

Flight Standards Service



Table of Contents

- ▶ **Organizational Mission and Structure**
- ▶ **Industry Customer Base**
- ▶ **Internal Resources**
- ▶ **Inspector Experience, Qualifications and Training**
- ▶ **Inspector Responsibilities**
- ▶ **The Inspection Work Program Development and Execution**
- ▶ **Feedback and Measurement**
- ▶ **Inspection/Surveillance -- 2005**

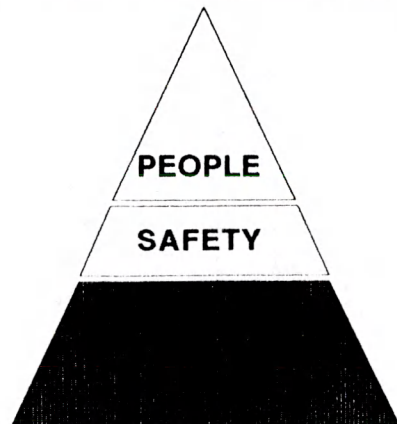
Organizational Mission and Structure



THE FLIGHT STANDARDS MISSION

***To provide the public
with accident-free
aircraft operations
through the highest
standards in the world.***

Flight Standards Strategic Goals:



1. Build an organizational culture which promotes both empowerment and accountability
2. Assure a well-trained, skilled, and qualified workforce
3. Provide quality facilities and resources to perform our job
4. Develop and maintain current regulations and policies
5. **Develop an effective and efficient global surveillance and certification safety system**
6. Achieve compliance through partnership
7. Improve the quality of service by anticipating customer needs and responding in the public interest
8. Create and implement a flexible, dynamic, visible and responsive management philosophy to support the everchanging environment



AFS Organizational Responsibilities

- ***Headquarters:***

Develops policies, regulations, standards for air carriers and general aviation operators

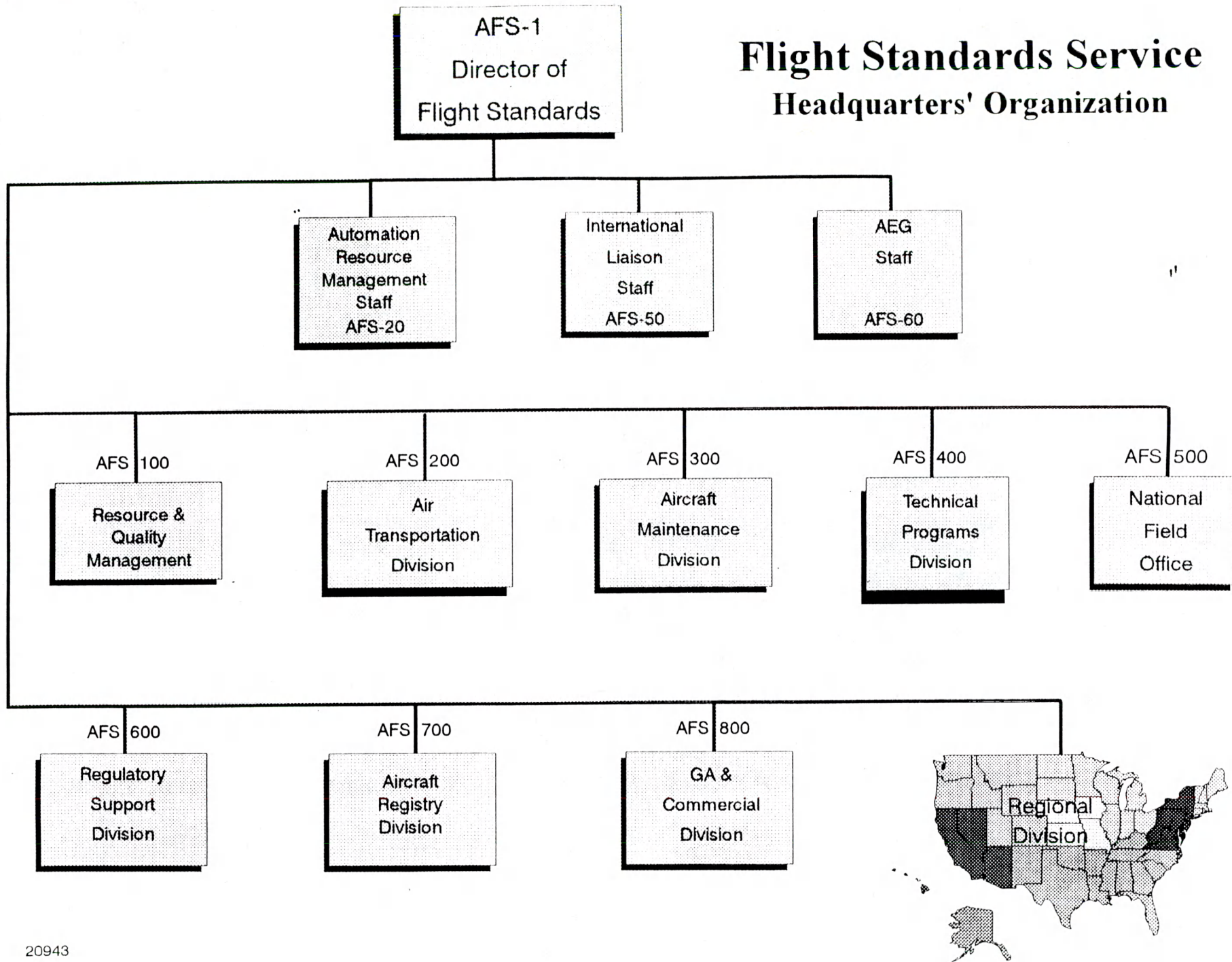
- ***Regional Offices:***

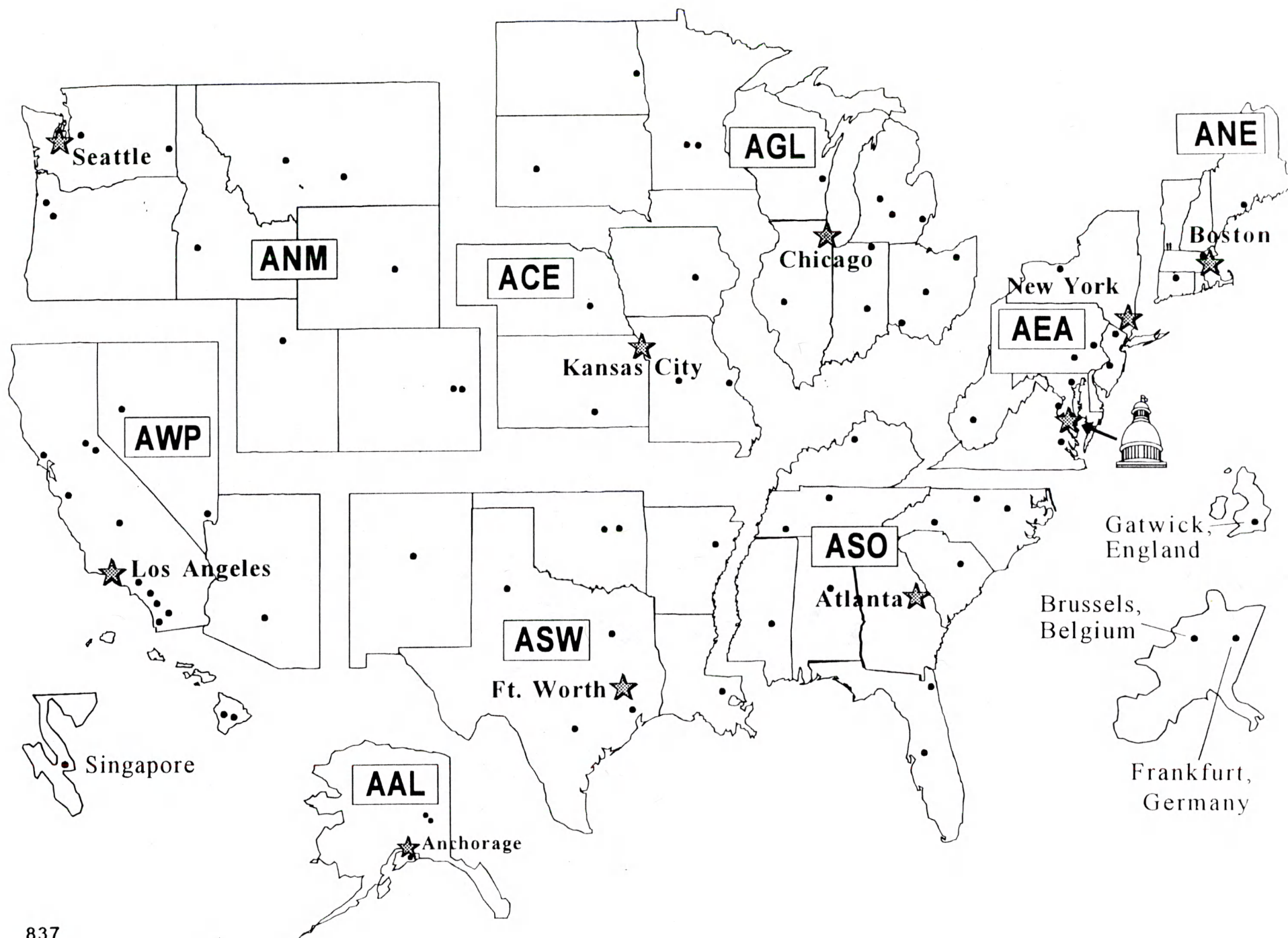
Responsible for implementing policies and overseeing the work program in a defined geographical area

