ASIA PACIFIC
Air Traffic Flow Management
Cross Border ATFM Seminar/Workshop Delhi 3rd and 4th September 2015

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Outline

- APAC Growth
- Current Situation
- Airlines and ATFM
- Air Traffic Flow Management why?
- Cross Border ATFM
Growth of Aviation in Asia Pacific

Almost half of additional passengers expected during 2014-2016 will fly within Asia.

- Within Asia: 46%
- Within Europe: 15%
- Within North America: 11%
- Within Latam: 9%
- Within Middle East: 2%
- Inter-regional & other: 16%

Proportion of global passenger traffic increase 2014-16

Source: IATA Airline Industry Forecast 2012-16
Current Situation

- Many key airports operate at near full capacity
  - Long term NOTAMs on arrival delay
  - Lack of timely information for long haul flights

- Air navigation service capabilities vary

- Asia-Pacific is forecasted to continue to be the world’s fastest growing region for air transport over the next 20 years

- Air transport connectivity is a critical link to markets and a generator of wealth

- There is a close link between GDP growth and air travel demand
ATFM Current Situation

- “Blunt Instrument” Traffic restrictions imposed
- No Shared Network view regionally
- Knock on effect to other FIRs
- Disruption and unpredictability
ANSP ISSUES

- Some Airports Insufficiently Utilized
  - No linkage to ATFM

- ATM Inefficiency
  - Uncoordinated
  - “Natural” focus on domestic, rather than regional integration and efficiency

Delhi ATFM workshop 3&4 sept 2015
User issues

- Major Airlines reported increased sector times in most major routes
- Key airport capacity challenged and largely underutilizing potential capacity
- Major air routes busier
- Airlines costs increasing
- Air-Ground mismatch = Unused costly technology
- ATM investment in near term upward of USD3.5b in APAC
Airlines & ATFM

➡ We need to deliver our passengers and cargo to their destinations without disruption

➡ We need:

➡ Predictability
   ➡ To connect passengers with their ongoing flights
   ➡ Fuel and cost efficient flight profiles

➡ To have a say in decisions that effect our operations
PREDICTABILITY
Predictability

- Allows us to build achievable schedules
- Allows us to load the appropriate fuel weight
  - Every kilo of extra fuel offsets cargo and passenger capacity
  - We may have to offload passengers and cargo to carry extra fuel
- It costs fuel to carry fuel
- Predictable direct sectors are 4-6% more efficient than tactical direct sectors
- Collaborative approach allows us to help the system
Predictability

- Creates planned workload for controllers

- Allows strategic management of traffic with less tactical intervention
  - Vectoring “low and slow” huge increase in fuel burn
  - Less Tactical intervention = reduced workload and increased capacity for planning

- Requires Appropriate support tools and training
Operations – disruption
Aircraft Routing Network is the Backbone of an Airlines Network
Crew Pairing
Disruption Management

- Disruption Management and Schedule Recovery is Challenging…
  - Passenger, crew and aircraft scheduling synchronization
  - Recovery within short time frame with limited resources
  - Recovery constrained by multi-objectives
    - Minimize passenger’s recovery cost
    - Minimize disrupted time of operation
ATFM – Why?
ATFM – Why?

Benefits

+ Enhanced ATM system safety
+ Increased **predictability**
+ Increased situational awareness
+ Reduced fuel burn and operating costs
+ Effective management of irregular operations and unforeseen events

- NOTE: An ATFM system for an airspace which has no capacity restrictions or flow requirements, ultimately becomes a limit to traffic flow and increase costs
APAC sub regional ATFM – Why?

- APAC (particularly SEA) relatively small FIRs with low transit flight times = “knock on effect”

- Restrictions in FIR (a) “push” the problem to FIR (b)

- We need to manage flows collaboratively with shared information and decisions
APAC Sub Regional (Cross Border) ATFM – Why?

- ATFM identified as a “Critical” element for Seamless Operations (ASBU 0-NOPS)

- To manage current and forecast activity for our region multi FIR “linked-up” solutions are required

- ATFM an opportunity to develop collaborative management of airspace associated with key regional flows

- ATFM is a tool that provides efficiency, predictability and capacity for both Users and ANSPs
APAC Cross Border ATFM – Why?

- CTFMU ‘ideal’ BUT

- Not feasible for APAC at this time

- We have to look at different Network solution(s)
THANK YOU