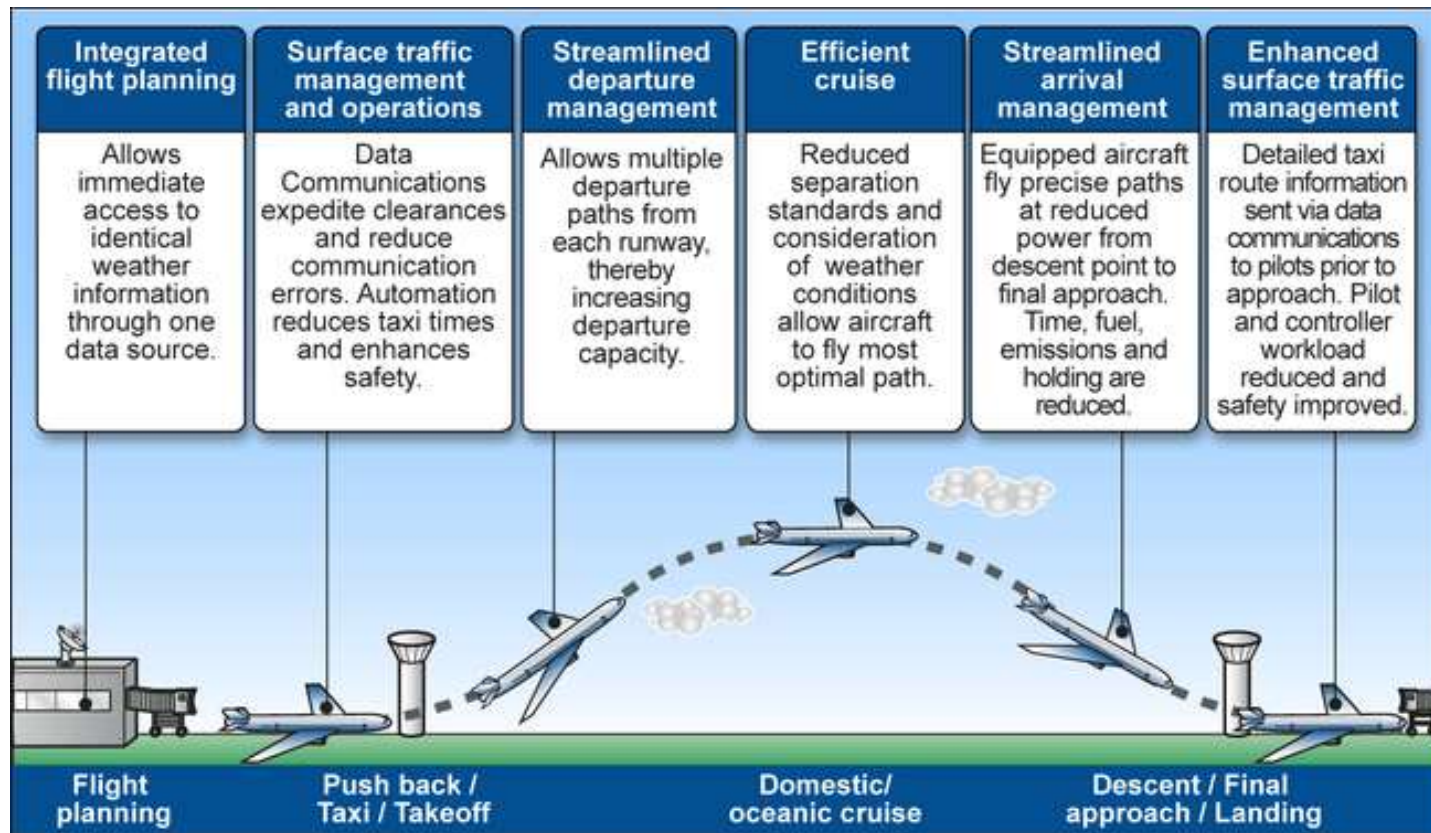


# NextGen and the Redesign of Airspace

This brief was prepared by  
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information from the FAA's  
website at  
[www.faa.gov/nextgen/](http://www.faa.gov/nextgen/)



## Expected Improvements under the Next Generation Air Transportation System



Source: GAO analysis of FAA information. | GAO-17-450

<https://www.gao.gov/products/GAO-17-450>

## What is NextGen?

- FAA-led modernization of US air transportation system
- A satellite-based upgrade to the air traffic control system
- Ground-based radar is limited when aircraft is at lower altitudes and dependent on ground radar stations
- A satellite-based system allows for better and faster communications

## How NextGen works

1. See
2. Navigate
3. Communicate

# How NextGen works

[www.faa.gov/nextgen/how\\_nextgen\\_works/](http://www.faa.gov/nextgen/how_nextgen_works/)

1. **See:** The ongoing implementation of NextGen provides air traffic controllers with:
  - Exact location of aircraft
    - Automatic Dependent Surveillance–Broadcast (ADS-B)
  - Clear vision of surrounding conditions, including weather patterns and other aircraft
2. **Navigate**
3. **Communicate**

# How NextGen works

## 1. See

## 2. **Navigate:** ADS-B – satellite-enabled navigation system

- More precise than traditional ground-based navigation aids
- Optimum routes for departure, cruising altitude, approach and arrival operations
- Efficient procedures to reduce flying time, fuel use, and aircraft exhaust emissions
- Improved capacity, performance, efficiency, and predictability

## 3. **Communicate**

# How NextGen works

**1. See**

**2. Navigate**

**3. Communicate:** New digital communications systems

- Aircraft receive dynamic, complex instructions from ground systems
- Can identify where aircraft need to be and at what time
- Helps pilots and air traffic controllers to communicate more quickly, more easily, and with less risk of miscommunication than radio messages over busy frequencies

# Resources

- SAN ANAC - SAN Airport Noise Advisory Committee
  - [www.san.org/Airport-Noise/Initiatives#405494-meeting-schedule](http://www.san.org/Airport-Noise/Initiatives#405494-meeting-schedule)
- Faviola Garcia, Senior Advisor, Federal Aviation Administration, Office of the Regional Administrator - (424) 405-7000
- How NextGen Works
  - [www.faa.gov/nextgen/how\\_nextgen\\_works/](http://www.faa.gov/nextgen/how_nextgen_works/)