- ***Field Offices:***

Responsible for the certification and surveillance of certificated aviation organizations

Flight Standards Service Headquarters' Organization





Industry Customer Base



Data as of 7/95

Flight Standards Customer Base

7,434

Air Operator Certificates

Large Airlines*	126
Commuter & Small* Charter Airlines	3,215
Foreign Airlines	491
External Load Operators	399
Agricultural Operators	3,203

5,752

Air Agency Certificates

Repair Stations	4,930
Pilot Training Schools	629
Maintenance Schools	193

Aircraft

General Aviation* *	184,434
Large Airlines	5,399
Commuter	1,920
Small Charter	11,114

**Flight
Standards
Service**

Active Pilots**

665,069

* Includes 29 split certificates
** 1993 number

Charter Air Carriers

A Wide Range of Complexity



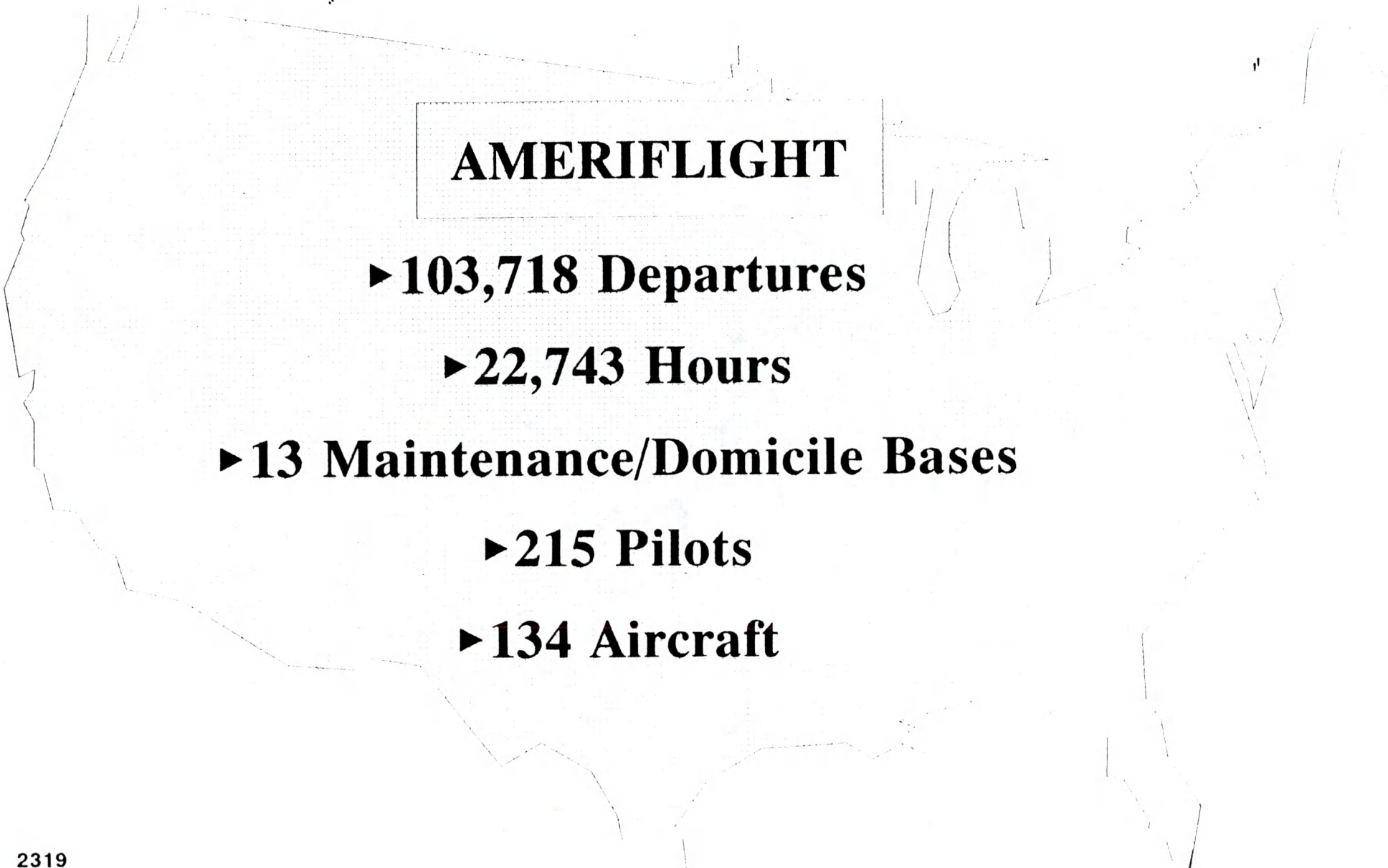
**Arctic Transportation
Services**

1 Airplane

1 Pilot

Charter Air Carriers

A Wide Range of Complexity

A faint, light-colored outline map of the United States serves as a background for the text. The map shows the continental United States, including Alaska and Hawaii.

AMERIFLIGHT

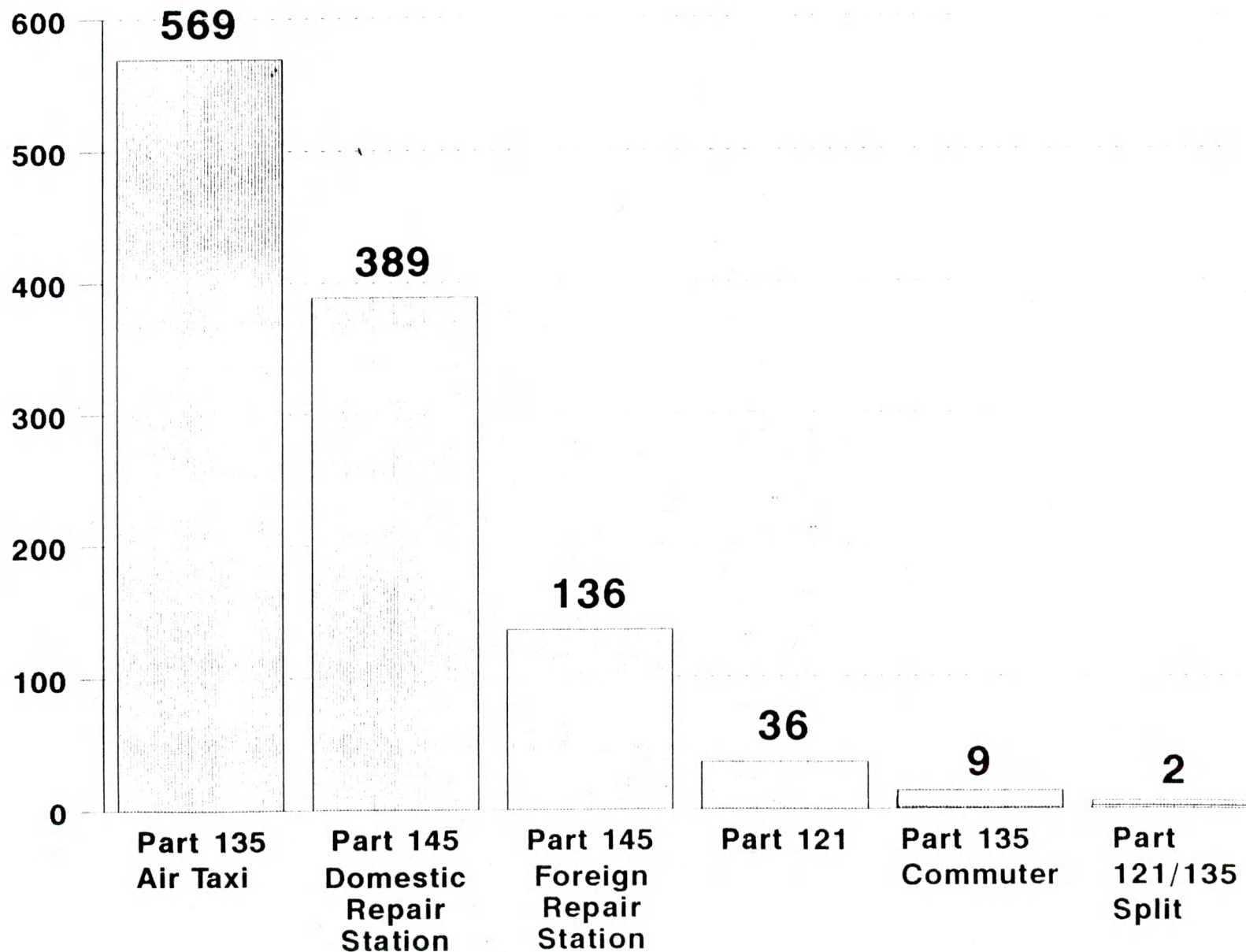
- ▶ **103,718 Departures**
- ▶ **22,743 Hours**
- ▶ **13 Maintenance/Domicile Bases**
- ▶ **215 Pilots**
- ▶ **134 Aircraft**

