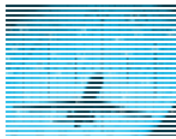
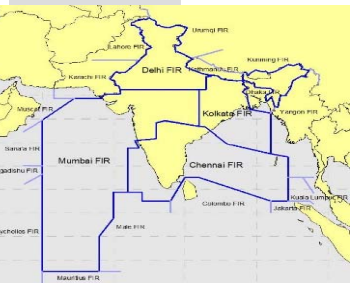




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ATFM IMPLEMENTATION IN INDIA — FUTURE PLANS



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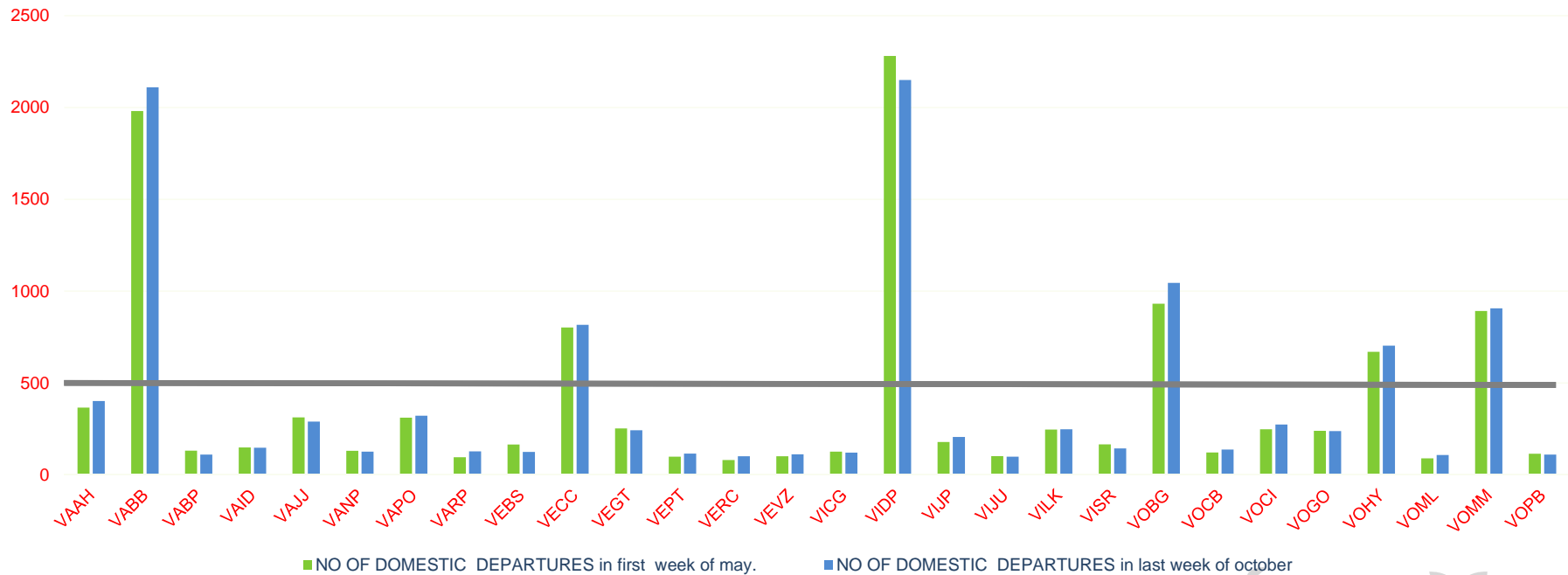


DEPARTURE FLOWS (PER WEEK)



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DEPARTURE FLOWS FROM MAJOR AIRPORTS



