aircraft operations and logistics. Within NASA, NAMIS currently tracks over 90 aircraft, manages over 1.25 million inventory items, and is used by over 900 personnel, including flight schedulers, aircrew, engineers, maintenance personnel, business managers, and external vendors. NAMIS can be used by any large organization in need of asset management, business intelligence, and/or data warehousing. The software's unique ability to aggregate operational and business transactions into one data warehouse allows users to extract intelligence data, analyze trends, and therefore make better business decisions.

Why it is Better

NAMIS is a customized, highly innovative information management system that touches all data elements related to parts, assets, and costs. NAMIS enables safer flight operations and improves management visibility into the work being performed. The software provides continuous and positive control of all assets, which improves data consistency by eliminating redundant data entry across multiple systems. NAMIS reduces material costs and labor hours required to execute tasks, resulting in lower operational costs, reduced inventory balances, and improved re-utilization of assets. NAMIS also provides the data to support consistent and accurate financial reporting and asset accounting. This reduces dependence on manual and inconsistent reporting processes, improves accuracy and timeliness in producing external reports, and enables a rapid response to changes in operational requirements.

Licensing and Partnering Opportunities

This technology is part of NASA's Innovative Partnerships Program, which seeks to transfer technology into and out of NASA to benefit the space program and U.S. industry. NASA invites companies and other government agencies to consider utilizing the NASA Aircraft Management Information System (MSC-24723-1) for their applications.

For More Information

If you would like more information or want to pursue transfer of this technology please contact us at:

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