

South Dakota Airports Conference

Presented to: Conference Attendees
By: Barry D. Cooper
Date: March 18, 2015



Federal Aviation
Administration

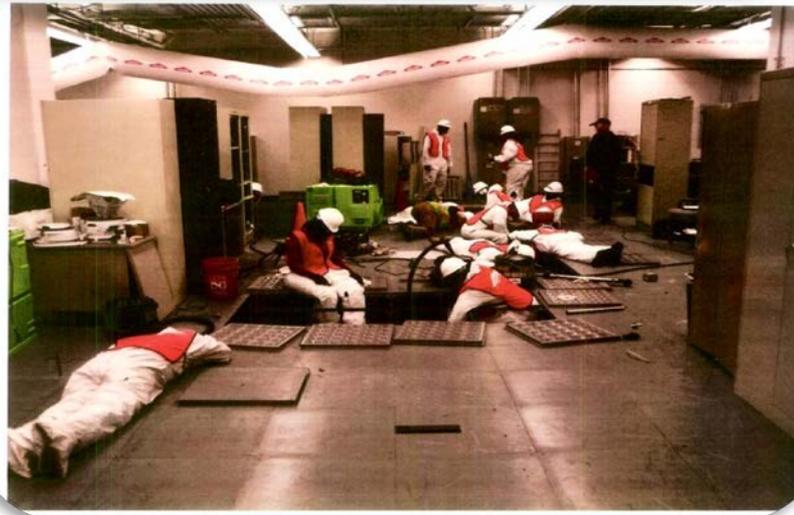


Legislation:

- **FAA Reauthorization**
- **Annual Appropriation**
- **Sequester**



Current & Future NAS

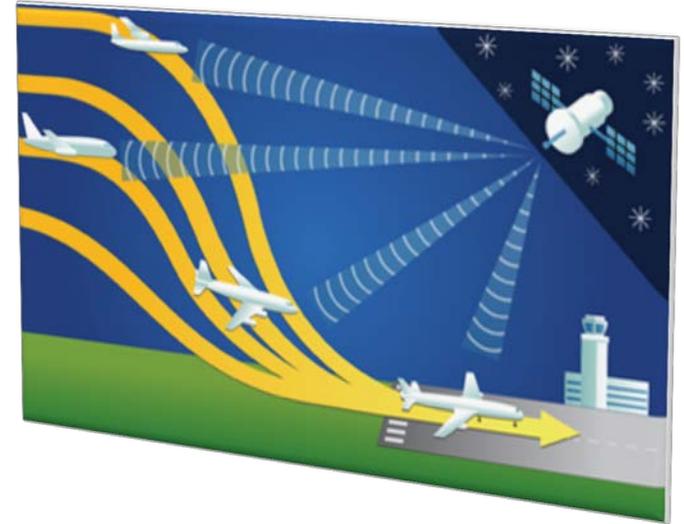


NEXTGEN



NextGen is the largest infrastructure project in U.S. history.

- Move from a ground-based system to satellite-based and digital technologies
- The flying public is already enjoying NextGen benefits:
- Shorter flights
- Better on-time performance and
- Fewer missed connections



NextGen Advisory Committee's top priorities fall into 4 categories



PBN



**Multiple
Runway Operations**



**Surface
Operations**



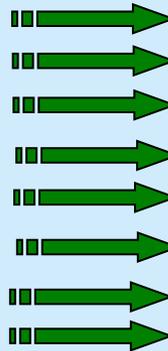
**Data
Communications**

Going forward, ERAM and TAMR will be coupled with ADS-B and other developmental programs—such as Data Communications and a suite of traffic management and decision support tools — that will provide new ways to move aircraft safely and efficiently through the NAS. 2016 will be pivotal for the next stage of NextGen, as we make investment decisions for a series of future programs. These decisions are dependent on stable funding.

