Aviation System Block Upgrades (ASBU)

Block 0 modules Users priorities in AFI region

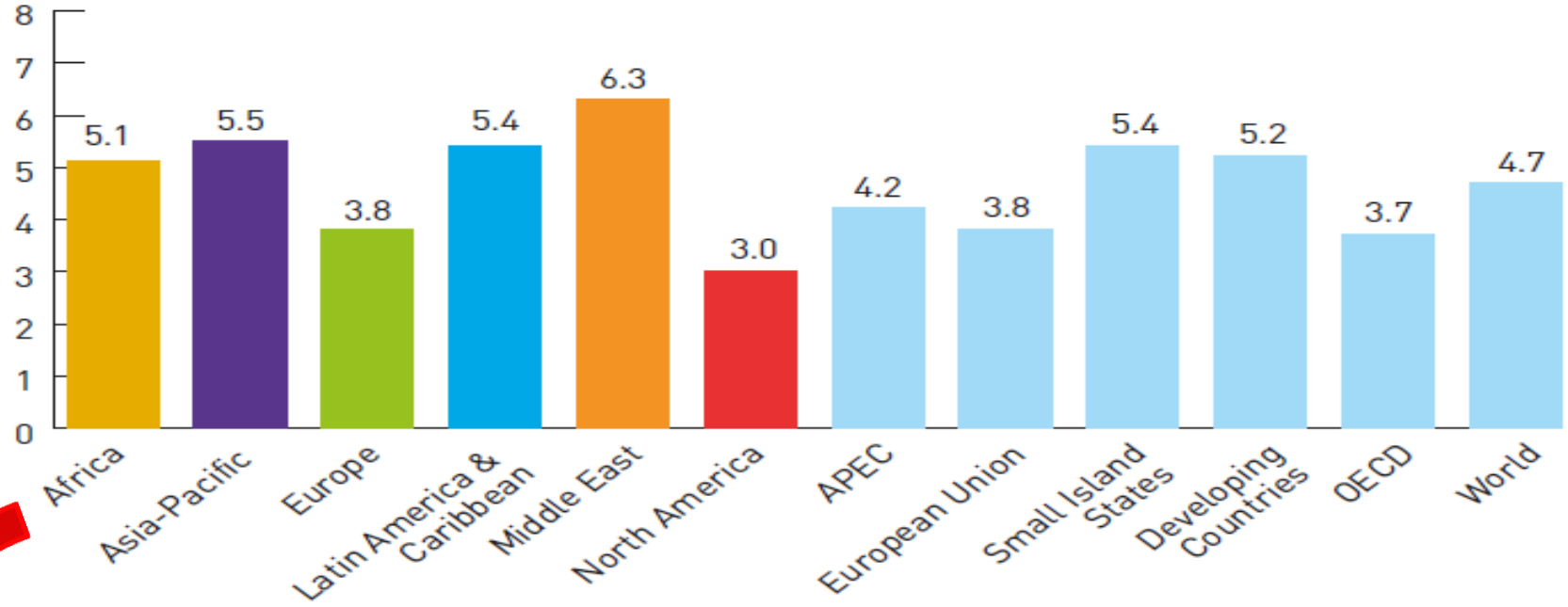
Addis Ababa, 17-19 November 2014

Presented by IATA

Context

- Aviation industry largely contributes to the economic and social growth of countries
- Since the1970s world traffic doubles every 15 years despite multiple recessions
- 2012, airlines transported 2.97 billions pax, 37.4 millions commercial flights worldwide
- AFI region:
  - 2.35% of pax with 1.6 commercial flights
  - 3% GDP in Africa

Projected annual growth rate for international traffic 2012-2032



4.4 millions commercial flights expected in 2032 in Africa

Burdens of traffic growth …

Lack of connectivity

ATM system limits

- Characterized by 50 years old conceptual approaches
- Disparities of services provided
- Persisting air-ground communication
- Limited capacity to utilize modern avionics
- Indirect fixed trajectories (departure, arrival, between city pairs)
- Poor surveillance coverage
- Lack of collaboration between stakeholders

