Keynote Address on the **ENRI International Workshop on ATM/CNS (EIWAC)**

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International Civil Aviation Organization (ICAO)

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The Big Picture

Post 12th Air Navigation Conference

- **10** Days
- **232** Conference Recommendations
- **153** Working Papers (WP)
- **62** Information Papers (IP)
- **1,030** Participants
- **120** States
- **30** International Organizations
- **25+** Media Articles
Important Developments

• **4** ICAO Milestones
  - Global Air Navigation Plan (GANP)
  - 2012 Safety Report
  - ASBU Block 0 iKit
  - Air Operator Certificates (AOC) iKIT

• **8** Agreements Signed

<table>
<thead>
<tr>
<th>Agreement 1</th>
<th>Agreement 2</th>
<th>Agreement 3</th>
<th>Agreement 4</th>
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<tbody>
<tr>
<td>ICAO-FSF MoC</td>
<td>Singapore-MITRE MoU</td>
<td>Singapore-Airbus Prosky MoC</td>
<td>ASECNA - France AFI FPP</td>
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<td>Singapore-FAA Sol</td>
<td>Singapore-SESAR JU MoC</td>
<td>India - MITRE MoU</td>
<td>ASECNA, ICAO, Thales, INEO</td>
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</table>
Next Steps

• Environmental & Operational Assessments
  – *Committee on Aviation Environmental Protection (CAEP)*
    modeling environmental benefits of Block 0 modules. More information by the end of 2013
  – *IATA* assessing the operational benefits

• Technical Work
  – Aviation Data Link Symposium: Now and Tomorrow (2015)
Next Steps

• Operational Policies
  – Incentives to allow early benefits of new technologies and procedures (including economic incentives)

• Financing Policies
  – On the Agenda of the *Air Transport Conference (AT Conf/6)*
  – Expect tasking to service providers, operators and economists
Next Steps

- An end-to-end system demonstration of new air traffic management concepts
- States and Industry are invited to play a part in this event by showing their latest developments and best practices in the field of air traffic management
Next Steps

• **Intended Outcomes**
  
  – International exposure to potential systems and technologies to support Block 0 implementation
  
  – Identification of:
    • Business case benefits of implementing Block 0
    • Economic opportunity cost of not implementing Block 0
  
  – Reinforcement of Block 0 implementation strategies (ASBU iKITS)
  
  – Agreed concept of Operations (CONOPS) for Block 1 to enable the appropriate standards and procedures to be developed
  
  – Demonstration of intended performance scenarios for Blocks 1, 2 and 3
### Next Steps

#### Standardization Roadmap

<table>
<thead>
<tr>
<th>Module #</th>
<th>Standard Title</th>
<th>Date of Availability</th>
<th>Organization</th>
<th>Action</th>
<th>Status</th>
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<tbody>
<tr>
<td>B0-05</td>
<td>DOC 4444 PANS ATM</td>
<td>Already available (2012)</td>
<td>ICAO</td>
<td>N/A</td>
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<td>B1-05</td>
<td>Document 1234</td>
<td>2018</td>
<td>Org#1</td>
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<td>Org#2</td>
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<td>B1-05</td>
<td>DOC9931 – Continuous Descent Manual</td>
<td>2018</td>
<td>ICAO</td>
<td>TBD</td>
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**B0-05: Improved Flexibility and Efficiency in Descend Profiles (CDOs)**
Deployment of performance-based airspace and arrival procedures that allow the aircraft to fly their optimum aircraft profile taking account of airspace and traffic complexity with continuous descent operations (CDOs)

**B1-05: Improved Flexibility and Efficiency in Descend Profiles (OPDs)**
Deployment of performance-based airspace and arrival procedures that allow aircraft to fly their optimum aircraft profile taking account of airspace and traffic complexity with Optimized Profile Descents (OPDs)
Next Steps

AN-CONF/12 Recommendation: 6.12

• Development of SARPs, procedures and guidance material
  a) Improve its project management and coordination of contributing ICAO panels, study groups and other groups tasked with the development of ICAO provisions
Thank You
BACKUP SLIDES
Operational Improvements at the Service of States

Performance Improvement Areas

Airport Operations

Globally Interoperable Systems and Data

Optimum Capacity and Flexible Flights

Efficient Flight Path

Block 0 (2013)

Block 1 (2018)

Block 2 (2023)

Block 3 (2028 onward)

Module
Making the Most of What We Have Today: **Block 0**

*Continuous Descent Approach Procedure*

Green Illustrates Aircraft Flying Optimum Near-idle Path

15,000 ft msl

*Courtesy of FAA*
Defining the Short-term Future: *Block 1*

*Courtesy of EUROCONTROL*
Defining the Medium & Long-term Future: *Blocks 2 & 3*