

# **Federal Aviation Administration**



## **Portfolio of Goals Fiscal Year 2004**

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## Airline Fatal Accident Rate

**1. FY 2004 Performance Target:** Reduce airline fatal accident rate to 0.028 per 100,000 departures

**2. Flight Plan Objective and Performance Target:**

- Safety Objective<sup>1</sup>: Reduce the commercial airline fatal accident rate.
- Flight Plan Performance Target: Reduce the airline fatal accident rate by 80% from the 1994-1996 baseline by FY 2007 and maintain this low rate in FY 2008.

**3. How FAA Measures This Performance Target:** Number of fatal air carrier accidents per 100,000 departures. A 3-year average of the accident rate is used to measure performance against annual targets. The 3-year average is calculated by dividing the number of accidents for the years involved by the number of departures.

$$\frac{[FYaccidents_1 + FYaccidents_2 + FYaccidents_3]}{[FYdepartures_1 + FYdepartures_2 + FYdepartures_3]} = 3\text{-Fiscal Year Average}$$

Note: Mid-year calculations are based on FY1 + FY2 + year-to-date FY3

**4. Scope of the measure:** This measure includes both scheduled and nonscheduled flights of U.S. air carriers (14 CFR Part 121) and scheduled flights of commuter airlines (14 CFR Part 135).

**5. Why the FAA chooses to use this measure:** The goal to reduce fatal commercial accidents by 80 percent in ten years originated in the final report of the White House Commission on Aviation Safety and Security issued on February 12, 1997. The National Civil Aviation Review Commission in its report, *Avoiding Aviation Gridlock & Reducing the Accident Rate* (December 1997), ratified this goal. In response to these reports, the FAA initiated a joint government-industry analysis of causal factors for aviation accidents. The resulting document, *Safer Skies – A Focused Agenda*, has formed the basis for joint government-industry efforts to reduce the number of accidents in both the commercial and general aviation areas.

**6. Source of Data:** The data on commercial and general aviation fatal accidents come from the National Transportation Safety Board's (NTSB's) Aviation Accident Database. Aviation accident investigators under the auspices of the NTSB develop the data.

Part 121 and scheduled Part 135 departure data is submitted by carriers to the Office of Airline Information (OAI) within the Bureau of Transportation Statistics (BTS) under 14 CFR Parts 241 and 298, respectively. The airlines submit the data on Form 41, Schedule T-100 – U.S. Air Carrier Traffic and Capacity Data By Nonstop Segment and On-flight Market and Form 41, Schedule T-100(f) – Foreign Air Carrier Traffic and Capacity Data by Nonstop Segment and On-flight Market. NTSB provides accident data. The fatal accident rate is small and could significantly fluctuate from year to year due to a single accident. Use of an average over three years smoothes the fluctuation that may occur in any given year.

The FAA has no independent data sources to validate BTS-collected departure data. Actual departure data for any given period of time is considered preliminary for up to 12 months after the close of the reporting period. This is due to amended reports subsequently filed by the air carriers. However, the changes to departure data rarely have an effect on the annual fatal accident rate. For internal use only, the FAA must rely on a combination of historical trend data, partial

internal data sources, and the Official Airline Guide (OAG) to project departure data. FAA uses OAG data until official BTS data is available. The air carrier fatal accident rate is not considered reliable until BTS provides preliminary numbers.

NTSB and FAA's Office of Accident Investigation meet regularly to validate the accident count and categorization.

Initially, this goal used the calendar year to keep it in line with the NTSB annual reports. However, FAA switched to a federal fiscal year basis to align with the Department of Transportation's performance reporting cycle.

Note: Most accident investigations are a joint undertaking. NTSB has the statutory responsibility, but, in fact, most of the accident investigations related to general aviation are conducted by FAA Aviation Safety Inspectors without NTSB direct involvement. FAA's own accident investigators and other FAA employees participate in all accident investigations lead by NTSB investigators.

Final Performance Figures: Numbers are final when the NTSB releases its report each March. So for March, 2004, FY2002 accident numbers will be finalized. However, the number is not likely to significantly change from the end of each fiscal year to when the rate is finalized.

## General Aviation Fatal Accidents

**1. FY 2004 Performance Target:** Reduce the number of general aviation and nonscheduled Part 135 fatal accidents to 349

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 2: Reduce the number of fatal accidents in general aviation.
- Flight Plan Performance Target: By FY 2008, reduce the number of general aviation and nonscheduled Part 135 fatal accidents to no more than 325 (from 385, which represents the average number of fatal accidents for the baseline period of 1996-1998).

**3. How FAA Measures This Performance Target:** The total number of fatal general aviation accidents. The first baseline of 379, against which future targets were set, was established based on data from the years 1996 to 1998. However, due to a switch in NTSB reporting from calendar to fiscal year and the addition of previously unrecorded fatal accidents, the baseline has been revised to 385.

**4. Scope of the measure:** This measure is a count of the number of general aviation fatal accidents during the fiscal year. It includes on-demand (non-scheduled FAR Part 135) and general aviation flights. General aviation comprises a diverse range of aviation activities, from single-seat homebuilt aircraft, helicopters, balloons, single and multiple engine land and seaplanes, to highly sophisticated extended range turbojets.

**5. Why the FAA chooses to use this measure:** The general aviation fatal accident goal was developed by the FAA and general aviation community as an overall measure of the impact of improved safety. Since it does not use a measure of activity to take into account changes in activity levels from year to year, the goal reflects a target based on projected growth in general aviation activity as reported in the FAA's annual General Aviation forecasts.

**6. Source of Data:** The data on commercial and general aviation fatal accidents come from the National Transportation Safety Board's (NTSB's) Aviation Accident Database. Aviation accident investigators under the auspices of the NTSB develop the data.

The FAA would prefer to use a fatal accident rate rather than fatal accidents as the performance measure because the use of a rate measure would take into account variation in activity levels from year to year. However, unlike commercial aviation activity that is reported regularly to the Bureau of Transportation Statistics by the carriers, general aviation flight hours are based on an annual survey conducted by the FAA. Response to the survey is voluntary. The accuracy of the flight hours collected is suspect and there is no readily available way to verify the data. For these reasons, the General Aviation community is unwilling to use a rate measure until the validity and reliability of the survey data can be assured.

The General Aviation community and the General Aviation Joint Steering Committee of the Safer Skies initiative recommend development of a data collection program that will yield more accurate and relevant data on general aviation demographics and utilization. Improved survey and data collection methodologies have been developed but timeliness of the information continues to be a major bar to its usefulness.

Note: Most accident investigations are a joint undertaking. NTSB has the statutory responsibility, but, in fact, most of the accident investigations related to general aviation are conducted by FAA Aviation Safety Inspectors without NTSB direct involvement. FAA's own accident investigators and other FAA employees participate in all accident investigations lead by NTSB investigators.

Final Performance Figures: Numbers are final when the NTSB releases its report each March. So for March, 2004, FY2002 accident numbers will be finalized. However, the number is not likely to significantly change from the end of each fiscal year to when the rate is finalized.

## Accidents in Alaska

**1. FY 2004 Performance Target:** Reduce accidents in Alaska for general aviation and all part 135 operations to no more than 125 per year.

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 3. Reduce accidents in Alaska.
- Flight Plan Performance Target: Reduce accidents in Alaska for general aviation and all Part 135 operations by 20% by FY 2008 (from the 2000-2002 average of 130 accidents per year to no more than 104 accidents per year).