Certificate Turnover

Percentage Per Year

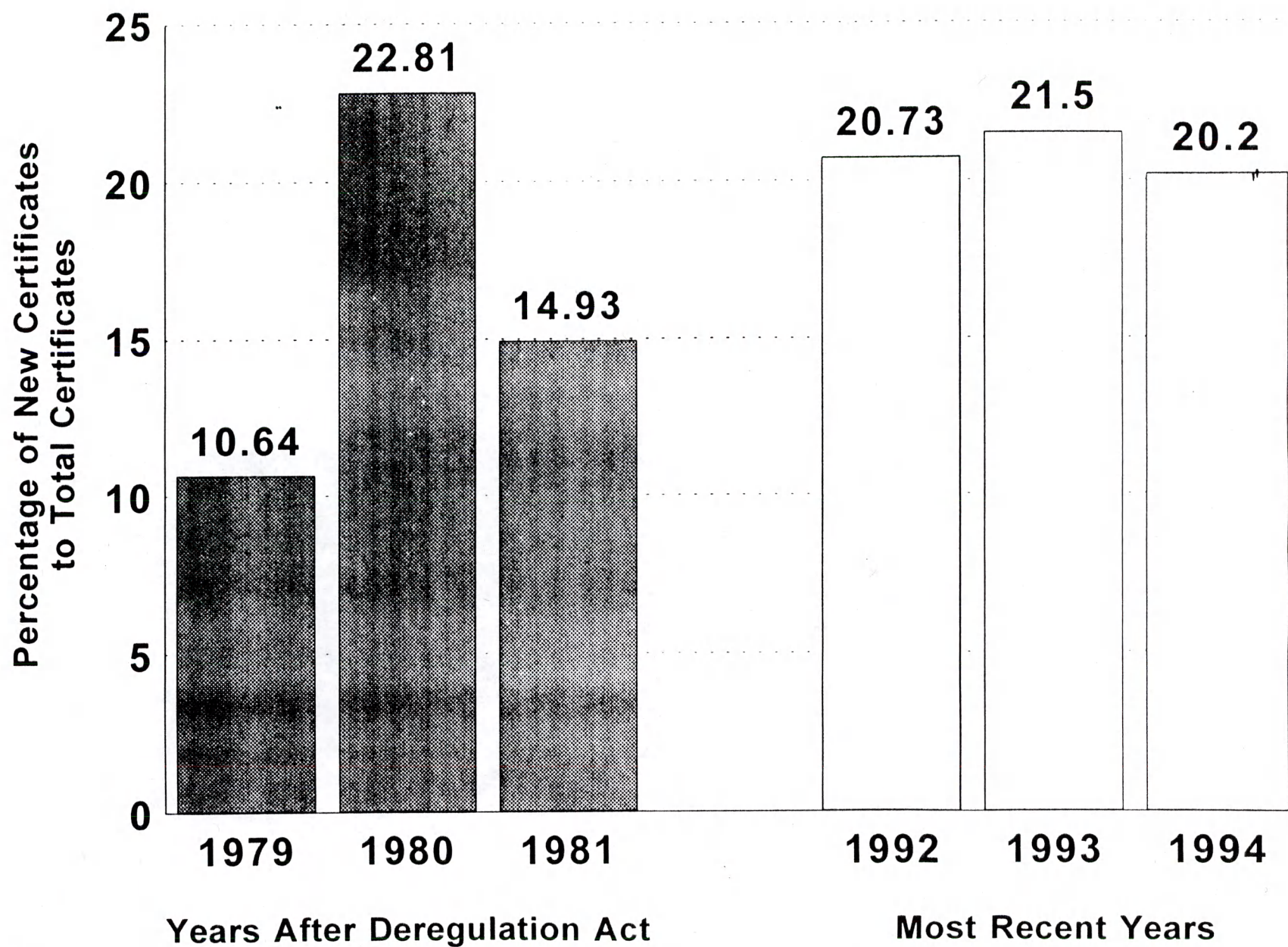
- **Large Air Carriers = 15%**
- **Small Air Carriers = 25%**

Pending Certifications By FAR Part



Turbojet Air Carriers

May 1995



Airmen and Airwomen Certification

(Average Year's Work)

Data for 1994

- **159,503 Certificates Issued**
- **36,235 Duplicate Certificates Issued**
- **66,874 Written Tests**
(68% via computer not included)
- **1483 Print Requests**
(Aviation Safety Program)
- **47,395 Written Inquiries**



Aircraft Registration

(Average Year's Work)

Data for 1994

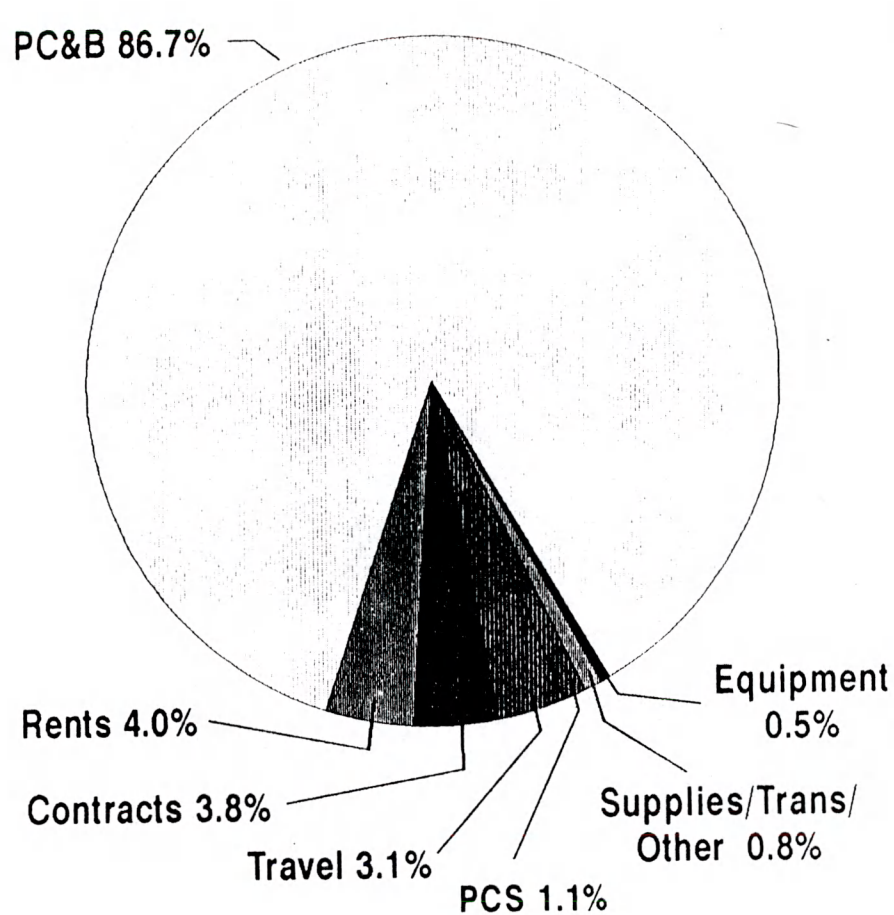
- **190,775 Registration and Recordation Documents Processed**
- **21,431 Specific Registrations Issued**
- **30,310 Written Inquiries**
- **3840 Imported Aircraft**

Internal Resources

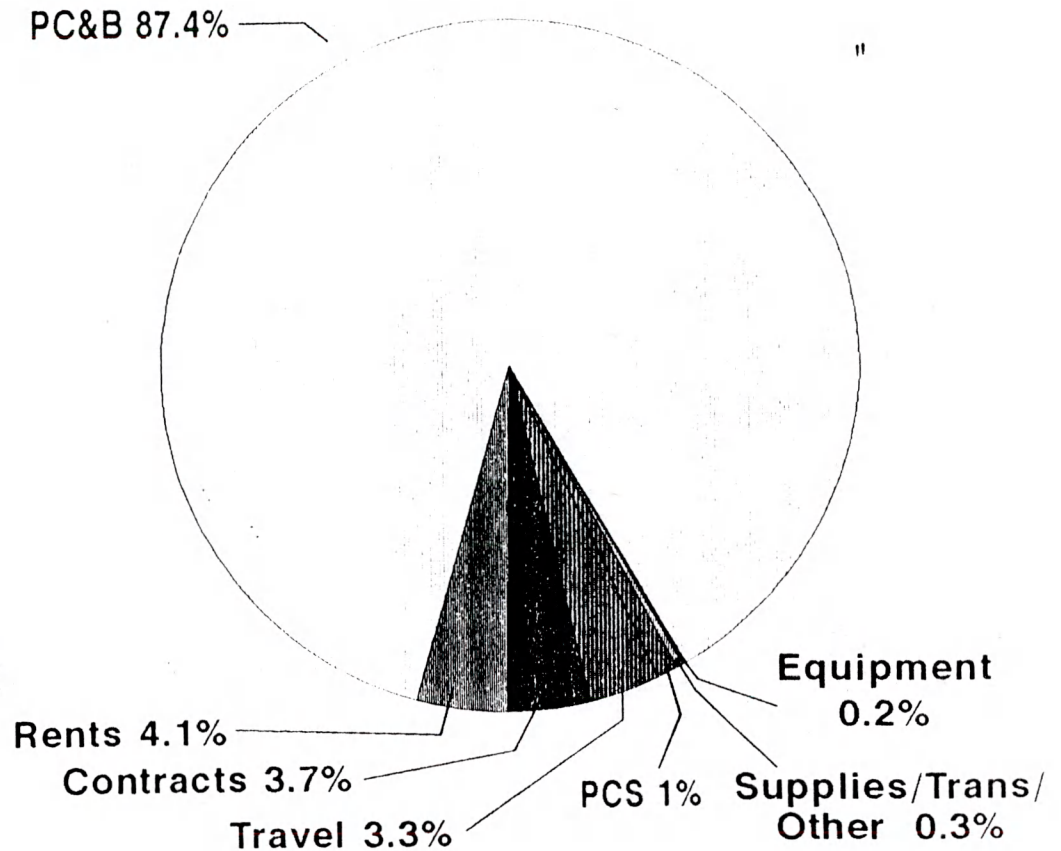


How The AFS Dollar Is Spent

(FY94 Actual And FY95 Estimated Expenditures)



