

NextGEN



Investment in Airspace Modernization



FAA

NextGen is
the continuous improvement
and modernization of the
invisible infrastructure
of our national airspace.

The image features a light blue background with a white horizontal band at the bottom. Stylized white clouds are positioned above the band, extending from the right side towards the center. The text is centered in the upper half of the image.

NextGen is a monumental and historic movement forward in flight. This comprehensive initiative integrates new and existing technologies, including satellite navigation and advanced digital communications.

This transformative change in the management and operation of how we fly will reduce delays, save fuel, and lower carbon emissions. The combined initiatives that make up NextGen will provide the consumer with a better travel experience.

NextGen's advanced infrastructure will continually share information in real-time to improve air transportation's safety, speed, efficiency, and environmental impacts.

01

U.S. ECONOMIC ACTIVITY TOTAL IN 2009

\$1.3 TRILLION
 **AVIATION**

\$394.4 BILLION **10.2** MILLION **JOBS**




Even during the economic downturn in 2009, civil aviation supported 10.2 million jobs with earnings of almost \$394.4 billion and contributed \$1.3 trillion in total U.S. economic activity.


PASSENGERS

\$597 BILLION**5.3** MILLION **JOBS**

Once passengers reached their destinations, they added \$597 billion in total economic activity to local communities, supporting 5.3 million jobs with average annual earnings of nearly \$34,000.


COMMERCIAL AIRLINES

\$296.6 BILLION**2.0** MILLION **JOBS**

Commercial Airlines contributed \$296.6 billion in total economic activity, accounting for 2 million jobs with average annual earnings of \$46,000.


GENERAL AVIATION

\$77 BILLION**0.5** MILLION **JOBS**

Overall, General Aviation supported spending of nearly \$77 billion, supporting nearly 500,000 jobs with average annual earnings of nearly \$45,000.

NextGen is Economic Impact

Aviation is a vital contributor to our nation's economic health and NextGen is the required modernization of a key national industry.

The aviation industry:

- Contributes \$1.3 trillion in total economic activity
- Generates nearly 10.2 million jobs with \$394.4 billion in earnings
- Generates \$785 billion in value-added economic activity
- Accounts for 5.2 percent of the Gross Domestic Product (GDP)
- More than \$562B in goods shipped by air every year

02

AVIATION AS THE ENABLER

Aviation economic activity in local communities, transported nearly \$562.1 billion of goods by air in 2008, added \$249.2 billion in direct expenditures by visiting air travelers and supported 2.1 million jobs in the U.S.

\$562.1 BILLION



GOODS TRANSPORTED
BY AIR IN 2008

\$249.2 BILLION



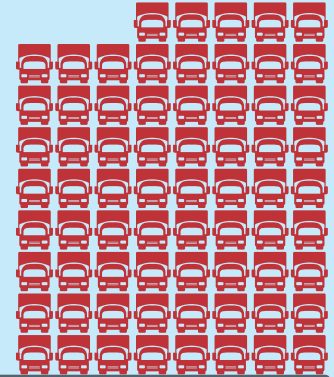
DIRECT EXPENDITURE
BY AIR TRAVELERS



2.2 MILLION
JOBS

#1

COMMODITY TRANSPORTED
BY AIR IS ELECTRONICS,
NEARLY \$202 BILLION
IN 2008.



\$73,000 PER TON / **69** TIMES
HIGHER IN VALUE

Commodities transported by air are high value – nearly \$73,000 per ton and 69 times higher in value than commodities transported by truck.

NextGen is benefiting local communities

Airports are the portal for travel and tourism that generates direct spending to a community, city or state. WAM technology is in place today and ensuring that flights are able to safely navigate the Rocky Mountain region to bring skiers, business people and tourists to Colorado. A 2008 study by Colorado Ski Country reported that the ski industry was responsible for bringing \$2.6B to the state's economy.

NextGen is a Better Travel Experience

Whether traveling for business or pleasure NextGen means safer skies and fewer delays. Better pilot communications and preemptive weather routing decisions ensure improved efficiency, safety and less delay.

03

FAA SPENDING

FAA spending in the U.S. to maintain a safe and efficient airspace amounted to almost \$14 billion in 2008, supporting nearly 218,000 jobs and inducing \$12.2 billion of additional spending in local economies.