**3. How FAA Measures This Performance Target:** The total number of Part 135 and general aviation accidents in Alaska. This is **NOT** a sub-measure of the Reduce General Aviation Fatal Accidents performance target.

**4. Scope of the measure:** This measure is a count of the number of general aviation and Part 135 accidents in Alaska during the fiscal year. It includes scheduled and non-scheduled FAR Part 135, as well as general aviation flights. Flight operations in Alaska are diverse and they are responsive to the State's challenging aviation environment and its unique air transportation requirements. The Part 135 operations in Alaska are dominated by single-engine airplanes powered by a reciprocating engine, operated under visual flight rules (VFR), and crewed by one pilot. Operating in rough terrain, adverse weather, and in areas of extreme isolation increase the risks to safe flight operations. The General Aviation operations often use the same types of single-engine airplanes and cope with the same environmental factors as the Part 135 operators.

**5. Why the FAA chooses to use this measure:** Alaska has a heavy reliance on air transportation in a difficult operating environment. This has led to an unacceptably high accident rate. Reducing accidents in Alaska will have an outsized effect on reducing Part 135 and general aviation accidents system-wide.

**6. Source of Data:** The data on Part 135 and general aviation accidents come from the National Transportation Safety Board's (NTSB's) Aviation Accident Database. Aviation accident investigators under the auspices of the NTSB develop the data.

Final Performance Figures: Numbers are final when the NTSB releases its report each March. So for March, 2004, FY2002 accident numbers will be finalized. However, the number is not likely to significantly change from the end of each fiscal year to when the rate is finalized.



## Runway Incursions

**1. FY 2004 Performance Target:** Reduce the number of most severe (Category A and B) runway incursions at towered airports to 33.

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 4: Reduce the risk of runway incursions.
- Flight Plan Performance Target: Reduce the number of most serious runway incursions (Categories A and B) at towered airports by at least 48% by FY 2008 (from the 2000-2002 baseline average of 52 per year to no more than 27 per year).

**3. How FAA Measures This Performance Target:** A runway incursion is any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in a loss of separation between aircraft taking off, intending to take off, landing, or attending to land at an airport. They are grouped in three general categories: operational errors, surface pilot deviations, and vehicle/pedestrian deviations. Runway incursions are reported and tracked at airports that have an operational air traffic control tower. "Operations" are total takeoffs and landings.

The FAA tracks four categories of runway incursions - A,B,C,D - but includes only those with the highest risk of collision, Category A and B incursions, in the measure.

- Category A: Separation decreases to the point that participants take extreme action to narrowly avoid a collision, or the event results in a collision.
- Category B: Separation decreases, and there is a significant potential for a collision.
- Category C: Separation decreases, but there is ample time and distance to avoid a collision.
- Category D: There is little or no chance of collision, but the definition of a runway incursion is met.

**4. Scope of the measure:** In FY2002 FAA changed the focus of measurement for runway incursions from all incursions to those incursions with measurable risk of collision, Categories A and B. Since Category C and D incursions were not likely to lead to an accident or a significant risk of an accident, their inclusion in the previous total tended to mask true safety risk. The new measure reflects the focus of FAA's runway safety effort to reduce the number and rate of the incursions with demonstrable risk.

**5. Why the FAA chooses to use this measure:** Runway incursions create dangerous situations that can lead to serious accidents. Reducing the number of runway incursions lessens the probability of accidents that potentially involve fatalities, injuries and significant property damage.

**6. Source of Data:** Air traffic controllers and pilots are the primary source of runway incursion reports. The data is recorded in the FAA National Incident Monitoring System (NAIMS). Preliminary incident reports are evaluated when received. Evaluation can take up to 90 days.

## **Injuries from Turbulence**

**1. FY 2004 Performance Target:** Reduce serious injuries from turbulence accidents to no more than 18.

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 5: Reduce cabin injuries caused by turbulence.
- Flight Plan Performance Target: Reduce serious injuries from turbulence accidents by 33% by FY 2008 (from FY 1996-2000 average of 18 serious injuries per year to no more than 12).

**3. How FAA Measures This Performance Target:** This measure is the count of serious injuries on U.S. commercial air carriers (14 CFR 121) resulting from turbulence during a fiscal year as determined by the National Transportation Safety Board.

**4. Scope of the Measure:** All serious injuries resulting from turbulence occurring on U.S. commercial air carriers.

**5. Why the FAA Chooses to Use This Measure:** The FAA is constantly trying to improve all aspects of aviation safety. One of those aspects is serious injury caused by turbulence. The FAA believes that through relatively simple and low-cost improvements such as improved dissemination of reported en route turbulence and improved cabin safety procedures during turbulence, U.S. carriers and the FAA can reduce this already low annual amount by one-third by FY 2008.

**6. Source of Data:** The National Transportation Safety Board.

## Single Index

**1. FY 2004 Performance Target:** Develop a workshop by June 2004 to help gain industry acceptance of a comprehensive index that provides a meaningful measure of the safety performance of U.S. civil aviation systems.

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 6: Measure the safety of the United States civil aviation system with a composite index.
- Flight Plan Performance Target: By FY2006, implement a single, comprehensive index that provides a meaningful measure of the safety performance of the U.S. civil aviation system.

**3. How FAA Measures This Performance Target:** For FY 2004, this target will be measured on whether the workshop occurred in June 2004.

**4. Scope of the measure:** This measure is concerned with the development of the index, not measuring the index itself.

**5. Why the FAA chooses to use this measure:** Current accident data is based upon number of accidents and the fatal accident rates. Although most everyone easily understands and accepts these measures, these measures are an incomplete way to gauge the overall risk to people using the aviation system. Fatal accidents are extremely rare, especially major commercial aircraft fatal accidents. A single accident can make a difference between a “good” and “bad” year. Accident rates by themselves make no distinction between relatively minor mishaps and very high-risk events.

Feasible alternatives to rates and fatalities do not exist. Lack of data is one reason. More importantly, we do not have a conceptual model that explains how all variables interact with each other to influence safe or unsafe outcomes. For example, we intuitively believe that an increase in operational errors or runway incursions implies an increased risk of accidents. However, we do not know what a 50 percent or 100 percent increase in operational errors or runway incursions means, if anything.

For this reason, the FAA is developing a single indicator that might provide a quick notion of whether the overall aviation system is doing better or worse relative to past performance. Like the Dow Jones Industrials Index or the S&P 500 index cannot explain a single industry or firm, a safety composite index would not be designed to tell us about a particular segment of the industry or a particular accident type.

The key to developing a comprehensive safety index is gaining approval from all stakeholders, including the aviation industry, OMB and Congress. For this reason, this performance measure focuses on achieving this acceptance by FY 2006.

**6. Source of Data:** AVR

## Commercial Space Launch Accidents – Fatalities or Serious Injuries

**1. FY 2004 Performance Target:** Prevent fatalities or serious injuries to the uninvolved public during commercial space launch or reentry activities

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 7: Prevent commercial space launch accidents.
- Flight Plan Performance Target: Prevent fatalities or serious injuries to the uninvolved public during commercial space launch or reentry activities

**3. How FAA Measures This Performance Target:** The number of fatalities or serious injuries that result from a commercial space launch or reentry.

**4. Scope of the measure:** This measure focuses only on commercial space launch or reentry activities licensed and supervised by the FAA.

**5. Why the FAA chooses to use this measure:** Commercial space transportation is the means by which payloads such as satellites and remote sensing devices are carried to orbit; these payloads have tremendous benefit to our society. Commercial space launch or reentry accidents can have the potential of major catastrophic consequences, involving large losses of life and property. The public expects to be protected from the potential dangers of commercial space launches and reentry activities. There has not been a single commercial space launch accident since the first DOT licensed launch took place in 1989, and DOT is working to keep this safety record perfect.