Delivering NextGen Improvements

Legacy System

Radar
 Inefficient Routes
 Voice Communications
 Disparate Information
 Fragmented Weather Forecasting
 Weather Restricted Visibility
 Forensic Safety Systems
 Nationwide Focus



NextGen

Satellite
 Performance Based Navigation (fuel savings)
 Voice & Digital Communications
 Automated Decision Support Tools
 Integrated Weather Information
 Improved Access in Low Visibility
 Prognostic Safety Systems
 Focus on Congested Metroplexes



Aviation Data



Implementation

TFDM PBN TBFM ASIAs AIM NWP

Transformational

ADS-B CATM-T SWIM CSS-Wx NVS DataComm

Foundational

Terminal Automation
 Modernization and Replacement

En Route Automation
 Modernization

Terminal Automation
 Modernization and Replacement



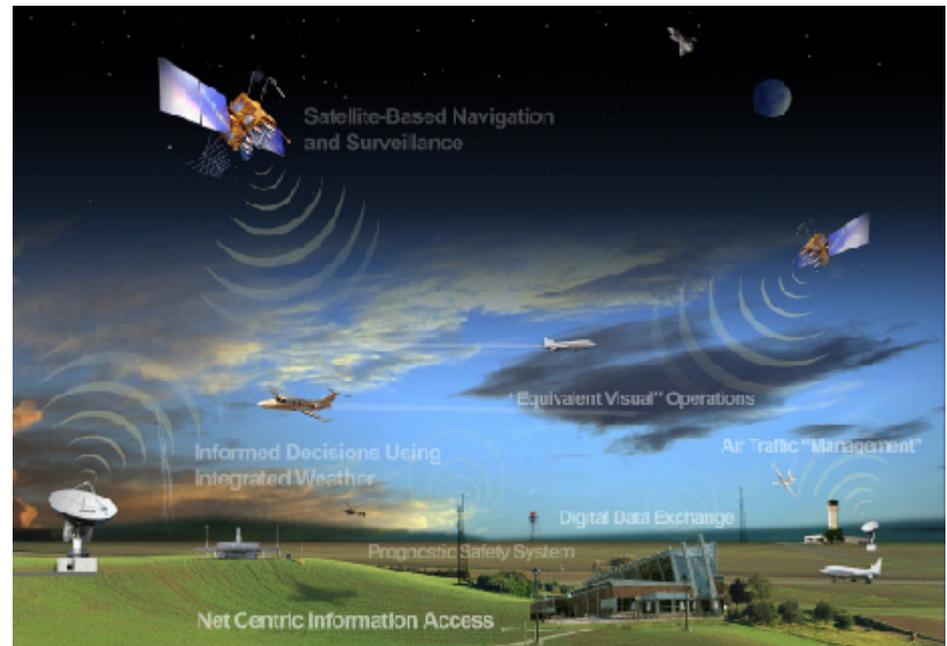
Delivering NextGen

Automatic Dependent Surveillance – Broadcast

Radar Surveillance  Satellite-Based Surveillance

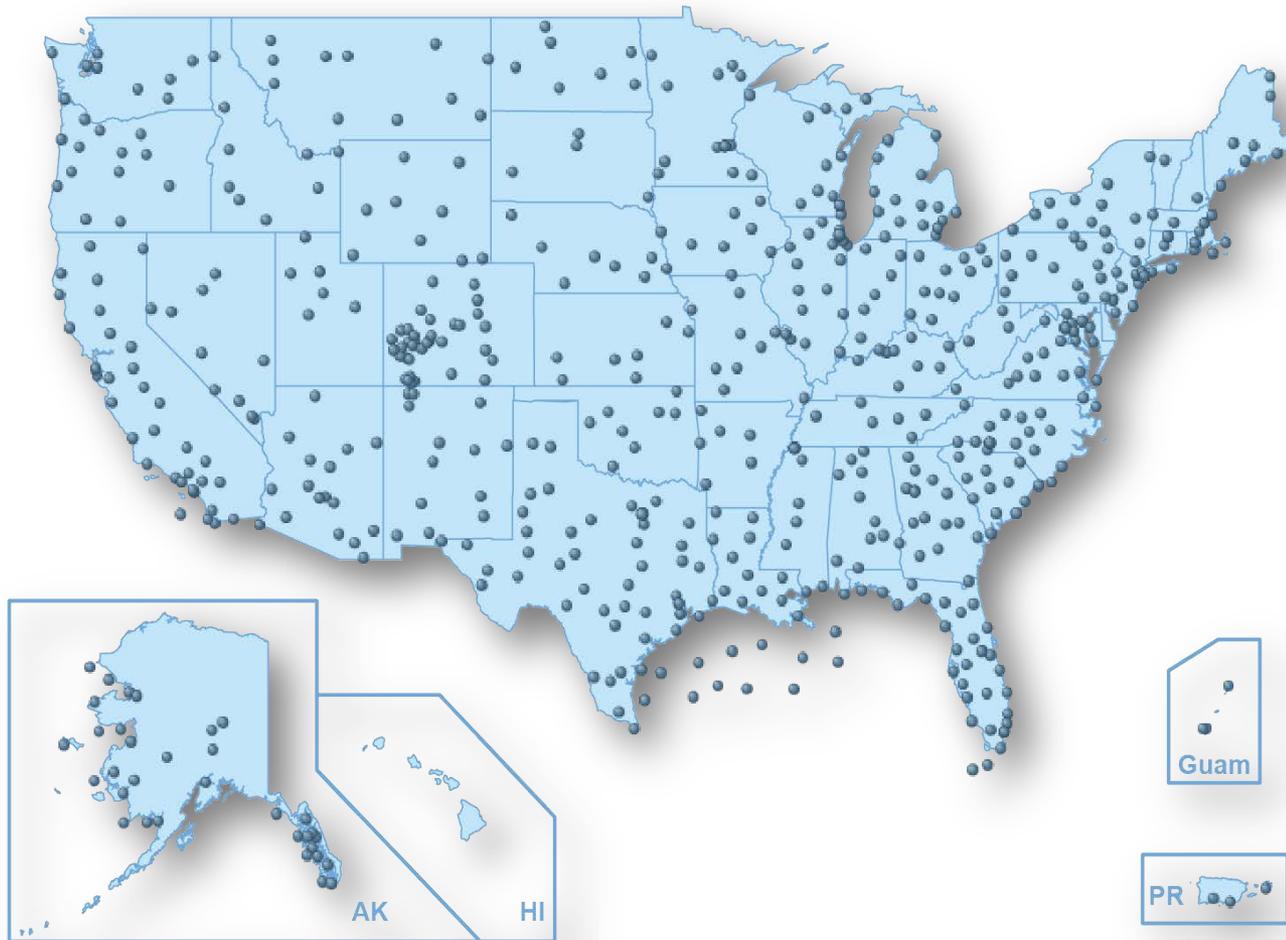
Satellite-Based Surveillance

- Aircraft positions updated continuously instead of every 4.7 seconds or longer with radar
- 100 of 230 air traffic facilities use ADS-B to separate traffic
- 634 ground stations are smaller than radar installations making them cheaper to maintain and easier on the environment



Transformational Program

Operational ADS-B Radio Stations



Data Communications



Delivering NextGen Performance Based Navigation (PBN)