\$14 BILLION

- PAYROLL
- NON-PAYROLL EXPENSES
- AIRPORT IMPROVEMENT GRANT

CONTRIBUTION IN LOCAL ECONOMIES

\$12 BILLION / **0.2** MILLION JOBS

TOP
3
STATES

| | |
|---------------|--------|
| 1. CALIFORNIA | \$1.3B |
| 2. VIRGINIA | \$1.0B |
| 3. OKLAHOMA | \$858M |

- CALIFORNIA
- TEXAS
- OKLAHOMA
- VIRGINIA
- NEW JERSEY

36%



NextGen is an Investment in our Future

Public and Private Sector investments in NextGen technologies have lead to successful launches of ADS-B in the Gulf of Mexico, required navigation performance (RNP) services, significant savings in fuel and reduced carbon emissions. Continued investments will enable us to realize these and other improvements integrated seamlessly into our national airspace.

NextGen is Connecting the World

Thanks to the global harmonization of equipment standards, airlines and passengers will be secure in the knowledge that their NextGen avionics will perform abroad just as they do domestically, providing the same capabilities and benefits. The World Travel Organization forecasts global travel spending to double to \$2.1 trillion by 2020 and to increase by 10 percent as a share of global travel GDP. The U.S. Department of Commerce forecasts that by 2016 the United States will welcome 81 million visitors, which is 22 million additional visitors above 2010, and will support 338,000 more jobs.

04

GDP

Once all impacts have been identified, civil aviation accounted for 5.2 percent of U.S. Gross Domestic Product (GDP) in 2009.



NextGen is Flexibility

NextGen provides the ability to flex to the capacity that the aviation industry creates. It enables a system and management that is nimble and responsive to the demand of commercial airlines – today and tomorrow.

NextGen is Communication

NextGen technology allows for better visual and verbal communication. With improved situational awareness, precision navigation, more efficient merging and spacing and multi-dimensional tracking of aircraft gives air traffic managers the tools to create safer skies and dramatically improve rescue efforts in remote areas.

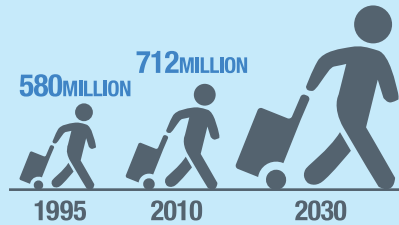
NextGen is Innovation

This represents a major shift in the FAA's role as it becomes a catalyst for technology development. NextGen relies on new technology and fuels that will improve emissions and air quality.

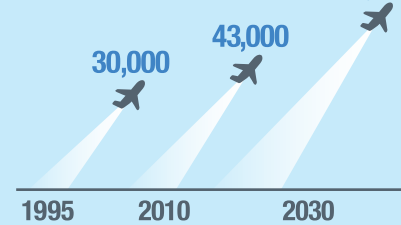
05 NEXTGEN

The benefits of NextGen are exponential. The forecast for passengers is expected to hit 1 billion in five years. It is expected to continue growing. By implementing NextGen we can shave minutes off of flight times. Those minutes translate into time and money saved.

