

# Realizing the NextGen Airports Vision

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## What is NextGen?

- Next Gen is a transformation of the entire National Airspace System. It will significantly impact the way airports operate. This wide-ranging initiative will transition our NAS from ground-based navigation to a dynamic, satellite-based system capable of handling future aviation demand.
- The new system will accommodate demand in a safe, efficient, and environmentally-friendly manner through the implementation of new technologies, standards, procedures, and infrastructure development.

## NextGen Airports Vision

- Anticipated future growth in aircraft operations will be accommodated through the improved utilization of existing infrastructure and the construction of new infrastructure, for both Commercial Service and General Aviation (GA) airports.
- NextGen must facilitate the optimum and balanced utilization of airside, terminal, and landside infrastructure, as well as support ground access.
- A diverse network of airports must be preserved throughout the nation in the best interest of an efficient national air transportation system.

## Airport Operators are Key Decision Makers

- The actual implementation of many NextGen concepts will be accomplished through a local decision-making process, *in a cooperative effort* between the airport operator, users, and neighboring communities, with support from local, state and Federal governments.
- NextGen guiding documents are meant to guide the development of available services, programs, and technologies that that can be adopted by airports as dictated by their needs and missions
- Effectively, the development or transformation of an airport hinges on the efforts and decisions of the communities and users that it serves.



## Key Decisions Drive Airports' "Tool Box"

- Decisions being made by various JPDO Divisions and Working Groups – government and industry stakeholders working together – are real and relevant to long-term airport operational and infrastructure planning.
- Addressing near and mid-term transitional goals vs. long-term implementation is a key driver for airports, given the long lead time associated with airport infrastructure development.
- Constant communication and coordination between the JPDO initiatives (including the modeling of expected benefits), through FAA "FACT-2 Next Steps", ACRP, NASA research initiatives , etc. are also key to getting tools into airport operators' hands.



## Many Complex Issues Drive NextGen/Airport Success

- Airfield and passenger terminal capacity continues to be a significant challenge for commercial airport operators.
- Increasing demand and complexities associated with runway/ramp operations, security, airline operational changes, and regulatory requirements need innovative solutions.
- Within the IWP, the airport functional area addresses the complex factors that affect day-to-day airport operations and support functions not directly involved with air traffic management.
- IWP focuses on improving surface/ramp operations, passenger flow, severe weather operations, airport resource management, airport advocacy/preservation, and airport facility development consistent with Next Gen standards.



## So what is the Airport Working Group up to?

- Relative to airports and NextGen, there are:
  - many issues to be resolved
  - many holes to fill
  - many questions to be answered
- The Airport WG is focusing on coordination and synthesis of various efforts that will have the greatest impact or benefit on the airport-related implementation issues.
- Six active taskings under way, all intended to address key JPDO/NextGen issues.



## Landside Capacity (a.k.a. Airport “Ultimate Capacity” Assessments)

- Conduct landside capacity analysis and assess ultimate ground capacity of selected 35 OEP airports
  - Largely in support of JPDO IPSA modeling initiatives
  - Aimed at determining what the real capacity limitations are at any given airport – runway/airfield; ramp area; gates; security checkpoint, etc.
  - And importantly, how those bottlenecks might affect the NextGen goals to meet future demand.

## FACT 2 Next Steps Alignment

- Coordinate and align FACT2 NextSteps with JPDO planning documents
- Ensure alignment of mid-term and long-term initiatives with NextGen/JPDO efforts
- Close coordination with FAA Lines of Business and airport sponsors in developing draft action plans

## Closely Spaced Parallel Runway Operations (CSPO)

- “Evaluate Benefits of CSPO to Airports”
  - Conduct system-wide analysis and modeling of CSPO benefits to airports. Complete an action plan/roap map on those benefits.
- *Theoretically* we’ll have new standards in place by 2017, which is good for a handful of airports that already have CSP runways
  - But new standards in 2017 means that new runways being planned between now and 2017 may come at a greater financial, environmental and political cost than necessary!
- Goal is to coordinate between on-going FAA studies on feasibility with airport planning initiatives so that airports will have some certainty as to what benefits might derived from a new standard.

## NextGen Airport Surface Operations

- Develop a comprehensive, integrated NextGen vision for operations on the airport surface, of both aircraft and ground support equipment.
- Current NextGen initiatives generally do not address what happens to “choke points” when you “solve” a runway capacity issue.
  - Effort will examine all means and measures of surface operations, provide data for JPDO modeling efforts, and look at various technologies that can “solve” the issues.

## Airport Advocacy

- Develop a paper to describe the definition, need and benefits of airport advocacy, including a strong multi-layered Federal role, to preserve and expand capacity and to advocate for airports as community assets of national importance.

## Next Gen “Supporting Airports”

- Evaluate the benefits of NextGen to smaller airports
  - Two pronged approach
    - First, focus on those smaller airports near the 35 OEP airports
    - Second, extend effort other GA and smaller commercial airports

## A Vision for NextGen Airports

- We hope all of this adds up to:
  - **Increased safety:** surface management (runways, taxiways and ramps) is safer even with growth in more aircraft operations
  - **Enhanced capacity:** reduced lateral and in-trail separations in all weather conditions; more direct routings
  - **Flexible design:** more efficient runway separation standards means greater flexibility in designing additional runways
  - **Environmental benefits:** minimizing operational impacts on the environment is a key component of NextGen



## Contact Info

- If you want to join the Airport WG

[http://www.ncat.com/ngats/wg\\_airports.html](http://www.ncat.com/ngats/wg_airports.html)

- If you have questions about the Airport WG:

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