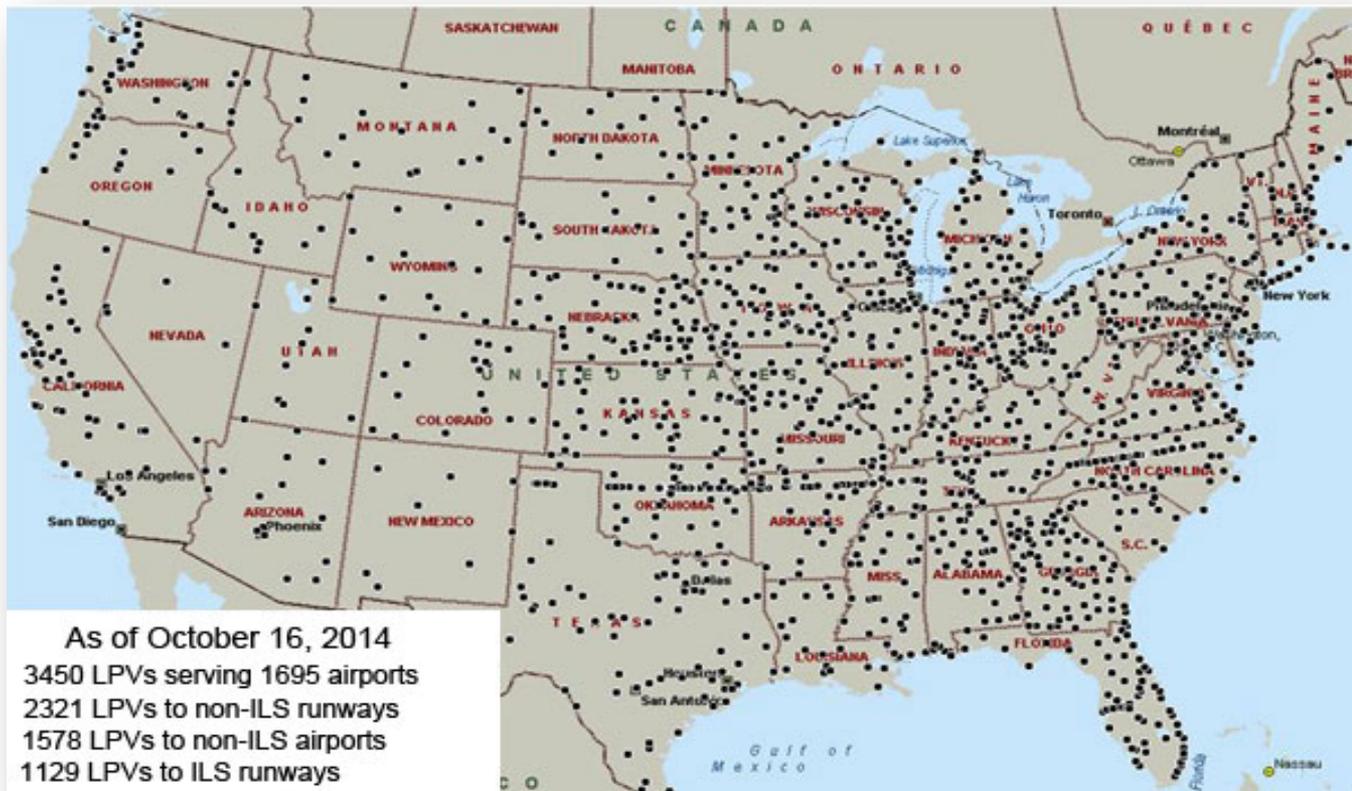
Ground-Based Navigation  Performance-Based Navigation

Precision routes

- Reduced flight time and fuel
- Flexible weather reroutes
- Integrated traffic flow
- End-to-end PBN network
- Airspace deconfliction