FY94 \$274,297,400

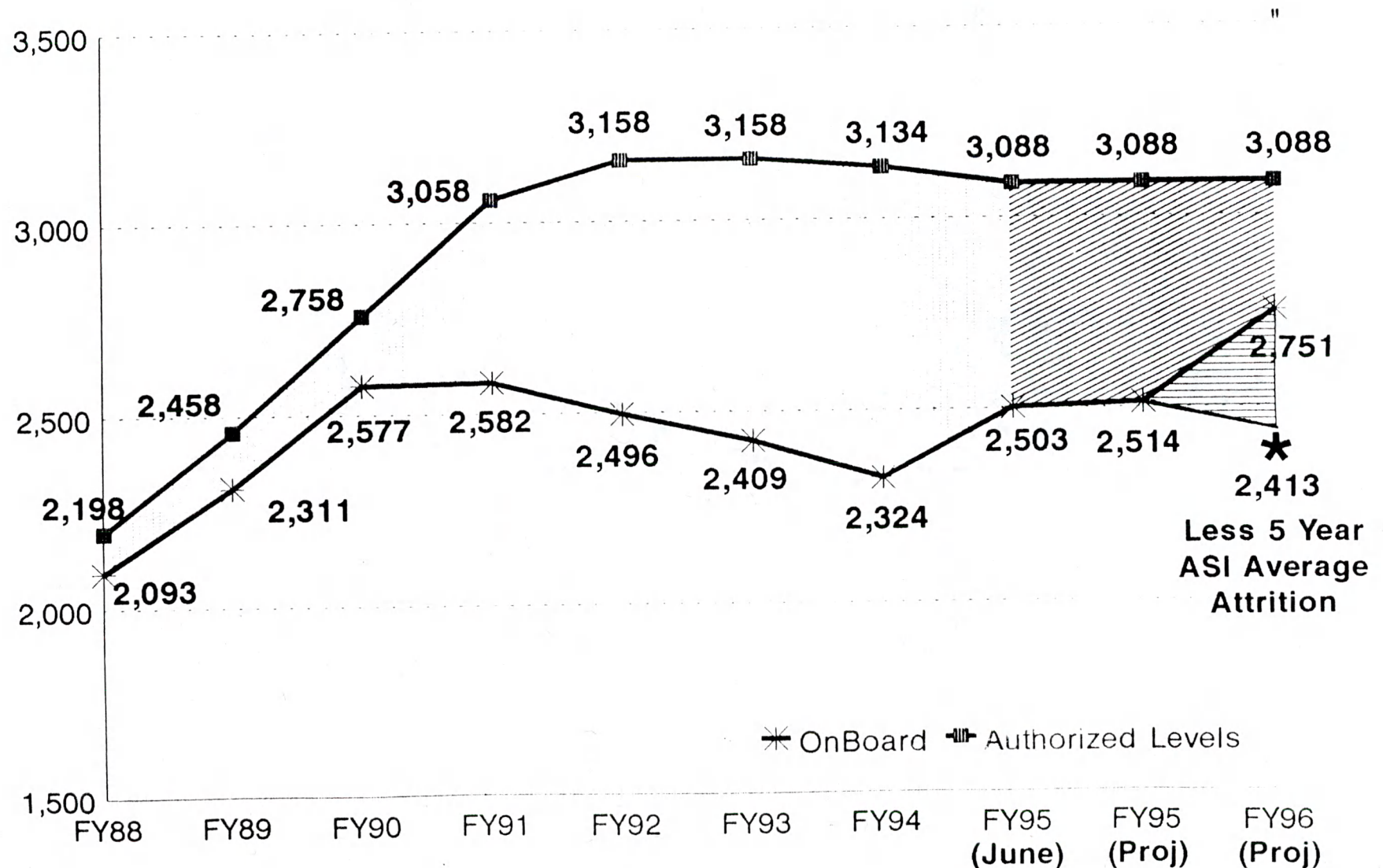


FY95 \$282,244,700

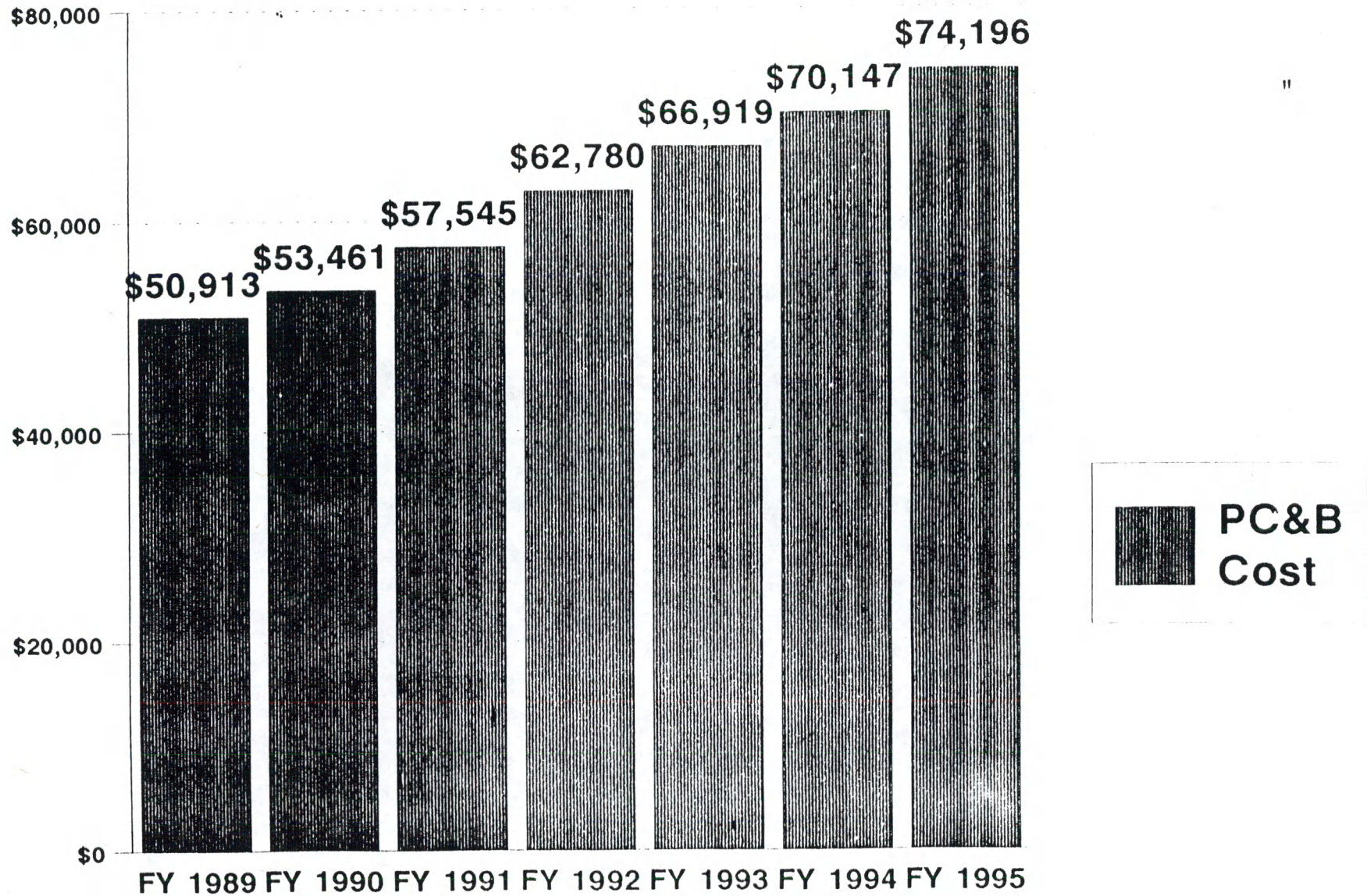
Flight Standards Field Inspector Staffing