**6. Source of Data:** FAA

## Commercial Space Launch Accidents – Damage to Property

**1. FY 2004 Performance Target:** Prevent significant damage to property that is not associated with the flight during commercial space launch or reentry activities

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 7: Prevent commercial space launch accidents.
- Flight Plan Performance Target: Prevent significant damage to property that is not associated with the flight during commercial space launch or reentry activities

**3. How FAA Measures This Performance Target:** The amount of property damage that results from a commercial space launch or reentry.

**4. Scope of the measure:** This measure focuses only on commercial space launch or reentry activities licensed and supervised by the FAA. “Significant” property damage is defined as \$25,000 or greater.

**5. Why the FAA chooses to use this measure:** Commercial space transportation is the means by which payloads such as satellites and remote sensing devices are carried to orbit; these payloads have tremendous benefit to our society. Commercial space launch or reentry accidents can have the potential of major catastrophic consequences, involving large losses of life and property. The public expects to be protected from the potential dangers of commercial space launches and reentry activities. There has not been a single commercial space launch accident since the first DOT licensed launch took place in 1989, and DOT is working to keep this safety record perfect.

**6. Source of Data:** FAA

## Operational Errors

**1. FY 2004 Performance Target:** Reduce the number of most serious air traffic control operational errors (Categories A and B) to no more than 629.

**2. Flight Plan Objective and Performance Target:**

- Safety Objective 8: Enhance the safety of FAA's air traffic systems.
- Flight Plan Performance Target: Reduce the number of most serious air traffic control operational errors (Categories A and B) by 15%, to no more than 563 by FY2008.

**3. How FAA Measures This Performance Target:** Number of category A & B (highest severity) operational errors.

**4. Scope of the measure:** An operational error is a violation of separation standards that define minimum safe distances between aircraft, between aircraft and other physical structures, and between aircraft and otherwise restricted airspace.

The severity of an operational error is determined by a point value established by the severity index. The severity index determines, for operational errors that occur in-flight, the gravity or degree of the violation of the separation standard. Categories within the severity index are determined by the sum of assigned values for vertical and lateral distances, closure rates, and flight paths. There are four categories of severity: Low (Category D), Moderate-Controlled (Category C), Moderate-Uncontrolled (Category B), and High (Category A). The level of air traffic control determines whether a specific flight is classified as Category B (uncontrolled) or C (controlled)

- Category A: Point values sum 90 points or higher.
- Category B: Point values sum 40 – 89 points, and the ATC control factor is determined to be uncontrolled.
- Category C: Point values sum 40 – 89 points, and the ATC control factor is determined to be controlled.
- Category D: Point values sum to 39 points or less.

Several procedures have been used to measure operational errors in the past. Prior to FY 2002, a straight count of all operational errors was used. This measure did not offer any differentiation between a technical violation and more severe operational errors. In FY 2002 only those operational errors with less than 80% separation were used as a control measure, with the presumption that this level of separation measured those operational errors with some degree of risk. Beginning in FY03, the focus was changed to measure those operational errors considered the most severe operational errors – those categorized as A or B.

**5. Why the FAA chooses to use this measure:** Separation is one of the fundamental principles of aviation safety – the need to maintain a safe distance from other aircraft, terrain, obstructions, and certain airspace not designated for routine air travel.

**6. Source of Data:** FAA air traffic facilities have a software program called Operational Error Detection Patch (OEDP) that detects possible operational errors and sends alert messages to supervisory personnel. Facility management reviews OEDP alerts and data provided from the

National Track Analysis Program (NTAP) to determine if an operational error has occurred. Controllers are required to report operational errors. The information is summarized in the FAA Air Traffic Operational Error and Deviation Database.

## Airport Arrival Efficiency Rate

**1. FY 2004 Performance Target:** Achieve an Airport Arrival Efficiency Rate of 95.67% at the 35 OEP airports.

**2. Flight Plan Objective and Performance Target:**

- Greater Capacity Objective 1: Increase airport capacity to meet projected demand.
- Flight Plan Performance Target: Achieve an airport arrival efficiency rate of 96% at the 35 OEP airports by 2008.

**3. How FAA Measures This Performance Target:** The percentage of time arrivals are greater than or equal to arrival demand or the facility-set arrival rate. The percentage is determined by dividing actual arrivals by the lesser of the arrival demand or the arrival rate. The percentage is capped at 100 percent.

**4. Scope of the measure:** Airport efficiency rate is the percent of time an airport facility meets demand for arrivals.

The airport efficiency rate is calculated based on three pieces of information:

- Arrivals during a given hour - how many aircraft actually landed during that hour
- Arrival demand for a given hour - how many aircraft wanted to land during that hour
- Airport capacity rate for a given hour - the facility-set arrival rate for that hour.

The Airport Arrival Efficiency Rate equals arrivals divided by the lesser of arrival demand or the airport arrival rate. In some cases, arrival demand exceeds airport capacity. In these cases, airport efficiency is calculated by dividing arrivals by the airport arrival rate. The lesser of the demand or arrival rate is used to not unfairly penalize an airport facility with a low efficiency rating when demand exceeds airport arrival capacity, nor reward an airport facility with an artificially high efficiency rating if actual arrivals exceed the facility-set arrival rate.

Hourly rates are weighted by arrivals in determining daily, monthly, and yearly totals. Airport arrival efficiency is measured between 07:00 and 21:59 hours, the peak operating hours of the day.

**5. Why the FAA chooses to use this measure:** This is one of several measures the FAA uses to supplement its main Greater Capacity goal of increasing capacity sufficient to meet demand. An increase in airport arrival efficiency means that more aircraft are accommodated in the time period of their choice, and not delayed or excluded.

**6. Source of Data:** The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans, provides the data for called arrival and departure rates by airport. The FAA began collecting ASPM flight data in January 2000, with data voluntarily supplied by certain air carriers for 21 airports. The database has since expanded to 55 airports with universal carrier reporting. The 35 OEP airports are a subset of these 55 airports.



## **Airport Daily Arrival Capacity**

**1. FY 2004 Performance Target:** Achieve an Airport Arrival Capacity at the 35 OEP airports in excess of 50,667 per day.

**2. Flight Plan Objective and Performance Target:**

- Greater Capacity Objective 1: Increase airport capacity to meet projected demand.
- Flight Plan Performance Target: Achieve an increase in the Airport Arrival Capacity at the 35 OEP airports from 50,550 arrivals per day from the 2000-2002 baseline to at least 53,600 per day by 2008.

**3. How FAA Measures This Performance Target:** Average Daily Airport Arrival Capacity is the sum of the daily hourly-called arrival rates at the 35 Operational Evolution Plan (OEP) airports per month, divided by the number of days in the month. The annual capacity level for the 35 OEP airports is the weighted sum of the monthly capacity levels.

**4. Scope of the measure:** Each airport facility determines the number of arrivals and departures it can handle for each hour of each day, depending on conditions, including weather. These numbers are the called arrival and departure rates of the airport for that hour.

**5. Why the FAA chooses to use this measure:** This is one of several measures the FAA uses to supplement its main Greater Capacity goal of Reducing Aviation Delay. Commercial aviation delays are estimated to cost airlines over \$3 billion per year. Missed flight connections, missed meetings, and loss of personal time directly affect passengers. There are approximately 20 congested airports, each averaging over 20,000 hours of flight delay per year. Delays are likely to increase as passenger travel demand continues to recover and rise. One of FAA's challenges is to ensure the optimal levels of safety and security for the national aviation system, while adding the least amount of "friction" which is a cause of delay.

