

Aeronautical Information Management



Federal Aviation
Administration

Activity Value Analysis Industry Day

Gary L Prock, AIM Systems

Overview

- Booz Allen and its FAA partners conducted an Activity Value Analysis (AVA) of the National Airspace Aeronautical Information Management (AIM) Systems (formally known as NAIMES)
 - Engaged AIM customers via focus group interviews and surveys (app. 33 groups)
 - Conducted data collection with AIM system contractors
 - Review findings from customer groups and systems analysis
- Results of the AVA
- Recommendations



The AVA Team analyzed the use of AIM Systems information across four external customer groups including FAA, Military, Airlines and GA

Customer Group Type	Customer Group	Description (Customer Description)
FAA	ATCSCC	Air Traffic Control System Command Center (ATCSCC), often referred to as the Command Center, manages the flow of air traffic through the NAS.
	ARTCC	Air Route Traffic Control Center (ARTCC), also known as a Center, is the facility responsible for controlling aircraft en route in a particular volume of airspace at high altitudes between airport approaches and departures.
	TRACON	Terminal Radar Approach Control (TRACON) or Terminal Control Center, controls aircraft within a 30-50 nautical mile radius of an airport between the surface and 10,000 feet.
	Towers	Towers are the air traffic control unit responsible for plane movements around an airport.
	FSS/AFSS	Flight Service Stations (FSS) and Automated Flight Service Stations (AFSS) are air traffic facilities which provide pilot briefings regarding current weather and possible hazards along a route of flight.
	Aviation System Standards (AVN)	AVN is responsible for development of instrument flight procedures (IFPs), publishing of aeronautical charts and digital products for air carrier and general aviation pilots.
Military	NOTAM Office	Military assigned to publishing Military NOTAMS into the Civil NOTAM system. This includes military assigned to the FAA ATCSCC USNOF and Global Positioning System Operations Center (GPSOC)
	Base Ops	Base operations is responsible for issuing Notices to Airmen for flight hazards or restrictions at an airfield or in the airspace that would pose safety of flight problems to pilots flying to the local airfield or through the airspace.
	NORAD	North American Aerospace Defense Command (NORAD) is a bi-national United States and Canadian organization charged with the missions of aerospace warning and aerospace control for all of North America.

Source: Booz Allen AVA Survey



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Customer Group Type	Customer Group	Description (Customer Description)
Airlines	Majors	Airlines with revenue in excess of \$1B and may have thousands of departures daily, domestic and international.
	Regional	Regional airlines are a type of airline service that is intended to feed a larger airline. Usually comprised of air service between small communities that are not able to support larger aircraft.
	Organizations	Associations or groups dedicated to representing airlines and the suppliers of products and services that support the industry, before federal and state agencies.
	Cargo	Cargo airlines (or airfreight carriers) are airlines dedicated to the transport of cargo. Some cargo airlines are divisions or subsidiaries of larger passenger airlines.
General Aviation	Business Aviation	Professional business flight operations under FAR Part 91, including fractional aircraft operating units and single pilot operations.
	Charter	A charter airline operates on-demand flights that take place outside normal schedules, by a hiring arrangement with individual customers. Part 135 and 91
	Schools	Provide aviation training and pilot services.
	GA Pilots	The term general aviation describes any flight other than a military or scheduled airline flight, ranging from gliders to large, non-scheduled cargo jet flights.
	Organizations	Groups whose membership consists mainly of general aviation pilots.

