

Challenges for an NGATS Infrastructure

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The Objective



2025 NGATS Concept

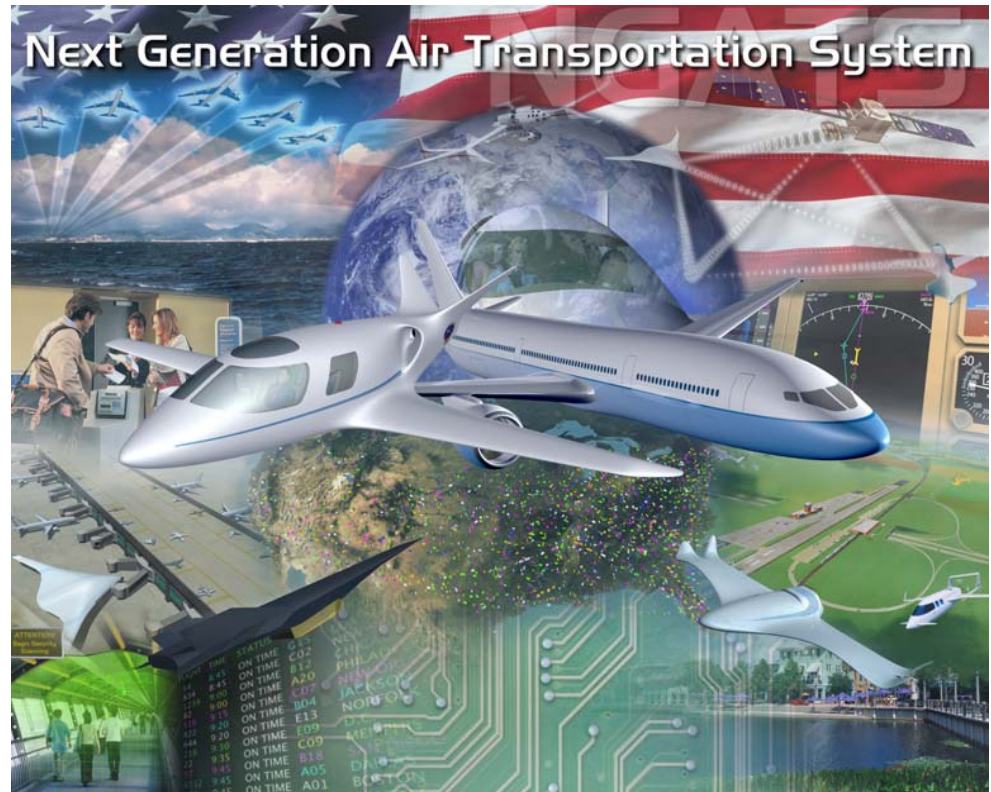
Operating Principles

For full version, see: jpdo.digiplaces.com/tech_hangar/

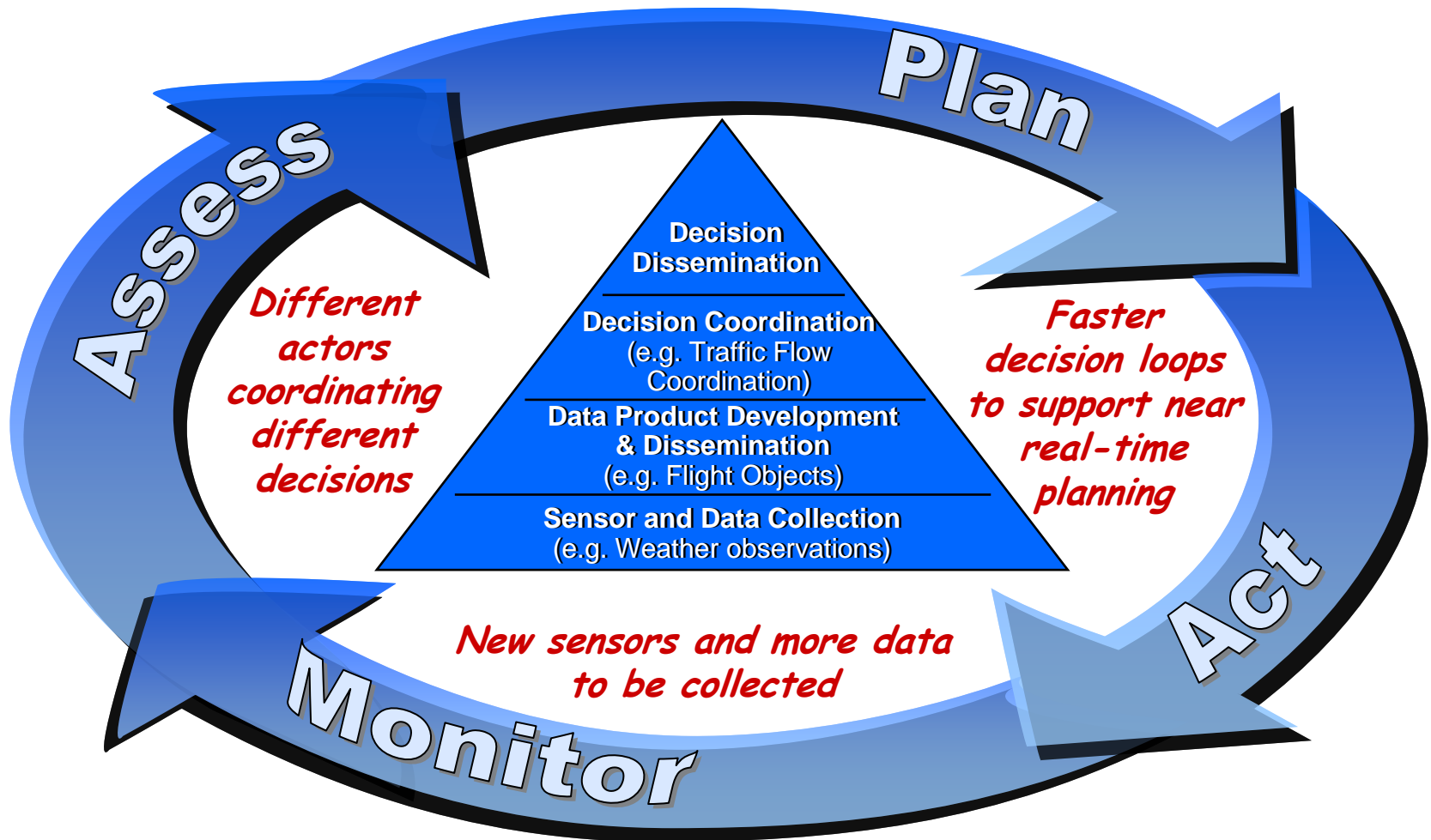
- “It’s about the users...”
- System-wide transformation
- Prognostic approach to safety assessment
- Globally harmonized
- Environmentally compatible to enable continued growth

Key Capabilities

- Net-Enabled Information Access
- Performance-Based Ops & Services
- Weather-Assimilated Decision Making
- Layered, Adaptive Security
- Broad-Area Precision Navigation
- Trajectory-Based Aircraft Operations
- “Equivalent Visual” Operations
- “Super Density” Operations



NGATS – A New Decision Framework



The Challenge



Highlight Three Challenges

- **Transition**
 - Reducing the number of instances of Systems
- **Convergence**
 - Reducing the number of systems
- **Evolution**
 - Changing the functionality of the systems

Transition

- **Front-room backroom paradigm to making transition**
- **Challenges**
 - Band-width
 - Backup
- **Proposed Savings - reduce the number of instances**
- **Reality**
 - It's the software not the boxes
 - It's the people not the boxes

Convergence

- **Evolve systems to replace existing systems**
 - Terminal automation → enroute automation
- **Challenge – maintaining service through evolution**
- **Proposed savings – reduce the number of types**
- **Reality**
 - Money can be saved
 - Payback is too long - foreclosing other opportunities

Evolution

- **Evolve systems to new functionality**
 - Trajectory based operations
- **Challenge - maintaining service through evolution**
- **Proposed savings/benefits – productivity and capacity**
 - Assumption is that you can't get to 3X in current paradigm
- **Reality**
 - Maintaining dual functionality and double the software is more than double the cost.

Summary

- **Transition is based on top-down decision on facilities and roles**
- **Convergence cost-effectively occurs at major system changes – so only 1 – 2 chances between now and 2025.**
- **Need a parallel universe strategy**