**6. Source of Data:** The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans, provides the data for called arrival and departure rates by airport. ASPM data are currently sufficient to complete capacity information for 55 airports, of which the 35 OEP airports are a subset.

The FAA's 2001 study, Airport Capacity Benchmark Report 2001, compared the ability of selected airports to accept and depart aircraft to the demand for those arrival and departure positions. A subsequent analysis of capacity at the 32 large hubs supported the OEP's later focus on increasing system capacity at 35 key airports. Increases in arrival capacity were considered more crucial to increases in system capacity since airborne flights and departures are generally delayed because of the lack of arrival capacity, not departure capacity. While both arrival and departure capacity are collected, the metric thus focuses on arrival capacity, rather than overall airport capacity.

## Operational Availability

**1. FY 2004 Performance Target:** Sustain operational availability at 99% for the reportable facilities that support the 35 OEP airports.

**2. Flight Plan Objective and Performance Target:**

- Greater Capacity Objective 1: Increase airport capacity to meet projected demand.
- Flight Plan Performance Target: Sustain operational availability at 99% for the reportable facilities that support the 35 OEP airports.

**3. How FAA Measures This Performance Target:** Operational availability is the ratio of total operating facility/service hours to maximum facility/service hours, expressed as a percentage and derived by the following calculation:

$$\text{Aop} = \frac{(\text{Maximum available time}) - (\text{Total time out of service})}{\text{Maximum available time}} \times 100$$

For this measure, a subset of the national airspace system is analyzed, as represented by the reportable facilities that support the 35 OEP airports. As the national airspace system modernizes, the reportable facilities may change, but the FAA remains committed to sustaining the operational availability at 99%.

**4. Scope of the measure:** Each OEP airport reportable facility is included in this measure.

**5. Why the FAA chooses to use this measure:** This is one of several measures the FAA uses to supplement its main Greater Capacity goal of Reducing Aviation Delay. One of FAA's challenges is to ensure the optimal levels of safety and security for the national aviation system. By measuring and tracking the amount of time equipment is available, the FAA is tracking the actual time that the equipment is available to the customer.

**6. Source of Data:** The National Airspace System Performance Analysis System (NASPAS) is maintained by the Quality Assurance and Performance Analysis Division, AOP-200. NASPAS was developed to analyze outages of the Air Traffic Control (ATC) Facilities in the NAS maintained by the FAA. NASPAS receives monthly updates of outage data from the National Outage Database (NODB).

## Annual Service Volume

**1. FY 2004 Performance Target:** Open two new runways and increase the Annual Service Volume of the 35 OEP airports by at least 1% annually, measured as a five year moving average.

**2. Flight Plan Objective and Performance Target:**

- Capacity Objective 1: Increase airport capacity to meet projected demand.
- Flight Plan Performance Target: Open as many as nine new runways, while increasing the annual service volume (ASV) of the 35 OEP airports by at least 1% annually, measured as a five-year moving average, through FY 2008.

**3. How the FAA measures this performance target:** Delay curves were developed for each of the 35 OEP airports for the existing airport layout and with new runways where proposed. Based on an acceptable level of delay, the number of operations that can reasonably be expected to occur at the airport were determined. A consistent calculation technique to estimate capacity was used for all airports. Demand schedules and fleet mixes were developed from recent Official Airline Guide (OAG) information, supplemented with flight counts from airport traffic control tower logs. In addition, standard air traffic control procedures were used for each airport. The Runway Delay Simulation Model (RDSIM) was selected as the simulation model to be used to calculate ASV. The ASV studies have not been recalculated since originally completed, nor is it necessary to do so. Once developed, the delay curves should remain accurate unless a major change in fleet mix or operational characteristics change at the airport.

For those airports where new runways are to be commissioned, the ASV can be estimated any time in the year that the runway will be opened. For example, Orlando International and Houston George Bush airports plan to open new runways early in FY 2004. We can calculate the increase in ASV at any time before or after the runways are commissioned.

**4. Scope of the measure:** This measure is applicable to all 35 OEP airports.

**5. Why the FAA chooses to use this measure:** This measure is calculated as a 5-year moving average. It is calculated this way to smooth out peaks and valleys associated with the yearly variability in new runway openings. The 1998 ASV is the base year. There were no new runways opened in 1999, and the new runways opened at PHL (FY 2000), PHX (FY 2001), and DTW (FY 2002) added 0.78% to overall capacity totaled over those three years. However, the new runways opened in FY 2003 at DEN, MIA, and CLE added an annual increase 2.51% resulting in a five-year moving average of 0.67%. New runways to be opened at MCO and IAH in FY 2004 will add an additional 1.91% annual increase to the nation's capacity resulting in a five-year moving average of 1.07%.

**6. Source of the data:** The NAS Advanced Concept Branch (ACT-540) at the FAA Technical Center in Atlantic City, NJ, through the Office of System Capacity, has provided, and continues to provide, technical support to develop a consistent method of calculating the individual airport ASV.

## Capacity in Metropolitan Areas

**1. FY 2004 Performance Target:** Achieve an Airport Arrival Capacity for the 8 major metropolitan areas of 21,313 per day.

**2. Flight Plan Objective and Performance Target:**

- ❑ Greater Capacity Objective 3: Increase or improve airspace capacity in the eight major metropolitan areas and corridors that most affect total system delay: New York, Philadelphia, Boston, Chicago, Washington/Baltimore, Atlanta, Los Angeles Basin, and San Francisco.
- ❑ Flight Plan Performance Target: Achieve an increase in the Airport Arrival Capacity for the eight major metropolitan areas from 21,290 arrivals per day from the 2000-2002 baseline to at least 22,000 per day by 2008

**3. How FAA Measures This Performance Target:** Average Daily Airport Arrival Capacity is the sum of the daily hourly-called arrival rates at the eight major metropolitan area airports per month, divided by the number of days in the month. The annual capacity level for the eight major metropolitan areas airports is the weighted sum of the monthly capacity levels.

**4. Scope of the measure:** This measure focuses on eight major metropolitan areas. These areas are New York, Philadelphia, Boston, Chicago, Washington/Baltimore, Atlanta, Los Angeles Basin, and San Francisco. Each airport facility determines the number of arrivals and departures it can handle for each hour of each day, depending on conditions, including weather. These numbers are the called arrival and departure rates of the airport for that hour.

**5. Why the FAA chooses to use this measure:** These eight major metropolitan areas represent the most emplanements and delays in the United States.

This is one of several measures the FAA uses to supplement its main Greater Capacity goal of Reducing Aviation Delay. Commercial aviation delays are estimated to cost airlines over \$3 billion per year. Missed flight connections, missed meetings, and loss of personal time directly affect passengers. There are approximately 20 congested airports, each averaging over 20,000 hours of flight delay per year. Delays are likely to increase as passenger travel demand continues to recover and rise. One of FAA's challenges is to ensure the optimal levels of safety and security for the national aviation system, while adding the least amount of "friction" which is a cause of delay.

**6. Source of Data:** The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans, provides the data for called arrival and departure rates by airport. ASPM data are currently sufficient to complete capacity information for 55 airports, of which the eight major metropolitan areas airports are a subset.