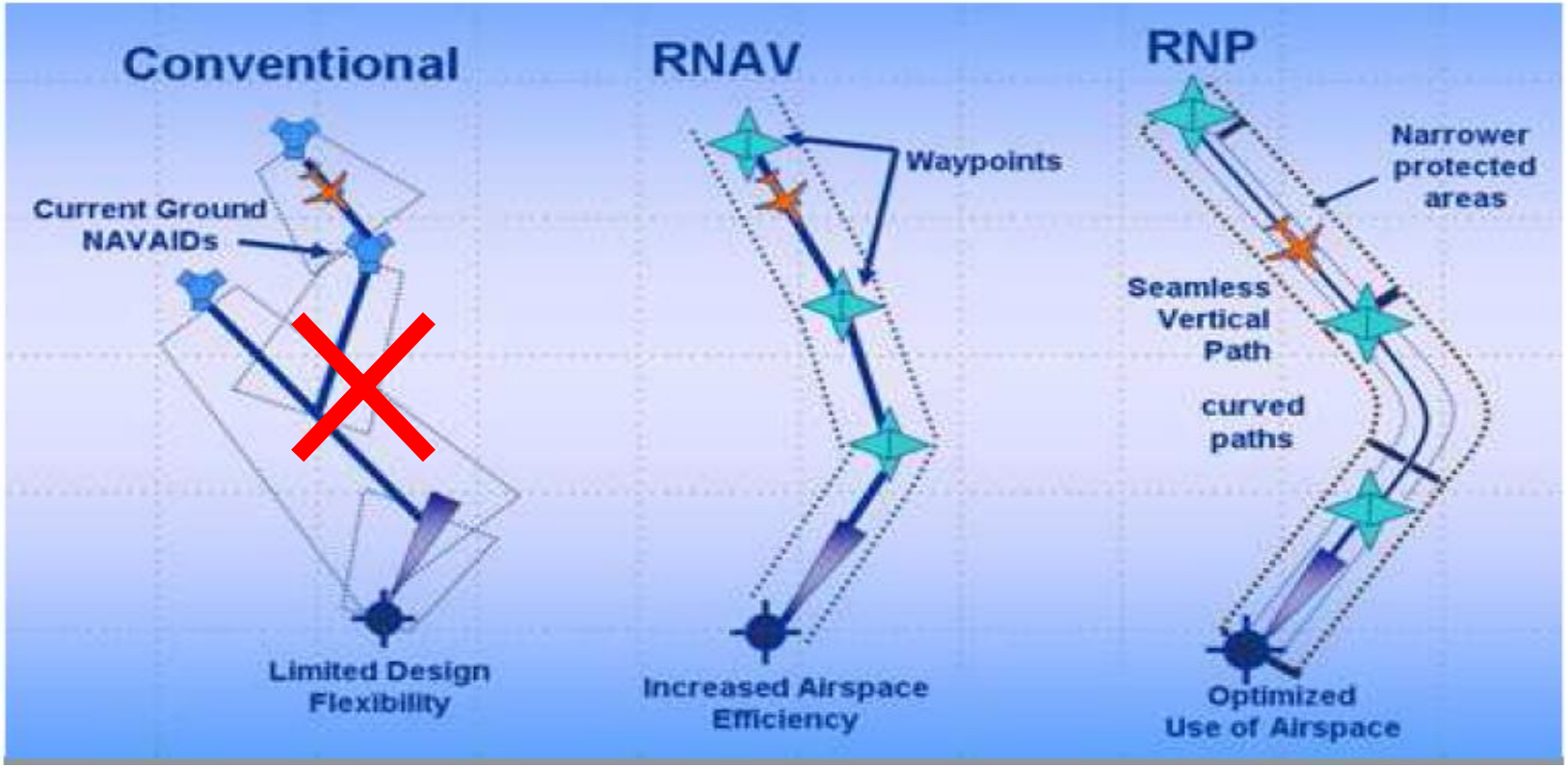
What do we need ….

- Modernization, integration and interoperability of air navigation systems to ensure safety and efficiency of flights

How ….

- Harmonized implementation of ASBU block modules developed in GANP (4th edition) based on:
  - user operational objectives to meet their expectations
  - cooperation between homogeneous areas (traffic flow) to avoid multiple on-board equipment and proliferation of ground systems

Having in mind ……PBN implementation is the highest priority for operators



User expectations?

Operate as much as possible close to the perfect flight

- Addressing external influences on gate-to-gate traffic flow
- Efficient ground movements (for aircraft and passengers)
- Optimized flight profiles
- Unrestricted climbs
- Fuel efficient air speeds
- Optimum cruise levels
- Uninterrupted descents
- Maximizing aircraft capabilities while Minimizing ATC intervention
- Predictable departure and landing events

ASBU Block 0 modules priorities

Airport Operations (PIA1)

B0-APTA: Optimization of approach procedures with APV	• APV with Baro-VNAV or GBAS for instrument runway • SBAS not supported
B0-ACDM: Improve airport operations through A-CDM	• Data exchange between airport stakeholders during ground operations

ASBU Block 0 modules priorities

Interoperability of data and systems (PIA 2)

B0-FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration

- ATS Inter-facility Data link Communication (AIDC)
- Aeronautical Message Handling System (AMHS) to replace AFTN

B0-DATM: Aeronautical Information Management (AIM)

- Improvement of quality and availability of data
- AIXM
- e-AIP

ASBU Block 0 modules priorities

Optimum capacity and flexibility (PIA 3)

B0-FRTO: Improved operations through enhanced operational efficiency and safety

- Flexible Use of Airspace (FUA)
- Flexible routing (UPR zones)
- PBN routes

B0-ASUR: Initial capability for ground surveillance

- ADS-B (TMA & En-route)
- MLAT (TMA)
- SSR mode S where justified

ASBU Block 0 modules priorities

Flight efficiency (PIA 4)

B0-TBO: Initial application of en-route data link	• ADS-C/CPDLC in remote/oceanic areas
B0-CDO: Improved Flexibility and Efficiency in Descent Profiles	• CDO operations • PBN STARs
B0-CCO: Improved Flexibility and Efficiency in Departure Profiles	• CCO operations • PBN SIDs

…. CDM environment

↗ Technical alternatives available but …

“Best choice is made through collaborative decision making process”

Thanks!

Questions?