Airports with WAAS LPV Instrument Approaches

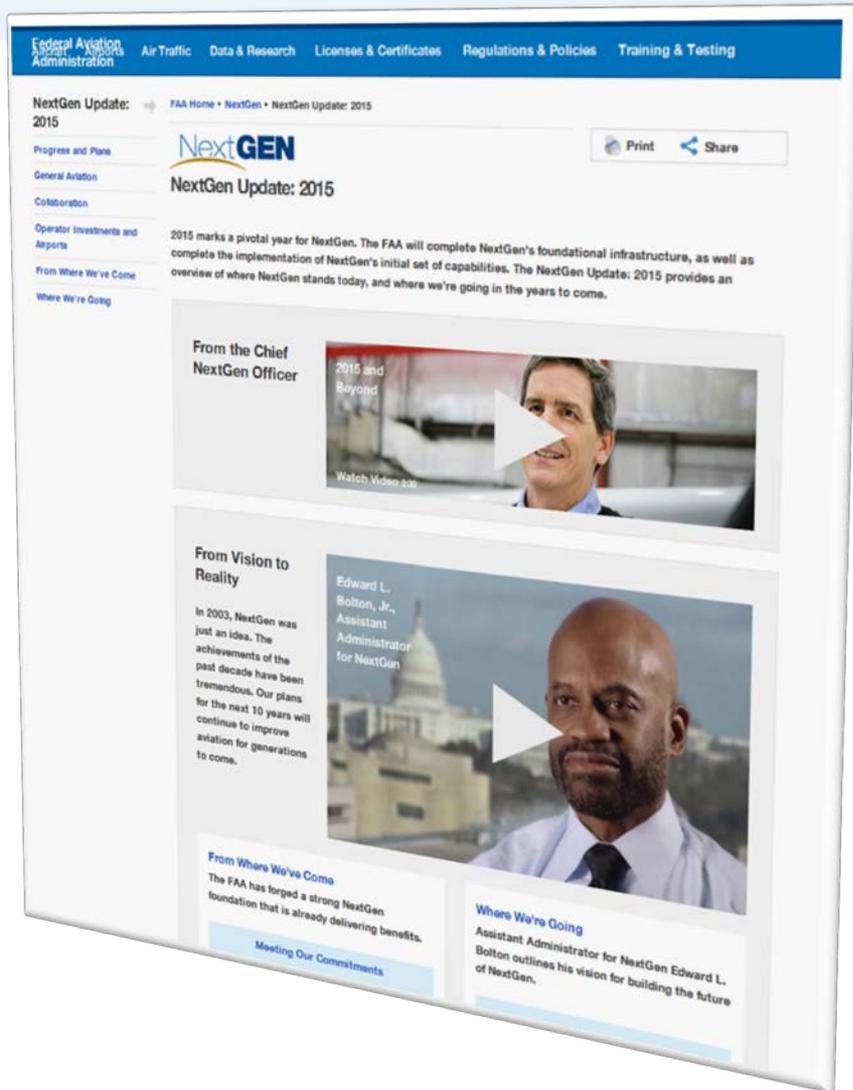


NextGen Update: 2015

The *NextGen Update: 2015* will be a web-based product

- + Links to additional information including program websites, reports, videos, etc.
- + **Section One:** From Vision to Reality – A look back at from where NextGen has come, and a look ahead at where we're going.
- + **Section Two:** Progress and Plans – Key Programs, Environment, Safety and Controller Tools
- + **Section Three:** Collaboration – NextGen Advisory Committee and International
- + **Section Four:** General Aviation – ADS-B, Approach Procedures and Fuel Technology
- + **Section Five:** Operator Investments and Airports