10/16/2015

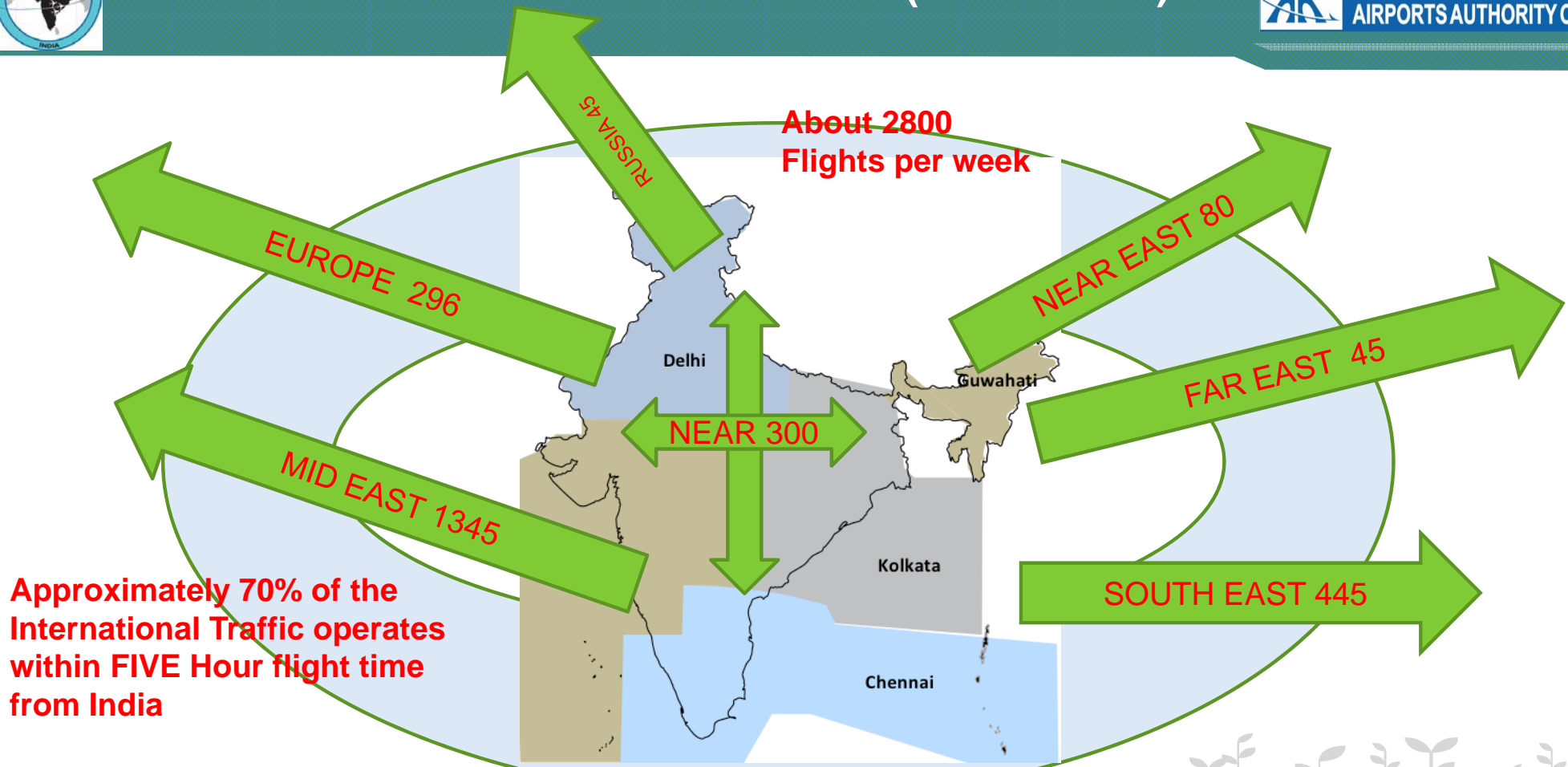
ATFM WORKSHOP - Delhi 2015



INTERNATIONAL OUTBOUND FLOW (PER WEEK)



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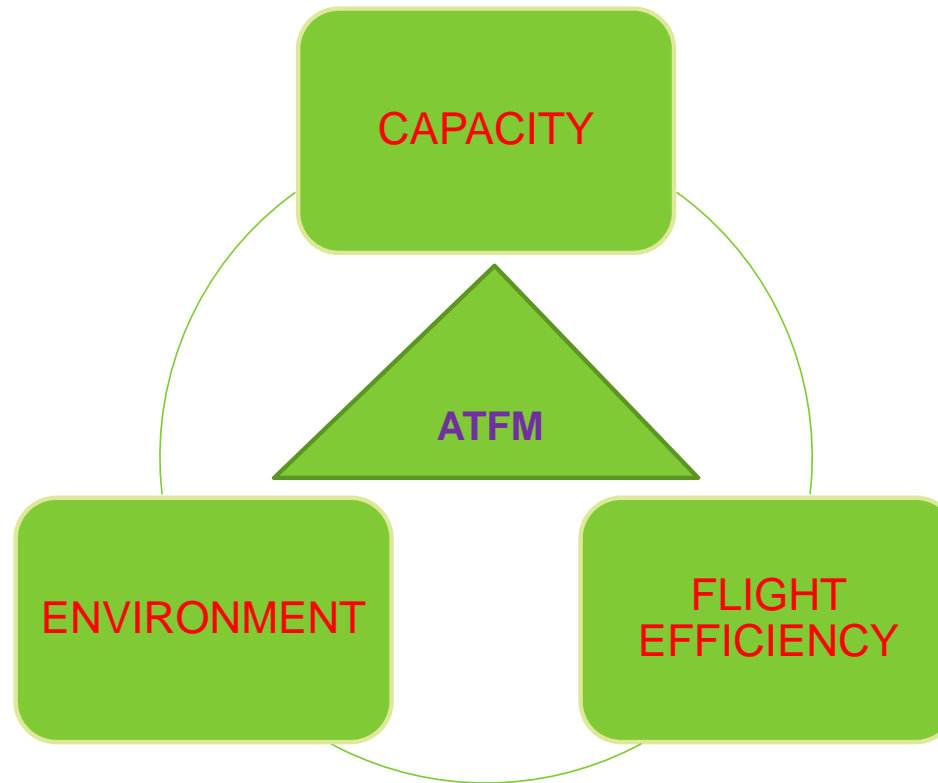
Approximately 70% of the International Traffic operates within FIVE Hour flight time from India