Actual vs Authorized

Fiscal Years 1988 - 1996

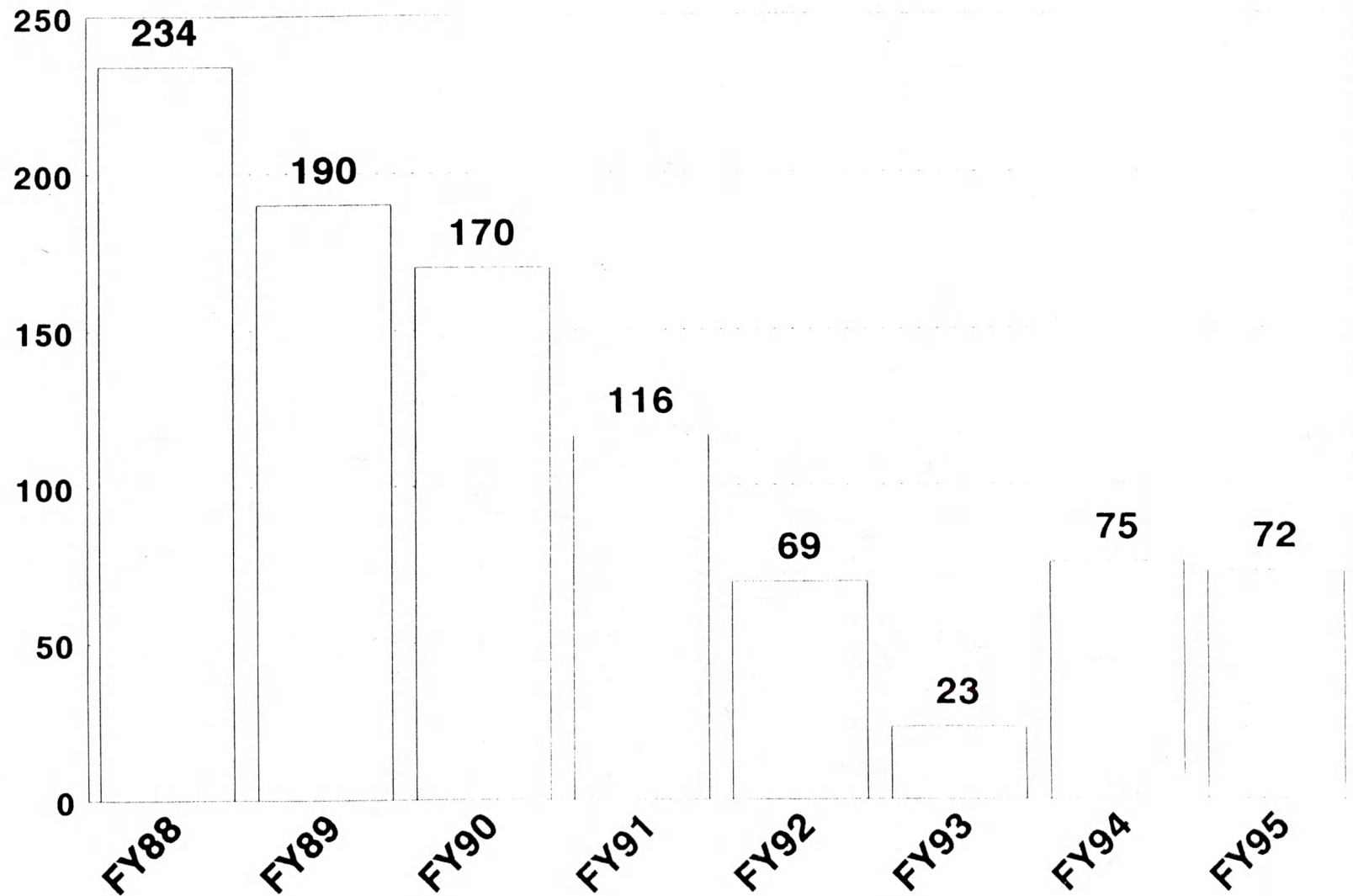


Inspector Cost



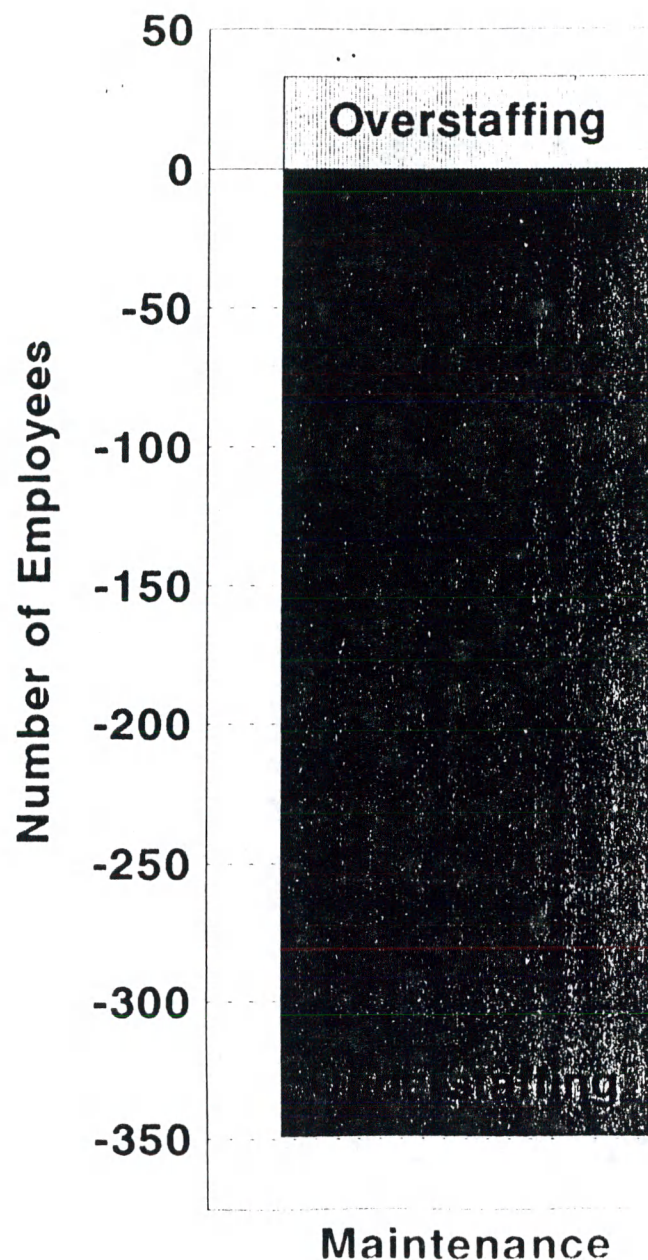
Flight Standards PCS Moves

Fiscal Years 1988 - 1995



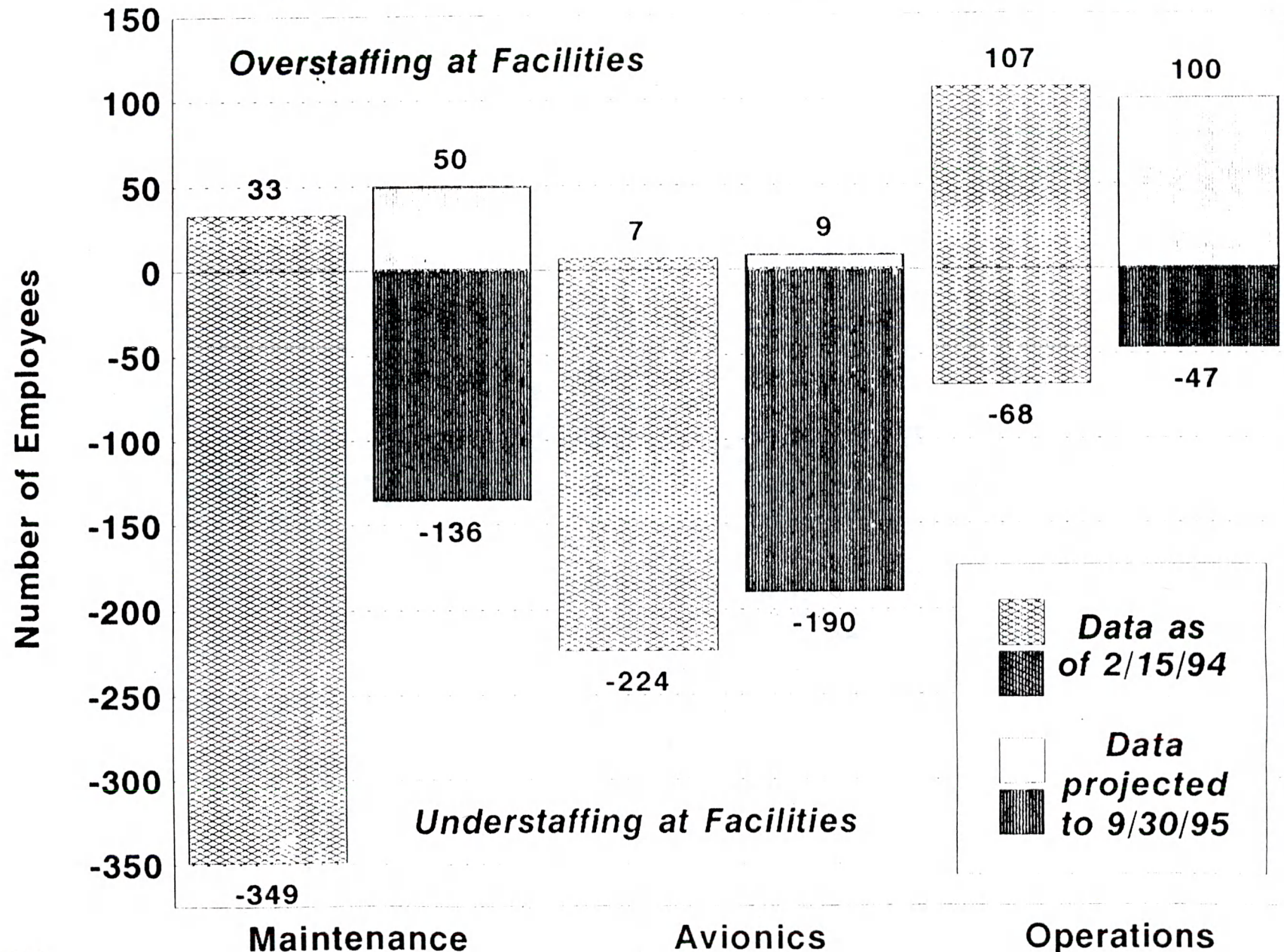
Significant Maintenance Inspector Shortage

February 1994



52% of Flight Standards field offices have maintenance inspector staffing that is 25% below the level required to manage their assigned workload.