<http://www.faa.gov/nextgen/update/>

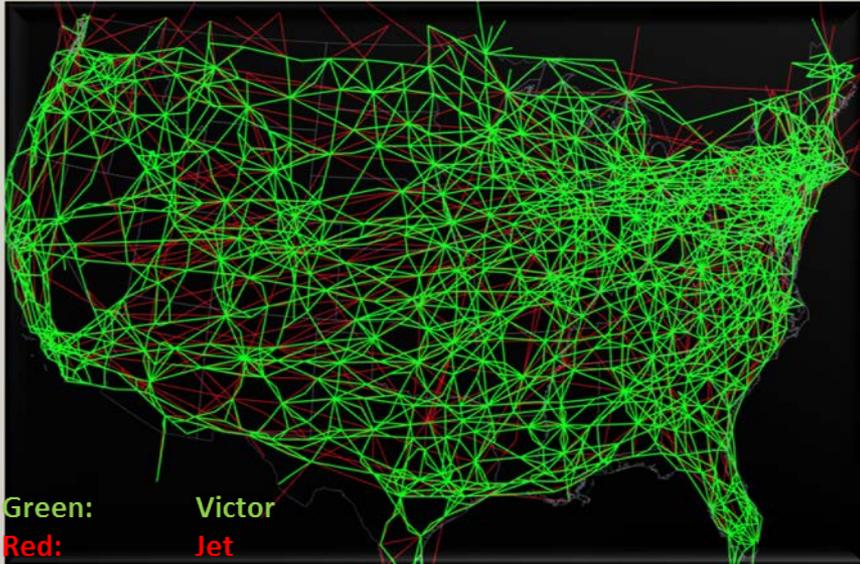


Present Day National Airspace System



VORS

TODAY



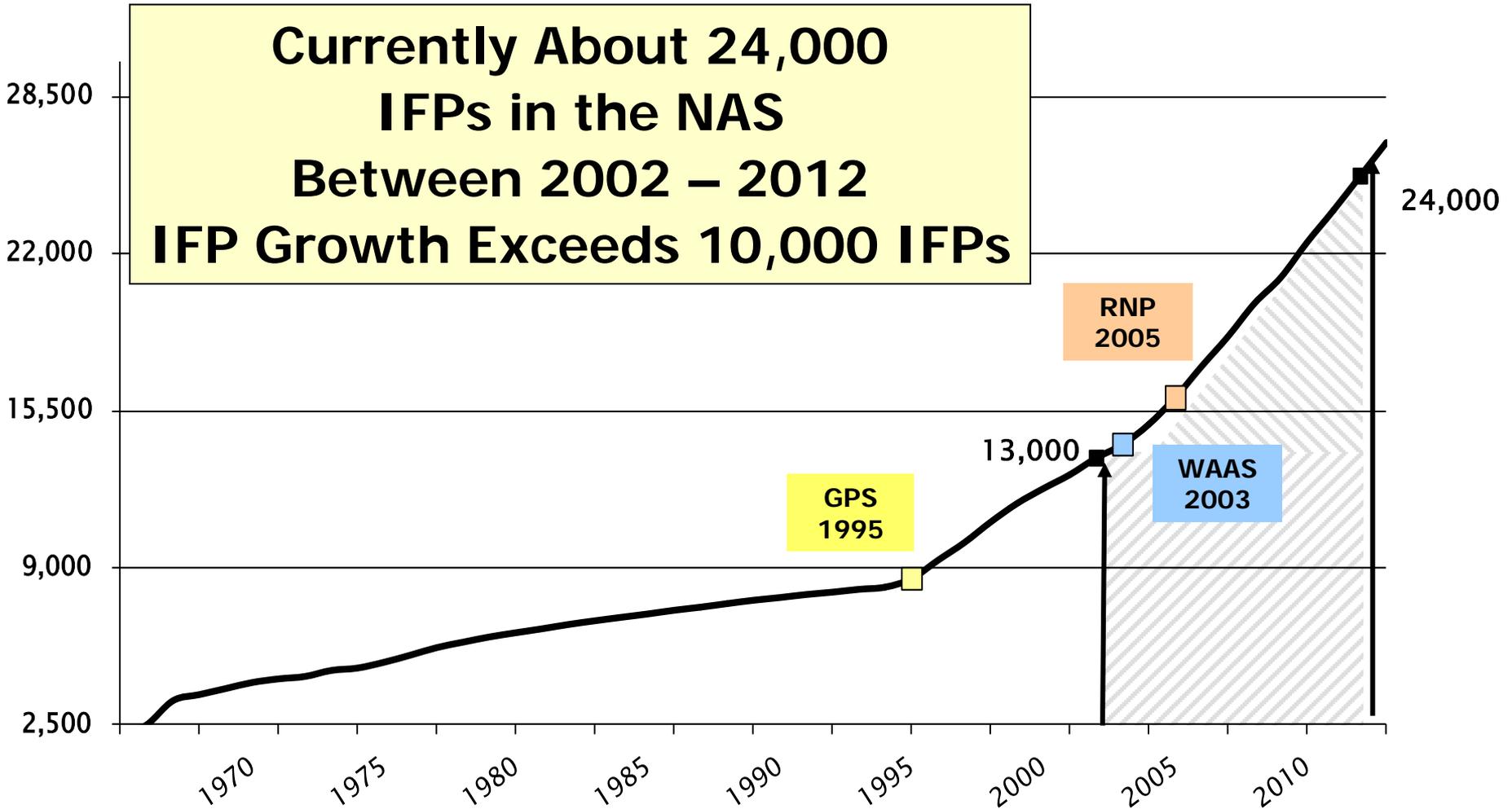
VOR MON



Note: Q Routes are not delineated in the diagram above.