Source: Booz Allen AVA Survey



NAIMES Customer feedback was captured from 33 Focus Groups across the four customer groups

FAA	ATCSCC	ARTCC	TRACON	Towers	FSS	Other
	CARF	Memphis	Potomac	Colorado Springs	AK- Kenai	ASS
	USNOF	Denver	Oklahoma City	Paine Tower		
	USNS	Chicago	Seattle	Merrill Field		
		Anchorage	Colorado Springs			
		Ft. Worth				
Military	NOTAM office	Base Ops	NORAD	Other		
	DoD	Elmendorf AFB	Peterson AFB	Scott AFB		
	GPSOC (GPS)					
Airlines	Majors	Regionals	Organizations	Cargo		
	United	Colgan	RAA	FedEx		
	Jet Blue	Air Wisconsin				
	Alaska					
	American					
General Aviation	Schools	GA Pilots	Organizations			
	AV-ED	Through AOPA	AOPA			
	Dulles Aviation					

Source: Booz Allen AVA Survey



Analysis of the findings revealed a series of issues and themes common throughout the NAIMES program, identifying Service Quality Gaps

Qualitative and Quantitative Findings	
Issues	Themes
<ul style="list-style-type: none">• Accuracy• Availability• Communication• Content• Customer Service• Ease of Use• Format• Timeliness	<ul style="list-style-type: none">• Inconsistent NAIMES system usage• Manual, time consuming processes• Reliance on 3rd party solutions• NAIMES not primary NAS data source• Custom, in-house work-around solutions• Ineffective communication across users• Full trust in information purveyed• Insufficient Feedback Processes

Source: Booz Allen AVA Survey



Results of the AVA/1

Theme 1 – Inconsistent usage of NAIMES systems

- ▶ Inconsistent use of NAIMES was common across many of the NAIMES user groups. Many use 3rd party software programs to provide flight planning information because their programs were easier to use. Also, several users verify information with multiple sources to insure NAS information accuracy.

Theme 2 – Manual and time consuming processes

- ▶ The use of manual and time consuming processes are prevalent across all NAIMES user groups. Users consistently reported the use of faxes, email, and phone calls to access content, validate accuracy, and resolve timing issues.

Theme 3 – Reliance on 3rd Party Solutions

- ▶ Customers rely upon outside vendors to provide aeronautical information because quality control provided by vendors added an additional level of accuracy. Vendors updated systems based on customer feedback and business requirements.

Theme 4 – NAIMES is not always the primary source of NAS data

- ▶ Inconsistent use of NAIMES was common across many of the NAIMES user groups. Many use 3rd party software programs to provide flight planning information because their programs were easier to use. Also, several users verify information with multiple sources to insure NAS information accuracy.



Results of the AVA/2

Theme 5 – Customized internal systems provide workaround solutions for users

- ▶ Issues with accuracy of NAS information in NAIMES requires users to implement their own quality control. Additionally, workaround solutions allow users to filter unwanted data.

Theme 6 – Trust in Information Purveyed

- ▶ Users do not fully trust NAIMES data. The perception that the NAIMES system does not always contain the most up-to-date, real-time information.

Theme 7 – Ineffective Communication Across Users

- ▶ NAIMES does not have a distribution method for disseminating system information to front line user groups, such as the recent changes to AISR and pilot web, therefore notifications and updates are not communicated effectively.

Theme 8 – Insufficient Feedback Processes

- ▶ No feedback mechanisms exists to collect consumer complaints from external users for change requests.



Recommendations

Recommendation 1 – Clarify and Define FAA Service Offerings –

Determine the level and type of aeronautical services and information the FAA will provide through the NAIMES office, and to whom.

Recommendation 2 – Improve the Integrity of NAIMES Data –

Address the shortcomings in NAIMES data that cause customers to dedicate resources to conduct quality control.

Recommendation 3 – Establish and Execute a Communications Strategy –

Let the aviation community know about current products and plans for the future.

Recommendation 4 – Implement a Comprehensive Customer Feedback Mechanism

Establish feedback mechanisms to measure satisfaction, maintain service quality and provide input into the NAIMES program.



Boss for a Day

What Changes would you make?

- **Disseminate NOTAM L's like NOTAM D's**
- **Make NOTAMs easier to read**
- **Parse NOTAMs so that users can see and use just what they want**
- **Don't cancel NOTAMs when published (eg: NAVAIDS)**
- **One Stop Shopping for Aeronautical Information.**
- **Follow ICAO Standards**