The FAA's 2001 study, Airport Capacity Benchmark Report 2001, compared the ability of selected airports to accept and depart aircraft to the demand for those arrival and departure positions. Eight airports with particular delay and capacity issues were identified. Because metropolitan area capacity may prove adequate even if particular airports may experience capacity difficulties, metropolitan areas for the eight congested airports were selected for study. Increases in arrival capacity were considered more crucial to increases in system capacity since

airborne flights and departures are generally delayed because of the lack of arrival capacity, not departure capacity. While both arrival and departure capacity are collected, the metric thus focuses on arrival capacity, rather than overall airport capacity.

## On-Time Arrival

**1. FY 2004 Performance Target:** Increase the percentage of all flights arriving within 15 minutes of schedule at the 35 OEP airports to 82.10%.

**2. Flight Plan Objective and Performance Target:**

- Greater Capacity Objective 4: Increase on-time performance of scheduled carriers.
- Flight Plan Performance Target: Through FY 2008, increase the percentage of all flights arriving within 15 minutes of schedule at the 35 OEP airports by 7%, as measured from the three year FY 2000-2002 baseline.

**3. How FAA Measures This Performance Target:** A flight is considered on-time if it arrives no later than 15 minutes after the scheduled arrival time. This definition is used in the joint Bureau of Transportation Statistics/FAA Airline Service Quality Performance (ASQP) and Aviation System Performance Metrics (ASPM) reporting systems.

The arrival time of completed, scheduled passenger flights to and from the OEP 35 airports is compared to their scheduled time of arrival. The sum of flights arriving on or before 15 minutes of scheduled arrival time is divided by the total number of completed flights.

**4. Scope of the measure:** This measure focuses on the 35 large-hub airports in the FAA's Operational Evolution Plan (OEP).

**5. Why the FAA chooses to use this measure:** This is the main measure the FAA uses to gauge Capacity. Commercial aviation delays are estimated to cost airlines over \$3 billion per year. Missed flight connections, missed meetings, and loss of personal time directly affect passengers. There are approximately 20 congested airports, each averaging over 20,000 hours of flight delay per year. Delays are likely to increase as passenger travel demand continues to recover and rise. One of FAA's challenges is to ensure the optimal levels of safety and security for the national aviation system, while adding the least amount of "friction" which is a cause of delay.

**6. Source of Data:** The Aviation System Performance Metrics (ASPM) database, maintained by the FAA's Office of Aviation Policy and Plans, provides the data for on-time arrivals. By agreement with the FAA, ASPM flight data is filed by certain major air carriers for all flights to and from most large and medium hubs, and is supplemented by flight records contained in the Enhanced Traffic Management System (ETMS) and flight movement times provided by Aeronautical Radio, Inc. (AIRINC). Data are sufficient to complete ASPM data files for 55 airports. The 35 OEP airports are a sub-set of these 55 airports.

Flight schedule data is extracted from the Official Airline Guide (OAG) and compared to data from carrier records supplied under ASPM, which contains carrier computer reservation flight schedule data. Summary data is compared and supplemented with data filed monthly with DOT under 14 CFR Part 234, Airline Service Quality Performance Reports, which separately requires reporting by major air carriers on flights to and from all large hubs.

## Noise Exposure

- 1. FY 2004 Performance Target:** Reduce the number of people exposed to significant noise to 400,000, as measured by a three-year moving average, from the three-year average for calendar year 2000-2002.
- 2. Flight Plan Objective and Performance Target:**
  - ❑ Greater Capacity Objective 5: Address environmental issues associated with capacity enhancements.
  - ❑ Flight Plan Performance Target: Reduce the number of people exposed to significant noise through FY2008 to 396,000, as measured by a three-year moving average, from the three-year average for calendar year 2000-2002.
- 3. How FAA Measures This Performance Target:** Number of people in the U.S. (in thousands) who are exposed to significant noise levels. Significant noise level is defined as Day Night Sound Level of 65 decibels or more.
- 4. Scope of the measure:** Residential population exposed to aircraft noise above Day Night Sound Level of 65 decibels around U.S. airports with the greatest number of commercial jet take-offs and landings.
- 5. Why the FAA chooses to use this measure:** Mitigating noise directly impacts our ability to increase capacity. Although building new runways is the best way to increase capacity, communities and local government are reluctant to build them if they impose increased aircraft noise exposure. By mitigating and reducing exposure to excessive noise, the FAA can help communities accept more runways in their areas.
- 6. Source of Data:** In 1981, the FAA issued 14 CFR Part 150, Airport Noise Compatibility Planning, and as part of that regulation, formally adopted Day Night Sound Level. Day Night Sound level, abbreviated as DNL and symbolized as Ldn, is the 24-hour average sound level, in decibels (dB), obtained from the accumulation of all events with the addition of 10 decibels to sound levels in the night from 10 PM to 7 AM. The weighting of the nighttime events accounts for the increased interfering effects of noise during the night when ambient levels are lower and people are trying to sleep. In the promulgation of 14 CFR Part 150, the FAA also published a table of land uses that are compatible or incompatible with various levels of airport noise exposure in DNL. This table established that levels below DNL 65 dB are considered compatible for all indicated land uses and related structures without restriction.

In 1997, the FAA initiated a project to collect airport noise analysis databases for a large number of the world's airports. This sample database of airports would be the basis for assessing worldwide trends that would occur as the result of stringency, different land-use planning initiatives and operational procedures. The objective was to develop a tool that could be used by the Committee on Aviation Environmental Protection (CAEP) under the International Civil Aviation Organization (ICAO). Previous attempts by CAEP to globally assess aircraft noise exposure had limited success. The proposed FAA methodology had much more promise, as the number of sample databases was large and has since grown to around 200. Furthermore, a generalized methodology was included to account for airports for which noise databases did not exist. Based on the initial success of the FAA activity, the fourth meeting of CAEP (CAEP4)

recommended that a task group be formed to complete the development of this tool for CAEP analysis.

This group and subsequently the model became known as MAGENTA (Model for Assessing Global Exposure from Noise of Transport Airplanes). The MAGENTA population exposure methodology has been thoroughly reviewed by this ICAO task group and was validated for several airport specific cases. MAGENTA played an important role in the setting of new international aircraft noise standards by CAEP in 2001. CAEP used MAGENTA to assess the benefits (reduction in number of people exposed to aircraft noise) of several noise stringency proposals. FY2000 was the first year MAGENTA was used to track the aircraft noise exposure goal in the DOT Performance Plan.

The MAGENTA model is applied using U.S. population data from the Department of Commerce Census Data for 2000, locally developed traffic distribution (route and runway utilization), and aircraft distributions developed using the Official Airline Guide (OAG), Terminal Area Forecast (TAF) and current aircraft registration databases. The local traffic utilization data is available for the busiest U.S. airports in the form of studies developed for the FAA's Integrated Noise Model (INM). For smaller airports, a generic statistical procedure was employed.

The number of people exposed to significant noise levels was reduced by about 90% between 1975 and 2000. This is due primarily to the legislatively mandated transition of airplane fleets to newer generation aircraft that produce less noise. Most of the gains from quieter aircraft were achieved by FY 2000. The remaining problem must be addressed primarily through airport-specific noise compatibility programs, using measures such as soundproofing and relocation of residences. The FAA is authorized to provide funds for these purposes. However, each project must be locally sponsored and be a part of a noise compatibility program prepared by the airport sponsor and approved by the FAA. The data for this measure reflects relocation of people from the DNL 65 contour since 2000.