PASSENGERS PER YEAR 1.2BILLION

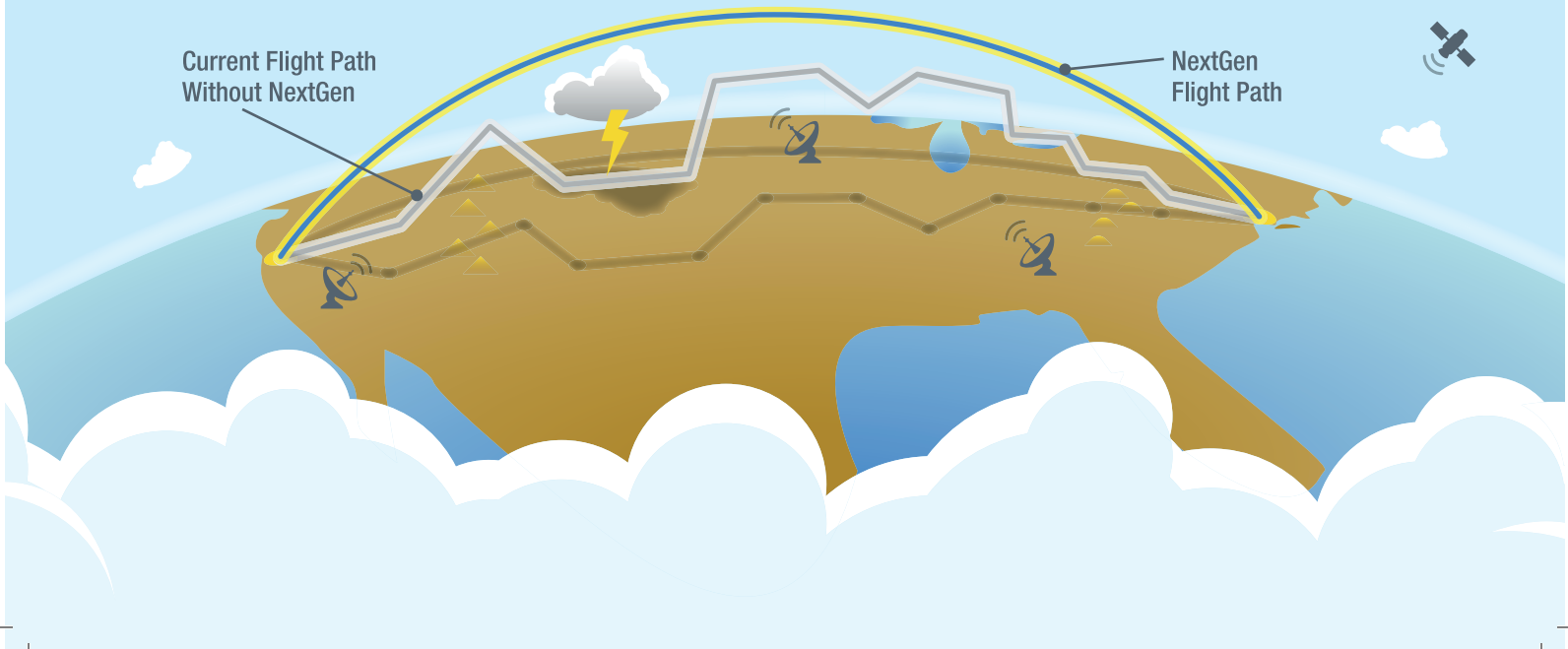


FLIGHTS PER DAY 60,000



Current Flight Path Without NextGen

NextGen Flight Path



NextGen is Happening Now

It's important to understand that NextGen has already begun. It is a continuous series of improvements and upgrades to the national airspace that's already under way.

- Surface monitoring and data sharing demonstrations at New York JFK and Memphis have successfully reduced taxi times.
- Collaboration between controllers and the airlines at New York JFK minimized the operational impact of the closure of an entire runway for renovations.
- With ADS-B, helicopters can be tracked over the Gulf of Mexico for the first time ever. Those aircraft have never before been visible to controllers because the area is not served by radar.
- ADS-B is allowing planes to be safely steered through mountainous terrain in Colorado.
- Tailored arrivals are saving fuel and curbing emissions for western approach to Seattle's SeaTac Airport.
- More than 3,000 runways are now providing Wide Area Augmentation (WAAS) procedures. This service provides precise navigation signals that enable aircraft to fly precision approaches at any qualifying runway without a need for ground-based navigation equipment. Over 50,000 general aviation, regional, business, and air carrier and cargo aircraft have equipped with WAAS. As additional users equip with WAAS, the FAA will be able to retire a portion of ground based systems, saving approximately \$50M per year in operational costs.

TOP 5 STATES

All throughout the country we're ensuring the safe travel of millions of passengers and goods. Here's a snapshot of where those passengers are traveling, the top export states and top domestic transport of goods.



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|---------------|
| 1. NEW YORK |
| 2. CALIFORNIA |
| 3. FLORIDA |
| 4. TEXAS |
| 5. NEVADA |



| |
|---------------|
| 1. FLORIDA |
| 2. CALIFORNIA |
| 3. NEW YORK |
| 4. TENNESSEE |
| 5. ILLINOIS |



| |
|------------------|
| 1. CALIFORNIA |
| 2. ARIZONA |
| 3. TENNESSEE |
| 4. TEXAS |
| 5. MASSACHUSETTS |



Next**GEN**

NextGen Will Deliver

Current projections indicate that NextGen will reduce delays by 38%, reflect a 14 million ton reduction in CO2 emissions and save 1.4 billion gallons of fuel. This results in \$24 billion in benefits by the end of this decade.

NextGen is Safety

At the core of all innovation and improvement is the number one priority of safer skies. Advanced safety management will reduce vulnerability and identify emerging weather patterns, giving air traffic management and pilots the tools to proactively identify and resolve hazards.

NextGen is People

NextGen involves every aspect of the agency, every line of business and every single employee. NextGen is the future of the FAA and people are the foundation of the FAA's mission accomplishment.

NextGEN



FAA