Inspector Staffing Imbalances





Inspector Turnover

- **440 Are Over the Age of 60**
- **1,526 Are Over the Age of 50**

By The Year 2004

- **97% Over the Age of 60 Will Have Retired**
- **75% Over the Age of 50 Will Have Retired**

Inspector Experience, Qualifications, and Training



Minimum Inspector Hiring Requirements

Operation Inspectors Require

- An airline transport pilot certificate or commercial pilot certificate with instrument rating
- Pilot-in-command experience in large aircraft (over 12,500 pounds gross takeoff weight) within the last three years

Maintenance inspectors Require:

- An FAA mechanic certificate with airframe and powerplant ratings
- Three years of supervisory experience in aviation maintenance

Avionics Inspectors Require:

- Aircraft avionics experience in a repair station, air carrier repair facility, or military repair station
- Three years of aircraft avionics supervisory experience

Level of Experience of the New Inspectors

New Hires for Operations

- 90% have an Airline Transport Pilot Certificate
- An Average of 13 years aviation experience with 8111 flight hours
- 13% have military backgrounds

New Hires for Maintenance

- An average of 17 years aviation experience
- 37% have military backgrounds
- 46% have Repair Station Experience

Examples of Technical Courses:

- **Operation Inspector Recurrent or Initial Flight Training Courses:**

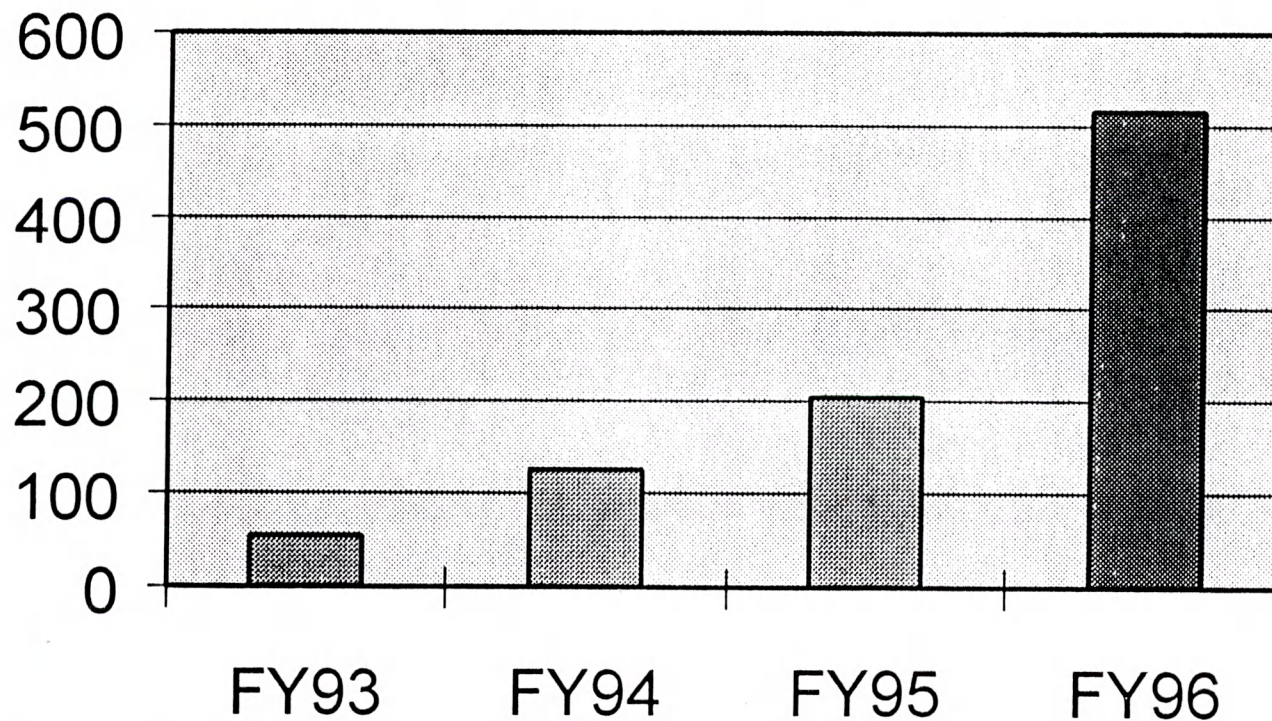
- B737 Recurrent 80 Hrs - \$9,759
- CL600 Recurrent - 32 Hrs - \$13,693
- B767 Initial - 122 Hrs - \$30,430

- **Maintenance Inspector Courses:**

- Repair of Composites 64 Hrs - \$4,539
- B737 Systems 112 Hrs - \$5,035

Training delivery budget has decreased from \$19 million to \$16 million in the last 5 years.

Project Growth in CBI Courses *



CBI courses allow Inspectors more choices, more flexibility, and more opportunities

*Parts of Maintenance String will be conducted using CBI (mandatory)

Flight Standards Service Inspector Training

-GOAL-

**The Right Training, for the
Right People, at the Right Time.**

Inspector Responsibilities





Operational Certification

- The process by which prospective air operators, air agencies, or airmen receive approval to conduct business in a manner that complies with all applicable Federal Aviation Regulations.
- Personnel, programs, equipment, and facilities must meet operational standards.



Complexity of an Air Carrier Certification

- 514 Separate Activities over 6 months to 1 year
- \$1 Million/Month Average Industry Cost*

** DOT figures new carrier
2 Boeing 737's*

On-Going Certificate Management Atlantic Coast Airlines

- **Airlines' fleet changed from 41 aircraft (2 different models) to 62 total aircraft (4 different models)**
- **Three new maintenance bases added**

Increased Work Load

- **New training program approvals required**
- **New maintenance program approvals required**
- **New personnel approval**

Surveillance

- Monitoring and inspecting certificate holders to ensure continued compliance with Federal Aviation Regulations

High Demands on "General Aviation" Inspectors

Ameriflight is 1 of 7 certificates this Principal Inspector is responsible for.

- ▶ **103,718 Departures**
- ▶ **22,743 Hours**
- ▶ **13 Maintenance/Domicile Bases**
- ▶ **215 Pilots**
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Typical Types of Field Office Inspections

Conducted On An Air Carrier

Operations Specialty

Manual/Procedures (1621)

Cockpit En Route (1624)

Cabin En Route (1625)

Pilot ground Training (1626)

Crew/Dispatcher Records (1627)

Airworthiness Specialty

Manual/Procedures (3626)

Structural Inspection (3637)

Line Station (3621)

Training Program (3633)

Aircraft Records (3634)

Inspector's Compliance Tools

- Voluntary Disclosure
- Internal Evaluation
- On-The-Spot Correction
- Administrative Action - Letter of Correction
- Civil Penalties
- Certificate Action - Normal and Emergency
 - Suspension
 - Revocation
- Criminal Action

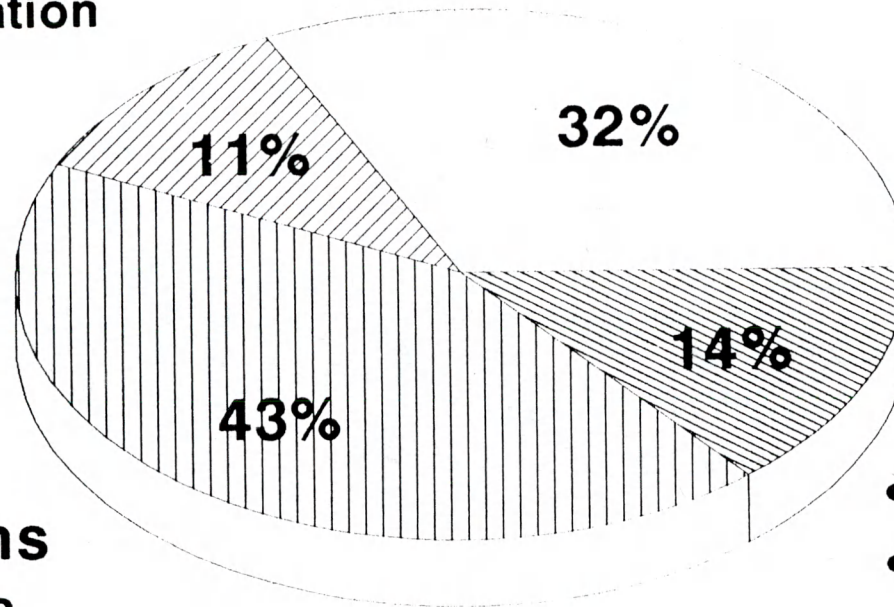
Safety Emphasis Areas

Inspector's Time Distribution

- **Follow-Up Items**

- Enforcement Investigative Reports
- Further Investigation

- **Inspection/Surveillance**



- **On-Demand Items**

- New Certificates
- On-Going Certificate Management
- Airmen Certification
- Accident Investigation
- Incident Investigation
- Complaint Investigation

- **Currency**
- **Training**
- **Travel**

NY Newsday

12/15/90

When Safety Takes a Backseat

On many foreign carriers
crucial equipment is
missing, planes are
badly maintained

By Glenn Kessler
and Ford Fessenden



Stop Press

"

Foreign airlines:
Is anybody watching?