For FY 2004, FAA plans to measure this performance goal differently. Previously, FAA's model compared scheduled flights to the type of aircraft flown. Computer models calculated the noise exposure contours. FAA upgraded its noise model to access the Enhanced Traffic Management System (ETMS), which provides more accurate operations data. This new model includes not just scheduled flights, but also any aircraft filing a flight plan to or from 95 of the United States' busiest airports. FAA is now able to track unscheduled air traffic from general aviation, freight, and military operations at civilian airports. This new data reflects an increase in night operations, which carry a noise penalty in calculating noise contours and can significantly increase the noise exposure area.

Based on this new information, FAA plans to revise the target in FY 2004, pending approval from DOT.



## Aviation Fuel Efficiency

**1. FY 2004 Performance Target:** Improve aviation fuel efficiency per revenue plane-mile by 1% per year through FY 2008, as measured by a three-year moving average, from the three-year average for calendar years 2000-2002.

**2. Flight Plan Objective and Performance Target:**

- Greater Capacity Objective Five: Address environmental issues associated with capacity enhancements.
- Flight Plan Performance Target: Improve aviation fuel efficiency per revenue plane-mile by 5% by FY 2008, as measured by a three-year moving average, from the three-year average for calendar years 2000-2002

**3. How FAA Measures This Performance Target:** FAA will measure this target using the SAGE system – System for assessing Aviation Global Emissions. The Volpe National Transportation Systems Center, with the Massachusetts Institute of Technology and the Logistics Management Institute helped the FAA develop this computer modeling system. The objective for SAGE is to be an internationally accepted computer model, that is based on the best available data and methodologies, and used for evaluating operational, policy, and technology-related scenarios to estimate global aircraft emissions.

The FAA is still determining the baseline for this measure, as well as how often during the fiscal year it will be measured.

**4. Scope of the measure:** TBD

**5. Why the FAA chooses to use this measure:** There is growing concern over aviation's contribution to both global climate change, and local air quality. As noise has been, aviation emissions are becoming a major environmental concern around airports. Although the science is still out on the actual impacts, local air quality is a major consideration of any assessment of potential capacity increases.

Although today's aircraft are up to 70% more efficient than early jets, there is growing attention being given to aviation's impact on the environment. Aviation is viewed as a small contributor to climate change, and the science involved with emissions around the airport is still developing. The United Nations Framework Convention on Climate Change has tasked the ICAO to address emissions reductions, and that work is going on in earnest. The U.S. is leading those efforts.

**6. Source of Data:** AEP (SAGE system)

## Technical Assistance

**1. FY 2004 Performance Target:** Provide new or expanded technical assistance to six key countries or regional authorities.

**2. Flight Plan Objective and Performance Target:**

- International Leadership Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.
- Flight Plan Performance Target: Provide new or expanded technical assistance and training to 30 key countries or regional authorities.

**3. How FAA Measures This Performance Target:** The number of bilateral agreements signed.

**4. Scope of the measure:** Technical assistance is delivered under government-to-government agreements. These agreements are tracked and reviewed on a regular basis (monthly and/or quarterly). The measure of success and baseline are the number of agreements concluded between FAA and other governments to provide technical assistance and training aimed at improving safety standards.

**5. Why the FAA chooses to use this measure:** Technical assistance activities transfer knowledge and develop skills to help States comply with international safety standards. These activities can be accomplished bilaterally or multilaterally and result in improvements to the safety of foreign aviation systems which help reduce accident rates and benefiting U.S. air carriers and citizens operating and traveling abroad.

**6. Source of Data:** API

## Bilateral Agreements

**1. FY 2004 Performance Target:** Conclude new bilateral agreements recognizing safety certification and approval systems with ten key countries or regional authorities.

**2. Flight Plan Objective and Performance Target:**

- International Leadership Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral partners.
- Flight Plan Performance Target: Conclude new bilateral agreements recognizing safety certification and approval systems with ten key countries or regional authorities.

**3. How this performance measure helps achieve the objective:** The purpose of a BASA is to promote aviation safety and environmental quality and to enhance cooperation and increase efficiency in matters related to civil aviation. By building a network of competent civil aviation authorities and concluding agreements with additional countries and/or regional authorities, the FAA can increase safety globally. Improved global understanding of U.S. safety regulations, processes, and procedures leads to better international regulatory oversight. Since the BASAs are based on a recognition of comparability of the U.S. and foreign systems for approval and surveillance of aviation industry, the BASAs allow the FAA to rely upon capabilities and technical expertise of other civil aviation authorities in particular areas of aviation safety, thereby minimizing duplication of efforts as well as opening new lines of communication between authorities. In doing so, the FAA can better focus on U.S. safety priorities and rely on competent civil aviation authorities for those activities taking place overseas.

**4. How is the target measured:** The BASA is comprised of two parts: an executive agreement signed by the Department of State and the Ministry of Foreign Affairs, and one or more implementation procedures signed by the FAA and the other civil aviation authority. The target is achieved when the executive agreement and at least one implementation procedure is concluded with a given country or regional authority. In 2004, we will sign three BASA Executive Agreements, each with at least one implementation procedures.

**5. Why the FAA chooses to use this measure:** No data.

**6. Source of Data:** API. Point of contact: Michele Cappelle, 202-267-8135

## Intellectual and Financial Assistance

**1. FY 2004 Performance Target:** Increase by 20 percent over FY 2003 levels in intellectual and financial assistance for international aviation activities from the United States and international government organizations, multilateral banks and industry.

**2. Flight Plan Objective and Performance Target:**

- International Leadership Objective 1: Promote improved safety and regulatory oversight in cooperation with bilateral, regional, and multilateral aviation partners.
- Flight Plan Performance Target: Secure a 100% increase, over FY03 levels, in intellectual and financial assistance for international aviation activities from the United States and international government organizations, multilateral banks, and industry.

**3. How FAA Measures This Performance Target:** Twenty percent over FY03 levels is about \$5 million. The success of this effort is measured in terms of amount of new funding which the agency secures for international aviation infrastructure projects. External funding institutions will often transfer funds directly to the FAA, but it is not necessary that the FAA manage the actual financial transactions. The important metric is the amount of external funding that the FAA identifies and directs toward aviation infrastructure projects. For FY03, external funding organizations provided approximately \$5 million for FAA technical assistance.

**4. Scope of the measure:** This measure focuses on international infrastructure projects.

**5. Why the FAA chooses to use this measure:** Providing the tools and a strategy through which FAA employees can reach out to external funding organizations will make the agency more effective in gaining the funding necessary to engage in international projects aimed at promoting aviation safety.

**6. Source of Data:** API

## Technique and Procedures

**1. FY 2004 Performance Target:** Make 75% of milestones to ensure the United States, ICAO and other international partners implement new technologies and procedures in a consistent and timely manner.

**2. Flight Plan Objective and Performance Target:**

- International Leadership Objective 2: Promote seamless operations around the globe in cooperation with bilateral, regional, and multilateral aviation partners.
- Flight Plan Performance Target: Ensure the United States, ICAO, and other international partners implement new techniques and key operational procedures in a consistent and timely manner.

**3. How FAA Measures This Performance Target:** FAA must achieve 75% percent of milestones for this project.

**4. Scope of the measure:** The milestones for this project are:

- Develop a worldwide Ionospheric Mitigation Roadmap addressing differing Space Based Augmentation Systems regional technical concerns by September 2004
- Revise the existing FAA/ EUROCONTROL Memorandum of Cooperation (MOC). Execute agreement for new MOC by 3rd Quarter '04. MOC Annexes (scope of work) completed by 3rd Quarter '04
- As it relates to the implementation and harmonization of Required Navigation Performance (RNP) exchange information with four ATS providers before March 2004
- Exchange information with four additional ATS providers before September 30, 2004
- Orchestrate a joint US/IATA/Europe Digital Air-Ground Communications Workshop by end of 2nd Quarter, 2004

**5. Why the FAA chooses to use this measure:** By working with international agencies, organizations and states, the United States can continue to enhance it's international leadership role by having a positive influence on critical technological issues, thus directly affecting their favorable outcomes.