IFP Growth in the NAS

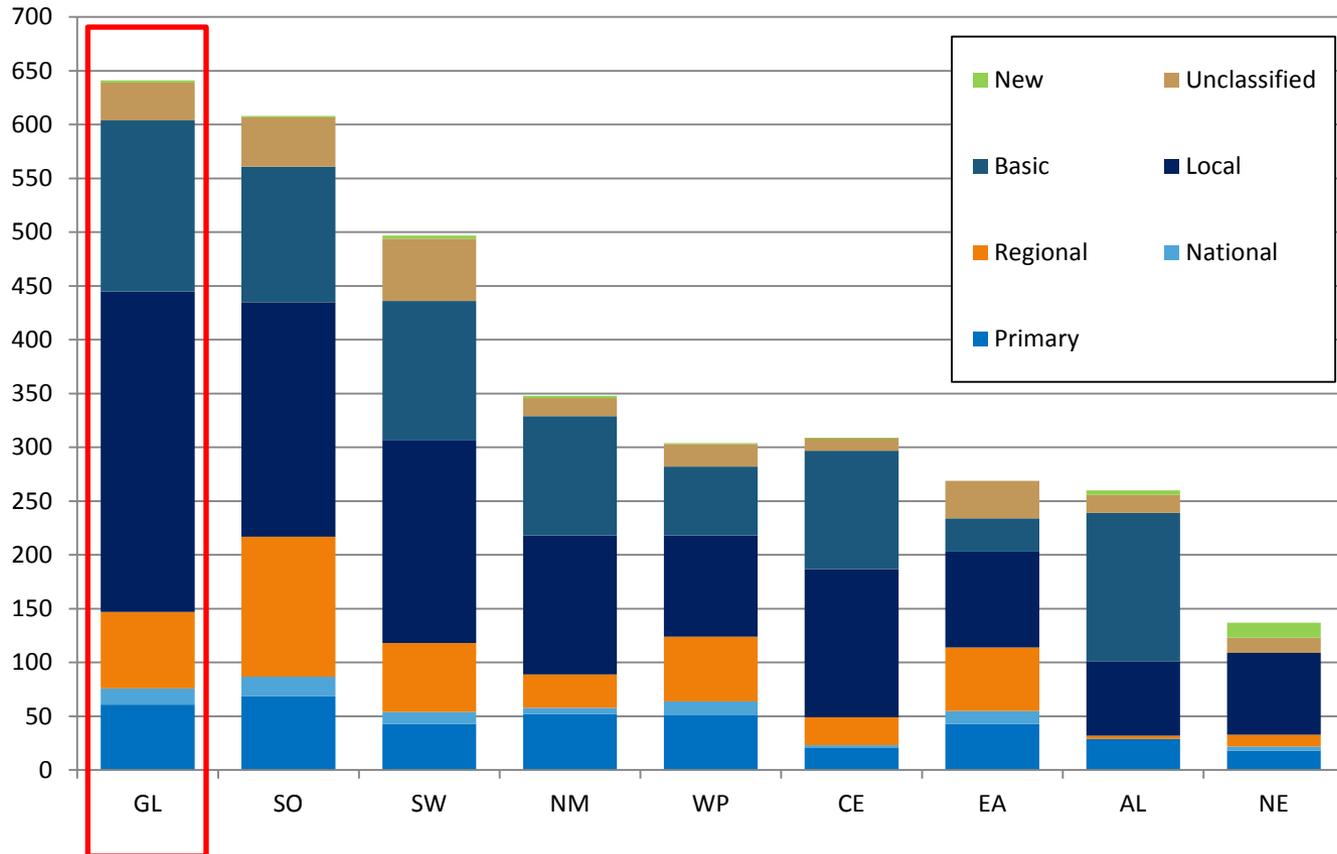


Airport Infrastructure



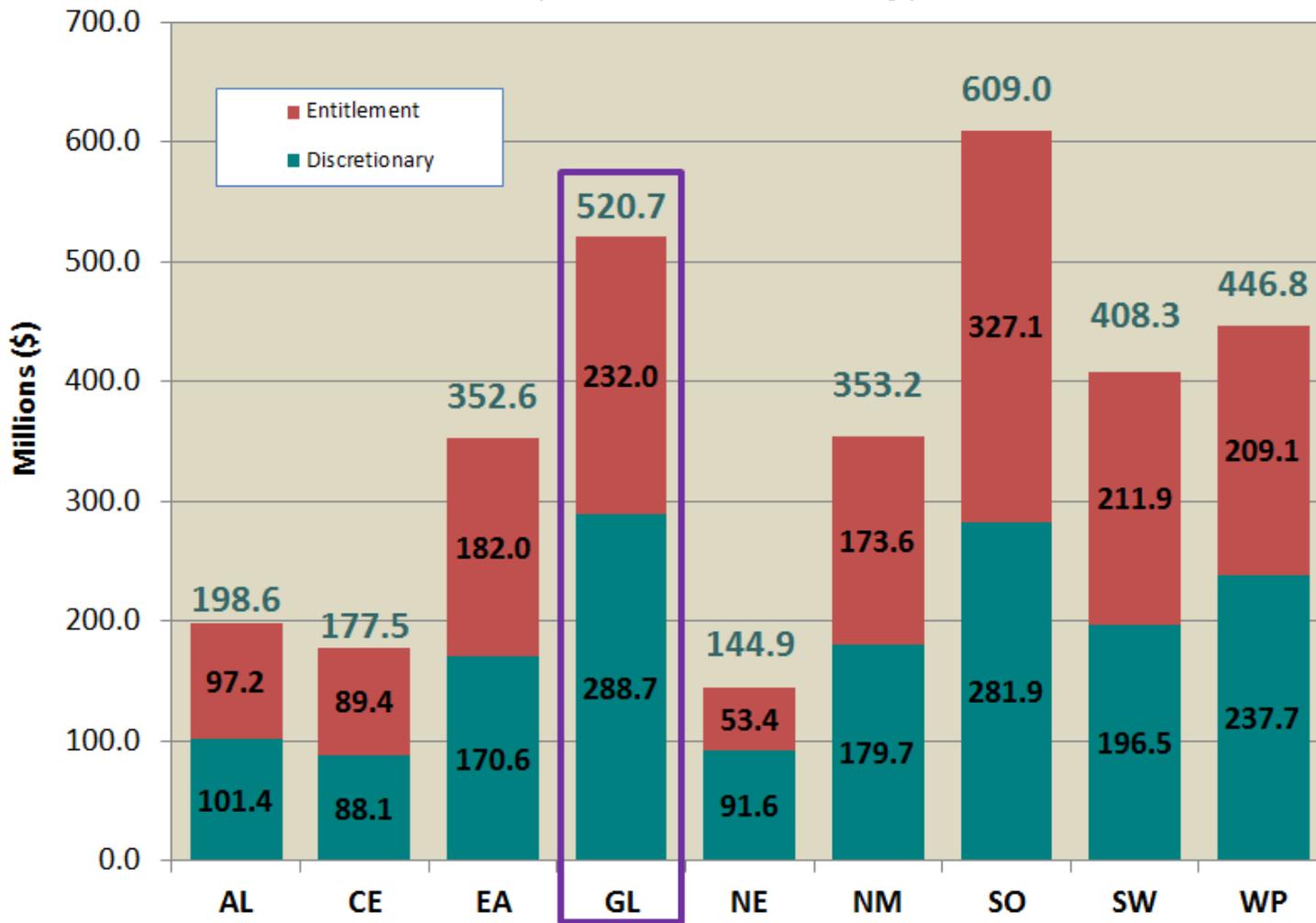
Number of NPIAS Airports Regionally

(3,345 Total - 641 in AGL)



AIP Funding for ALL FY14 Grants Initiated

(National Summary)



Unmanned Aircraft Systems





Selected UAS Test Site Operators



Federal Aviation
Administration

UAS: Getting to Integration

Today

- Accommodation

Mid-term

- Transition to NAS Integration

Long-term

- Integration into the NextGen NAS

For More Information Visit....

<http://www.faa.gov>

