Japan’s Experience
TOWARD SEAMLESS ATM

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Shaping Asia Pacific ATM - Global Vision, Regional Action

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CANSO ASIA PACIFIC CONFERENCE
Future Vision “CARATS”

- Japan’s Long-term vision for Introduction of new operation and technology
- International collaboration to realize seamless air traffic
- Stakeholder Engagement - Industry, Academia and Government
- Implementing vision with Roadmap
Stakeholder Engagement (1) : CFDT

* Calculated Fix Departure Time

Target FIX

Tokyo Int’l Airport (HANEDA)
Stakeholder Engagement (2) : CFDT

ESTIMATE (Calculated)

ACTUAL

Gap
Stakeholder Engagement (3) : CFDT

- **Short-term Approach**
  Upgrading ATFM System Program

- **Medium- to Long-term Approach**
  Data Exchange between Aircraft and ATC

  ✓ Datalink network
  ✓ Avionics
  ✓ ATFM System
  ✓ R & D
  etc.
Implementing vision with Roadmap (1)

• Development of Roadmap
  Timeline for
  Concrete measures and R&D (Short- & Long-term)

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• Decision of implementation and priority
  ✓ Cost benefit analysis
  ✓ Consultation with stakeholders
Implementing vision with Roadmap (2)

• Monitoring the Performance Index
  - Flight cancellation and delay etc.
  - Analyze data from JCAB, Airlines and Airport Operators

• Review of Roadmap
  - Modify measures
  - Change timeline (decision-making, implementation etc.)
## Implementing vision with Roadmap (3)

### Enhancement of ATM operations in Airports

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Implementing vision with Roadmap (4)

Operational improvements (OI)

- Variable sector transitions
- Dynamic use of training airspace
- Dynamic variable use of terminal airspace
-Vertically separated airspace (High / Low approach)
- Free routing for high altitude airspace
- Dynamic variable airspace organization
- Airspace organization suitable for IASS
- Line corridor
- Accurate and flexible procedures
- En-route operations with high accuracy including the "Area" element
- Low altitude en route for general aviation
- Detector/variety/keen procedures suitable for general aviation
- Enhanced TMA
- Enhanced weather

Technology for realizing OI (Enabler)

- Evaluation capacity of advanced tracking services
- Realization of weather data and radar for OI
- Identification of radar and weather data support capabilities before flight
- Utilization of common radar data
- Weather service (TWI)
- Pre-flight coordination
- Enhanced weather observation data / Qualification of observation data for airport and airspace
- Enhanced weather observation data / Use of advanced observed weather data
- Enhanced weather observation data / Thorns of sensor data and enhancement of existing sensors
- Enhanced weather observation data / Enhanced observation of volcanic ash
- Enhanced weather observation data / Enhanced observation of meteorological data
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Comprehensive Management
Conclusion

*Important things are ...*

- Stakeholder Engagement
- Development of Roadmap (Shared Vision)
- Steering Framework to manage plan (Decision Making, Revisions of RM)