**6. Source of Data:** ARA

## Global Environmental Standards

**1. FY 2004 Performance Targets:** ICAO Committee on Aviation Environmental Protection (CAEP) agreement on new nitrogen oxide emissions standards for engines that power commercial aircraft. ICAO Assembly adoption of guidance material on the Balanced Approach to Noise Management consistent with A33-7. ICAO Assembly support for development of voluntary measures as a viable alternative to mandatory emissions trading schemes or emissions charges.

**2. Flight Plan Objective and Performance Target:**

- International Leadership Objective 2: Promote seamless operations around the globe in cooperation with bilateral, regional, and multilateral aviation partners.
- Flight Plan Performance Target: Flight Plan Performance Target: Ensure that international environmental standards, recommended practices, and guidance material adopted by ICAO are globally and uniformly applied, reflect the best available technology, provide real environmental benefit, and are economically sound.

**3. How FAA Measures This Performance Target:** Successful adoption of an internationally agreed approach on these issues acceptable to the U.S.

**4. Scope of the measure:** This measure covers the critical phase of an internationally acceptable approach to dealing with environmental standards, practices, and guidance material across the world. Agreement at these bodies is essential to permitting a harmonized international approach.

**5. Why the FAA chooses to use this measure:** The lack of international harmonization on environmental standards and practices creates significant difficulties to the effective operation of an industry which has an aircraft take-off somewhere in the world every few seconds. It also can result in misapplication of limited regulatory and financial resources in a manner than does not achieve cost-effective solutions to deal with aviation's environmental impacts. It is also important to ensure that internationally agreed standards and practices are acceptable to the U.S.

**6. Source of Data:** AEP

## Performance Plans Aligned

**1. FY 2004 Performance Target:** Directly relate 80 percent of all employee performance plans to FAA strategic goals and their organization's performance.

**2. Flight Plan Objective and Performance Target:**

- ❑ Organizational Excellence Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goals, and a better prepared, better trained, diverse workforce.
- ❑ Flight Plan Performance Target: Directly relate 100% of all employee performance plans to FAA strategic goals and their organization's performance plans.

**3. How FAA Measures This Performance Target:** The number of performance plans that directly

**4. Scope of the measure:** TBD

**5. Why the FAA chooses to use this measure:** Traditionally, many FAA employees have had a difficult time seeing how their day-to-day activities helped influence the FAA accomplishing its mission. By aligning individual performance plans to organizational and FAA goals, there is a clear path to how individuals and organizations accomplish the FAA Flight Plan goals.

**6. Source of Data:** AHR

## Hire Mission Critical Positions

**1. FY 2004 Performance Target:** Reduce the time it takes to hire mission critical positions by 3% over the FY 2003 baseline.

Table 1. Proposed Targets by Fiscal Year:

FY 04	FY 05	FY 06	FY 07	FY 08
3%	6%	10%	15%	20%

**2. Flight Plan Objective and Performance Target:**

- Organizational Excellence Objective 1: Make the organization more effective with stronger leadership, increased commitment of individual workers to fulfill organization-wide goal, and a better-prepared, better-trained, diverse workforce.
- Flight Plan Performance Target: Reduce the time it takes to hire mission critical positions by 20% over the FY 2003 baseline and maintain this rate in FY 2008.

**3. How FAA Measures This Performance Target:** Three elements comprise measuring this performance target: the target positions, the measure, and the criterion.

- Mission Critical Positions (MCPs) include: Air Traffic Controllers (2152), Aviation Safety Inspectors (1825), Engineer/Electronics Technicians (802/856), Transportation Specialists (2101), Computer Specialists (335/1550), and Engineers (800s)
- The Time-to-Hire measure is the total number of days from the date an action to fill a position is requested by the hiring organization to the date the new hire reports for duty.
- We have established an efficiency criterion to reduce the median number of days to fill mission critical positions in annual increments totaling 20% by 2008. We will compute medians for each MCP and a total median for all MCPs comparing them to the baseline measure to determine if the percent reduction meets the performance goal (see Table 1).

**4. Scope of the Measure:** Includes all mission critical positions filled during the fiscal year.

**5. Why the FAA chooses to use this measure:** One crucial element of assuring safety through organizational excellence is to fill mission critical positions as quickly as possible. In addition, the anticipation of a retirement increase, with more employees reaching eligibility each year, provides even more impetus to fill positions more efficiently. Measuring how long it takes to hire is a critical first step in improving the process, which is important to achieving the Agency's mission and strategic goals.

**6. Source of Data:** Human Resources' staffing specialists across the country enter the Time to Hire data throughout the year into a website database. We created this database to measure the efficiency, as well as the quality of hiring for the FAA. The database is secured by usernames and passwords and assures that only these specialists and HR officials have access to hiring records. Maintaining annual records allows us to compare performance, year by year.

The database provides a secure record of the time it takes to fill positions and allows optimal flexibility in managing and analyzing the stored information. We collect additional descriptive



information besides the amount of time for the hiring process, which enables us to locate delays in the process steps, as well as examine how we are doing by Region, Line of Business, and Hiring Vehicle (e.g., via announcement or direct hire authority).

Note: The Time to Hire measure is computed by fiscal year with quarterly checks to track progress in order to align itself with FAA and DOT administrative requirements.

## **Fund Flight Plan**

**1. FY 2004 Performance Target:** By putting cost controls in place, and having a more efficiency, effective workforce, the agency expects to fund at least 10% of the currently unfunded portion of the Flight Plan.

**2. Flight Plan Objective and Performance Target:**

- ❑ Organizational Excellence Objective 2: Deliver quality customer service while controlling costs.
- ❑ Flight Plan Performance Target: By putting cost controls in place, and having a more efficiency, effective workforce, the agency expects to fund at least 75% of the currently unfunded portion of the Flight Plan.

**3. How FAA Measures This Performance Target:** The FAA is currently determining total costs of the Flight Plan compared to the FY2004 Reauthorization. Once this exercise is completed, the FAA will finalize the means and methods to formalize the Cost Control Program for FY04 and beyond.

**4. Scope of the measure:** This measure focuses on cost controls that will provide for a percentage of the unfunded portions of the Flight Plan.

**5. Why the FAA chooses to use this measure:** FAA's operating costs have increased significantly over the past decade. Furthermore, the IG and GAO have focused these escalating costs as an issue. To create a more effective organization capable of meeting the future needs of the public and industry, the FAA cannot continue to request, and is unlikely to receive, additional funding at the current rate of growth.

**6. Source of Data:** ABA

## Cost Reimbursable Contracts

**1. FY 2004 Performance Target:** Complete the closeout of 100% (FY2001) of cost reimbursable contracts by the end of FY2004 and maintain timely closure of future contracts.

**2. Flight Plan Objective and Performance Target:**

- Organizational Excellence Objective 2: Control costs while delivering quality customer service.
- Flight Plan Performance Target: Complete the closeout of 100% (FY2001) of cost reimbursable contracts by the end of FY2004 and maintain timely closure of future contracts.

**3. How FAA measures this Performance Target:** By tracking the number of overage cost reimbursement contracts, on the FY 2001 list, that have been closed by FAA Contracting Officers, and the number closed by the FAA's closeout support contractor.