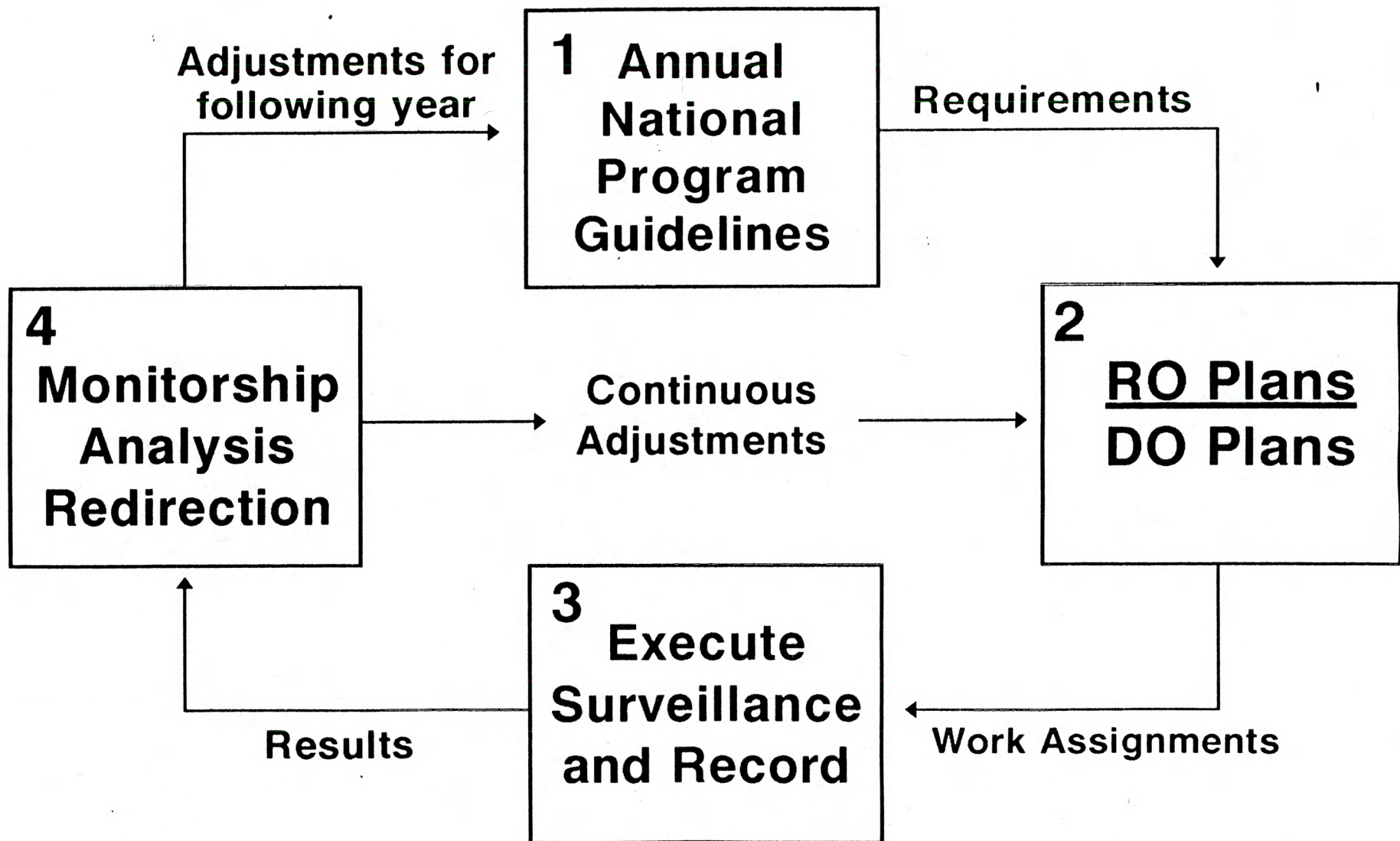
By Gary Stoller

Conde Nast TRAVELER

The Surveillance Program Development and Execution



National Work Program Development Process



Program Tracking and Report System (PTRS)

- **A computer-based system designed to provide data for planning and overseeing Flight Standards inspection program.**
- **Inspectors are required to enter information on inspections they perform.**

NASIP/RASIP Inspection Program*

Objective – To conduct an in-depth independent safety review of an operator with inspectors selected from outside of the Certificate Holding District Office (CHDO)

* NASIP -- nationally arranged
RASIP -- regionally arranged

DOD Inspection Program

- **PURPOSE:** To conduct a review of an air carrier's compliance with the safety and service contract provisions required to transport U.S. Armed Forces personnel
- **Teams formed at Scott AFB, St. Louis (Flight Standards on site)**
- **Information coordinated/shared with Flight Standards**
- **Results tracked and utilized by Flight Standards**

Feedback and Measurement



Flight Standards Service's Evaluation Program

- **PURPOSE:** To assess the efficiency and effectiveness of Flight Standards' offices and programs in order to enable continued improvement.



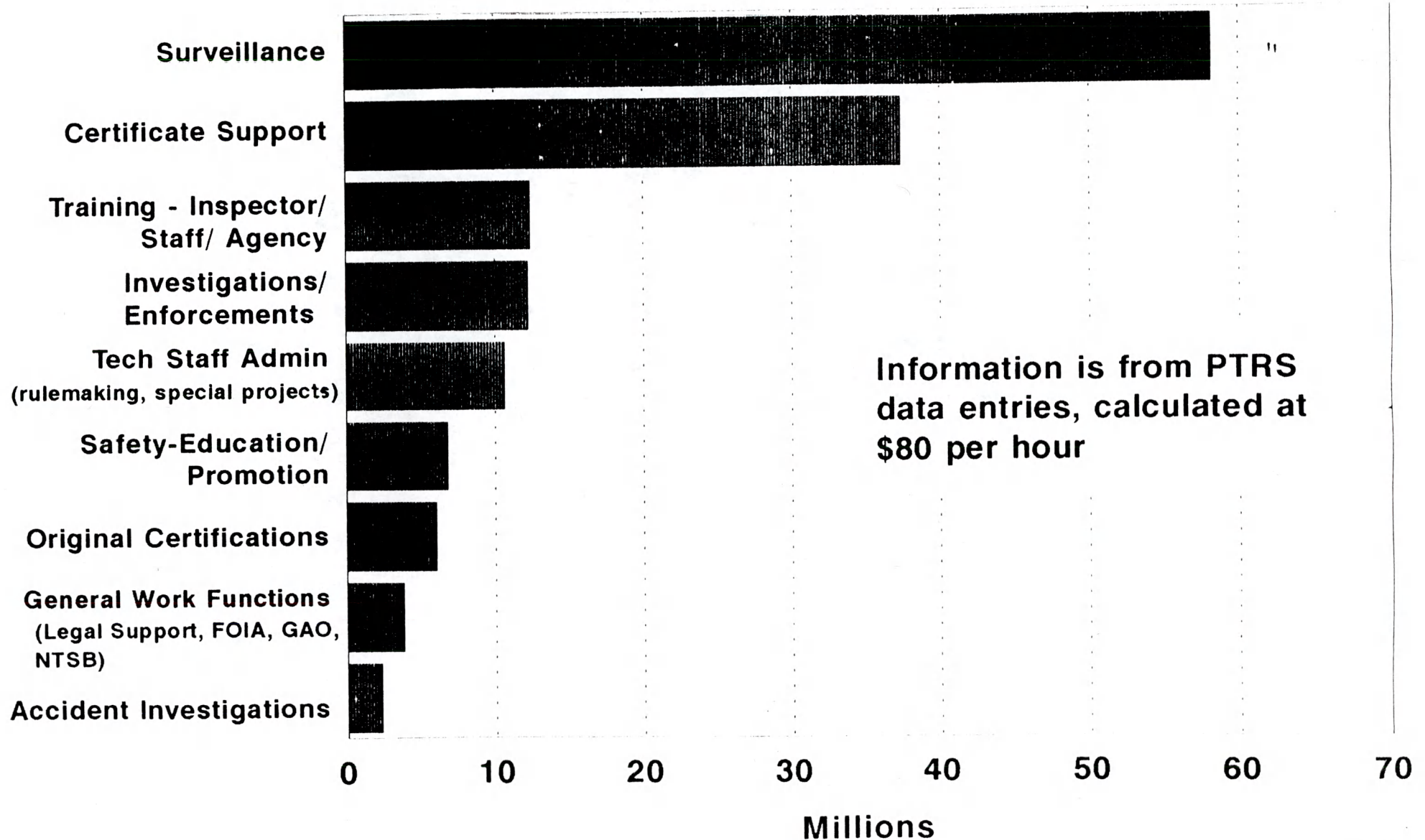


Unit Cost Report (UCR)

- The UCR is a management support tool designed to identify work activity costs.

Unit Cost Report

Man Power Cost



Flight Standards Customer Survey

- **Designed to measure our customer's perception of the quality of service provided by the local FSDO's**



Flight Standards Customer Survey Concept

- 1. Determine which services provided by the FSDO are the most important to customers (pre-survey)**
- 2. Ask customers to rate the quality of those services which are important to them (measurement survey)**



Customer Survey

A diagram with two main sections. The top section is enclosed in a large right-pointing chevron and lists six categories: Air Carriers, Pilot Schools, Repair Stations, Mechanic Schools, Agriculture Operators, and External Load Operators. To the right of this list is the text '100% Sample'. The bottom section lists two categories: Pilots and Aircraft Owners. To the right of this list is the text '6% to 10% Random Sample'.