ATFM Performance Priorities



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ATM ENVIRONMENT TODAY



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Service to Passengers

The Different Stakeholders may have different interests , while progressing towards the same objective.





NETWORK CENTRIC ATFM



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The ATFM System Needs to be :

- **Flexible**
- **Collaborative**
- **Provide Common Situational Awareness**
- **Involve all the Stakeholders**

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C-ATFM OBJECTIVES



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Strategic Planning

- Harmonized Link between
ASM and ATC
- Civil Military
Coordination
- “ Gate-to-Gate”
network planning

CDM Procedures

- Enabling platform for interaction
 - Integration of Airport CDM
- Airspace Users Tactical Priorities
 - Collaborative Contingency
Management





MAIN FOCUS AREAS FOR INDIAN ATFM



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ANS STRATEGIC PLAN



DETERMINE AND MEASURE OPERATIONAL PERFORMANCE





ATFM AND FUA



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- **Network Wide View Shared between Civil and Military**
- **Focus areas of cooperation**
 - Inclusion of future civil/military airspace requirements
 - Enhanced cooperation in crisis and contingency situations
 - ASM system support and data management
 - ASM Post Ops and Performance Monitoring
- **Both ASM and FUA will focus on :**
- **Enhanced airspace utilisation by civil and military**
 - Airspace Configurations
 - ASM solutions
 - Procedures
- **Enhanced cooperation at pre-tactical and tactical level**
 - Getting closer together planning and operations
 - Integrating ASM/ATFCM
- **Flexible Route deployment in the Upper Airspace**





ATFM AND CDM



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- CDM TO BE INTEGRAL PART OF ATM
- Expanding CDM Philosophy to cover all areas of Strategic ATM
- Understanding Business Objectives Of Partners
- Enabling Maximum Benefits With Minimum Restrictions
- Proactive Feedback For Resource Augmentation / Optimization





FUTURE CHALLENGES



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- SYSTEMS INTEGRATION - From “ INTEROPERABLE “ to “ INTEGRATED “ systems
- Utilizing the advanced avionics capabilities – RTA
- Robust Communication Network – Leading to SWIM
- Standard Protocols – FIXM, AIXM , WIXM.....





ATFM – FUTURE PLANS



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- CROSS BORDER ATFM
- BILATERAL / MULTILATERAL ATFM DATA EXCHANGE
- MULTI-NODAL ATFM
- LOOKING BEYOND SUB-REGIONAL/ REGIONAL ATFM
- A GLOBAL ATFM NETWORK ?





IMMEDIATE FOCUS



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- Creating a NET CENTRIC PAN National Integrated ASM+ATM+ATFM Structure
- Integrated Data Flow-
“AIS+AIRPORTS+AIRLINES+ATM+Military+MET”
- Enabled CDM Platform
- IFPS
- Creating ATFM Specialists
- Determining METRICS



MEDIUM TERM FOCUS



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- National Performance Targets for ATM (and ATFM)
- Integrating Airports into ATFM network
- FUA and ATFM
- Working towards Harmonization in data exchange methods
- Towards developing better MET products for ATFM
- Participating as a NODE in the Regional ATFM Network





LONG TERM GOALS



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- ATFM – an important component of B1-FICE (SWIM G-G)
- Work towards enabling exchange of FLIGHT INTENT
- Enable DIGITAL AIS , B1-AMET
- Developments in ASM to enable FLEX ROUTES
- Collaborative Traffic (Trajectory) Management for ATFM and Contingency Management
- Leading to TBO – requires a powerful and responsive ATFM system.



TIMELINES



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- Immediate Future –
 - Next Two-three Years
 - Primary Focus :Domestic
 - Airport and Airspace DCB
- Intermediate –
 - Three To Five Years
 - Bilateral / Multilateral ATFM Agreements
 - Bringing Short Range International Flights Under ATFM
- Medium –
 - Five To Seven Years
 - Towards Regional ATFM
- Long Range –
 - Seven And Beyond-
 - Pan Regional ATFM ?
 - Global SWIM ?



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**THANK
YOU**