**4. Scope of the measure:** The original FY 2001 list contained 440 overage cost reimbursement contracts. At the end of FY 2003, there were 180 overage cost reimbursement contracts remaining to be closed. A schedule of 45 overage cost reimbursement contracts per quarter in FY 2004 was developed and is being worked to eliminate the remainder.

**5. Why the FAA chooses to use this measure:** The FY 2001 list of 440 overage cost reimbursement contracts was included in the OIG's April 2002 report. It was that list that is the basis of this measure. It is also good contract business practice, Federal Government-wide, to closeout cost reimbursement contracts within 36 months of their completion.

**6. Source of Data:** The FAA will use its Global Contracts List (GCL) database, as well as its procurement acquisition system PRISM to track contract closeouts accomplished by its contracting officers. The FAA's closeout support contractor submits a quarterly report that includes the number of contracts that it has closed. All three of these sources will be used.

## Critical Acquisitions On Schedule and Budget

**1. FY 2003 Performance Target:** Make sure 80% of critical acquisition programs are both on schedule and within budget.

**2. Flight Plan Objective and Performance Target:**

- Organizational Excellence Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.
- Flight Plan Performance Target: Make sure 80% of critical acquisition programs are both on schedule and within 10% of budget.

**3. How FAA Measures This Performance Target:** FAA's Research and Acquisitions (ARA) line of business selected a set of milestones that cover what they designate as critical programs. To determine whether the milestones total 80%, ARA takes the total milestones on time/on budget and divides by total milestones.

**4. Scope of the measure:** This measure is set to only those milestones selected. No milestones are added during the year.

**5. Why the FAA chooses to use this measure:** This measure is a DOT measure. The requirement began in FY 2003 as an initial effort to begin developing efficiency metrics.

**6. Source of Data:** ARA tracks all milestones on an Excel spreadsheet.

## Customer Satisfaction Scores

**1. FY 2004 Performance Target:** Increase Agency scores on the American Customer Satisfaction Index (ACSI) to 63.

**2. Flight Plan Objective and Performance Target:**

- Organizational Excellence Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.
- Flight Plan Performance Target: Increase scores on the ACSI to 67 by 2008

**3. How FAA Measures This Performance Target:** The ACSI is a national indicator of the quality of goods and services available to the American public. The ACSI score is a weighted average measuring overall satisfaction, customer expectations, and perceived quality.

**4. Scope of the measure:** A telephone survey is conducted on a sample of 260 commercial pilots drawn from a random subset of certified airmen. Commercial pilots are asked about air traffic control personnel and services, pilot certification processes, the clarity of regulations, and how regulations contribute to aviation safety.

**5. Why the FAA chooses to use this measure:** Many federal government agencies, including the FAA, began participating in the ACSI in 1999. Participation in the survey over a period of four years has enabled the FAA to compare its customer satisfaction scores to other regulatory agencies and private industry.

FAA's baseline is from 1999, the first year the FAA survey was conducted. In 1999 the score for commercial pilots was 58.

The 2002 ACSI for commercial pilots is 64 on a 0-100 scale, up a significant 5 points from 2001. Since the baseline measurement in 1999, the ACSI is up a total of 6 points. Although FAA's ACSI remains significantly below the national ACSI of 71.6 for private sector services, the score of 64 is consistent with government agencies that have a regulatory and enforcement function.

**6. Source of Data:** ACSI is produced by the National Quality Research Center at the University of Michigan Business School, American Society for Quality, and the consulting firm CFI Group.

## Agency Information Security Plan

**1. FY 2004 Performance Target:** Achieve 90% of the FY 04 milestones for the agency information security plan.

**2. Flight Plan Objective and Performance Target:**

- Organizational Excellence Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.
- Flight Plan Performance Target: Achieve 90% of the milestones for the agency information security plan.

**3. How FAA Measures This Performance Target:** The FAA has an information security plan to protect the agency's IT assets in accordance with numerous executive and legal requirements, including the Computer Security Act, Executive Order 13231, and the Federal Information Security Management Act (FISMA), as well as in accordance with DOT and FAA policy. The FAA's information security plan is the subset of the AIO Business Plan that contains those actions the agency will take to carry out its responsibilities to protect its critical information systems. The plan has six performance targets related to information security:

- For FY 04, zero cyber events that significantly disable or degrade an externally-visible FAA service.
- By July 1, 2004, complete a security review of 90% of FAA's IT inventory.
- On September 30, 2004, there is an average of no more than 0.05 "high" vulnerabilities per network server that is scanned by the Foundscan tool.
- By September 2004, co-invest in three cyber-related research projects, in universities and other institutions, with the National Science Foundation, the Defense Advanced Research Project Agency, or other research-funding Federal agencies.
- Sign a bilateral agreement with Canada and a separate bilateral agreement with Mexico to share ISS technical and operational data, techniques, tactics, and procedures, and to work cooperatively towards better business practices, by September 2004.
- Best practices for safety and security are published as extensions to the FAA-iCMM, by September 2004.

Because these six milestones have different rankings of severity and criticality, AIO uses a weighted average to measure whether it achieves its performance target. First AIO will only reach its overall FY 04 performance target if the first target is met and no cyber events occur that significantly disable or degrade an externally-visible FAA service. Second, the next two targets have equal overall weight and together count for 90% of our overall target score. Both of these are critical to the agency and the Department and receive the most outside scrutiny. For the first, we will measure what percentage of the 320 critical system total security reviews (SCAPs) are completed by July 1, 2004. For the second we will measure what percentage of servers score no more than .05% vulnerabilities among the 1500+ servers we scan using Foundscan by September 30, 2004. The last three targets build capability for the future and together account for the remaining 10% scoring towards overall performance target completion but do not have the

criticality and visibility to outside stakeholders as the first three. If we do all three of these we will count 10% towards our FY 04 performance target.

**4. Scope of the measure:** The measure involves all activities that will be performed in furtherance of the agency's due diligence in protecting its cyber-assets.

**5. Why the FAA chooses to use this measure:** International terrorism threatens national security. Several nations are capable of launching cyber attacks against the United States. Hackers and criminals are leveraging vulnerabilities exploitable through the Internet at an ever accelerating rate. The FAA, as an important element of the nation's critical infrastructure, is a plausible target for all these threats. AIO has the agency lead for ensuring that cyber attacks are not effective so that the decision making and operational apparatuses of the agency, including the air traffic control system, are never disabled because of a cyber attack.

**6. Source of Data:** AIO

## Flight Plan Performance Targets Achieved

1. **FY 2004 Performance Target:** Achieve 90 percent of FY 2004 performance targets.
2. **Flight Plan Objective and Performance Target:**
  - Organizational Excellence Objective 3: Make decisions based on reliable data to improve our overall performance and customer satisfaction.
  - Flight Plan Performance Target: Achieve 90% of all performance targets in the Flight Plan.
3. **How FAA Measures This Performance Target:** The number of performance targets met in a fiscal year divided by the number of performance targets measured.
4. **Scope of the measure:** Not every performance target in the FAA Flight Plan is measured each year. For FY 2004, the FAA has 34 performance targets out of 37 in the Flight Plan. The three performance targets not being measured are Altitude Change Requests (begins in FY05), Creating Regional Aviation Authorities (none scheduled this year), and the Employee Attitude Survey (creating baseline). Therefore, to achieve 90 percent, the FAA needs to accomplish 31 of the 34 performance targets.
5. **Why the FAA chooses to use this measure:** If the Flight Plan is to be a real driver of the FAA's performance, the FAA needs to measure how well it is accomplishing the goals.
6. **Source of Data:** AEP