**Air Carriers
Pilot Schools
Repair Stations
Mechanic Schools
Agriculture Operators
External Load Operators**

100% Sample

**Pilots
Aircraft Owners**

**6% to 10%
Random Sample**

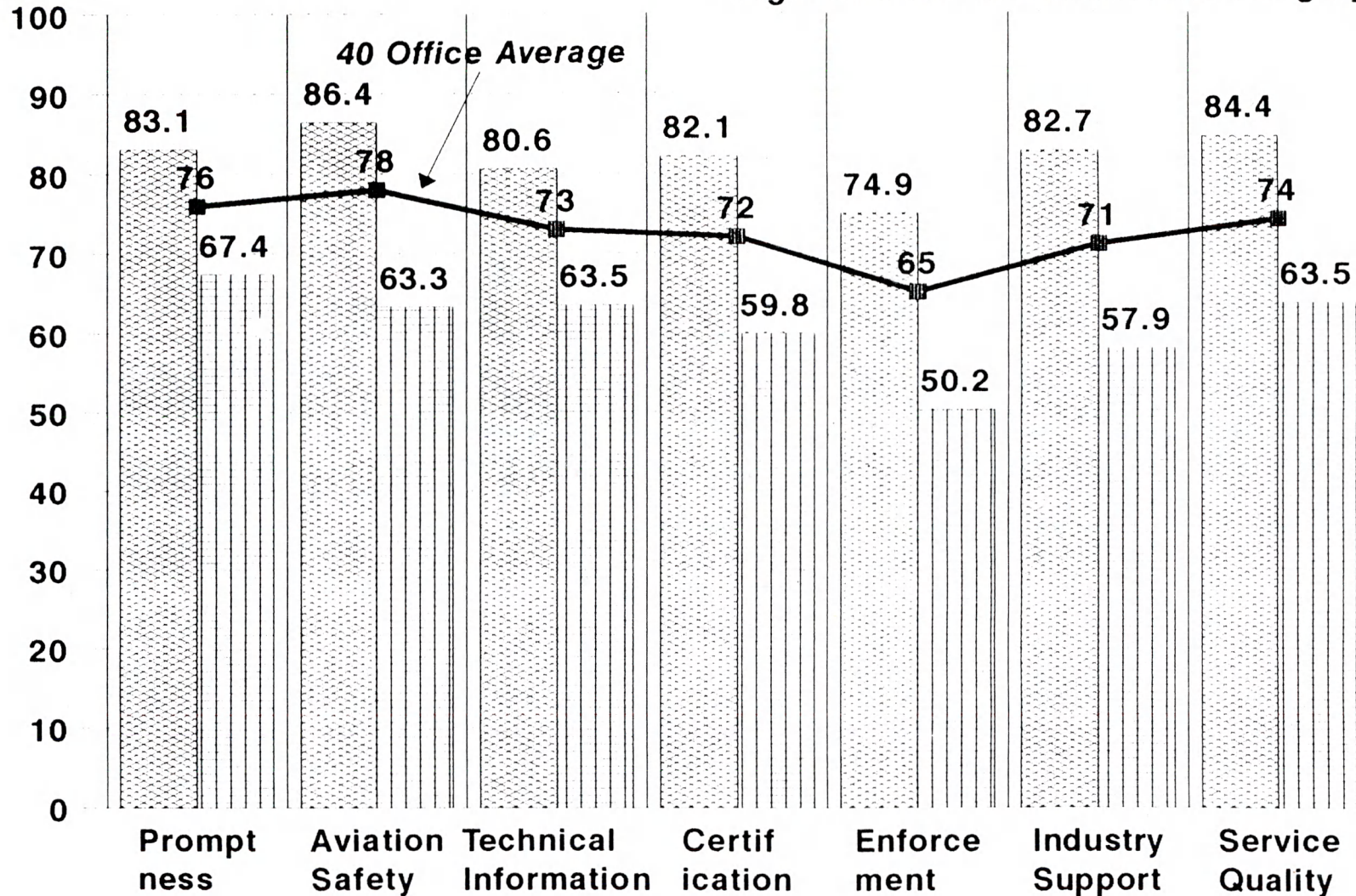
NOTE: 50 survey cards are given to each FSDO manager to be distributed to customers as determined by the FSDO manager

National Roll-Up

Flight Standards Customer Satisfaction*

April 1995

High and Low Scores in Each Category



* 100,000 Customers; 40 Field Offices



FSDO Peer Review

- **All field offices receive peer review evaluations on-site triennially consisting of:**
 - **Personnel Interviews**
 - **Data Review**
 - **Operator Visits**

Inspection/Surveillance -- 2005



Safety Performance Analysis System

Today's Indicators

Tomorrow's Indicators

SPAS Objectives

- To analyze safety critical performance indicators & retrieve underlying data
- To identify areas that pose a greater safety risk (resource allocation)
- To assist in establishing & updating the surveillance program work elements

FAA's New Safety Performance Analysis System Makes Surveillance More Effective

Washington

9/18/95

Aviation Week & Space Technology

New Software To Let Inspectors Spot Safety Trends Quickly

The FAA will activate a computer-based Safety Performance Analysis System next March, 1991. SPAS is essentially designed as an To help determine if a safety problem exists at any particular airline.

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will
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Federal Computer Week

**SPAS database takes flight
Will track, analyze aircraft
inspection reports**

9/18, 1995

9/8/1995

AVIATION DAILY

**FAA Deploying Computer
System To Analyze Airline
Safety Practices**

2426

"...DoD has confidence that the hardware and software parts of SPAS will satisfy our mutual need....One of the greatest advantages to DoD will be the availability of current up-to-date information rather than utilizing certain data presently provided on tape each month, thereby providing real-time inputs from the FAA inspection process. The SPAS trend analysis feature and ability to analyze different peer groups of air carriers will enhance DoD air carrier evaluations...."

**Frank J. Olson
Executive Director
DoD Policy Board on
Federal Aviation**

Performance Enhancement System

(PENS) (7 min video)

- **Review of inspector responsibilities and record keeping complexities**
- **Under development - a mobile computer platform and software system to simplify data entry and retrieval**
 - **Reports**
 - **Tracking**
 - **Scheduling**
 - **Reference Library**

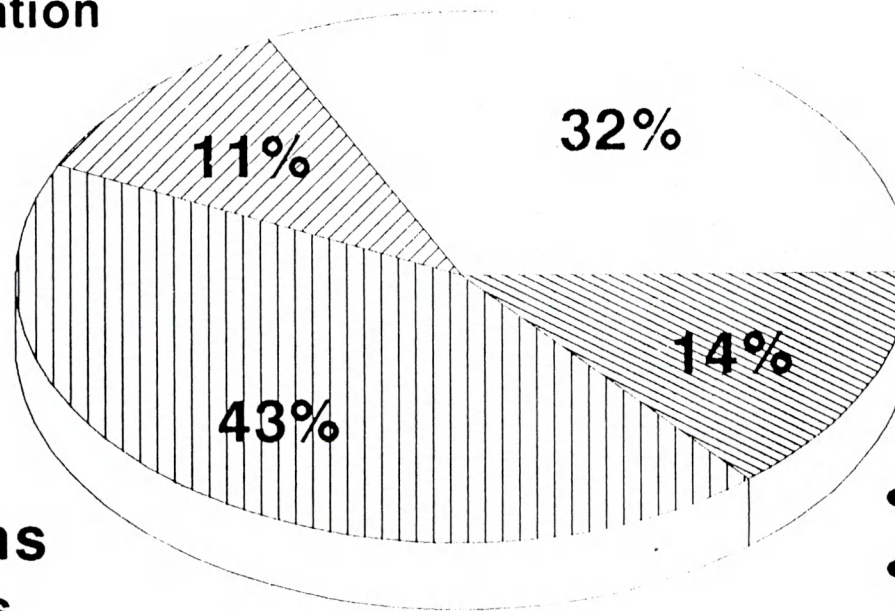
Safety Emphasis Areas

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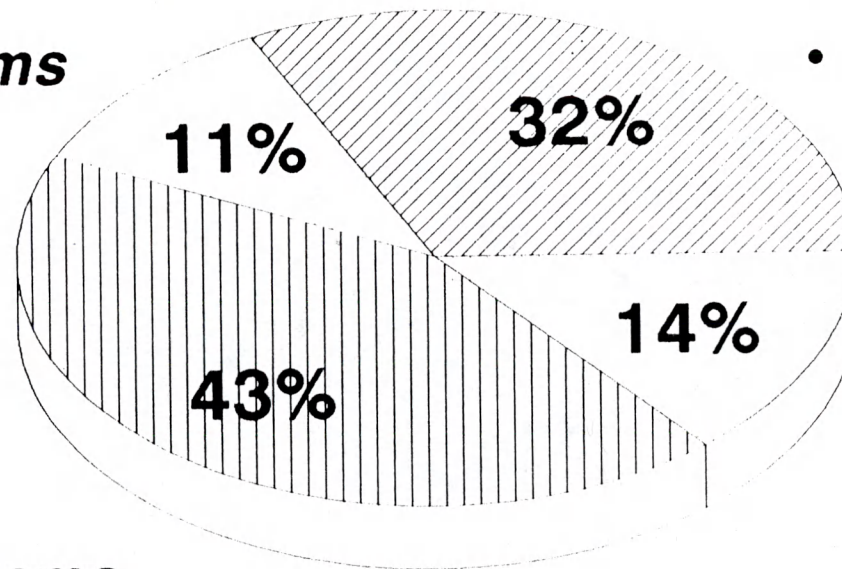
- **Currency**
- **Training**
- **Travel**

Productivity Enhancements

Inspection/Surveillance

- Safety Performance Analysis System "
- Internal Audit Programs
- Self Disclosure

Follow-Up Items



On-Demand Items

- National Certification Teams
- Airman Certification & Rating Application
- Computerized Testing
- New Examiners

Currency, Training & Travel

- Distance Learning
- Computer Based Training
- Inspector Targeted Training

2005 Vision - Summary

- **Computer platform and software development to meet the changing environment**
- **Better informed decisions through easier access to multiple data sources**
- **Resources better utilized through risk assessment**