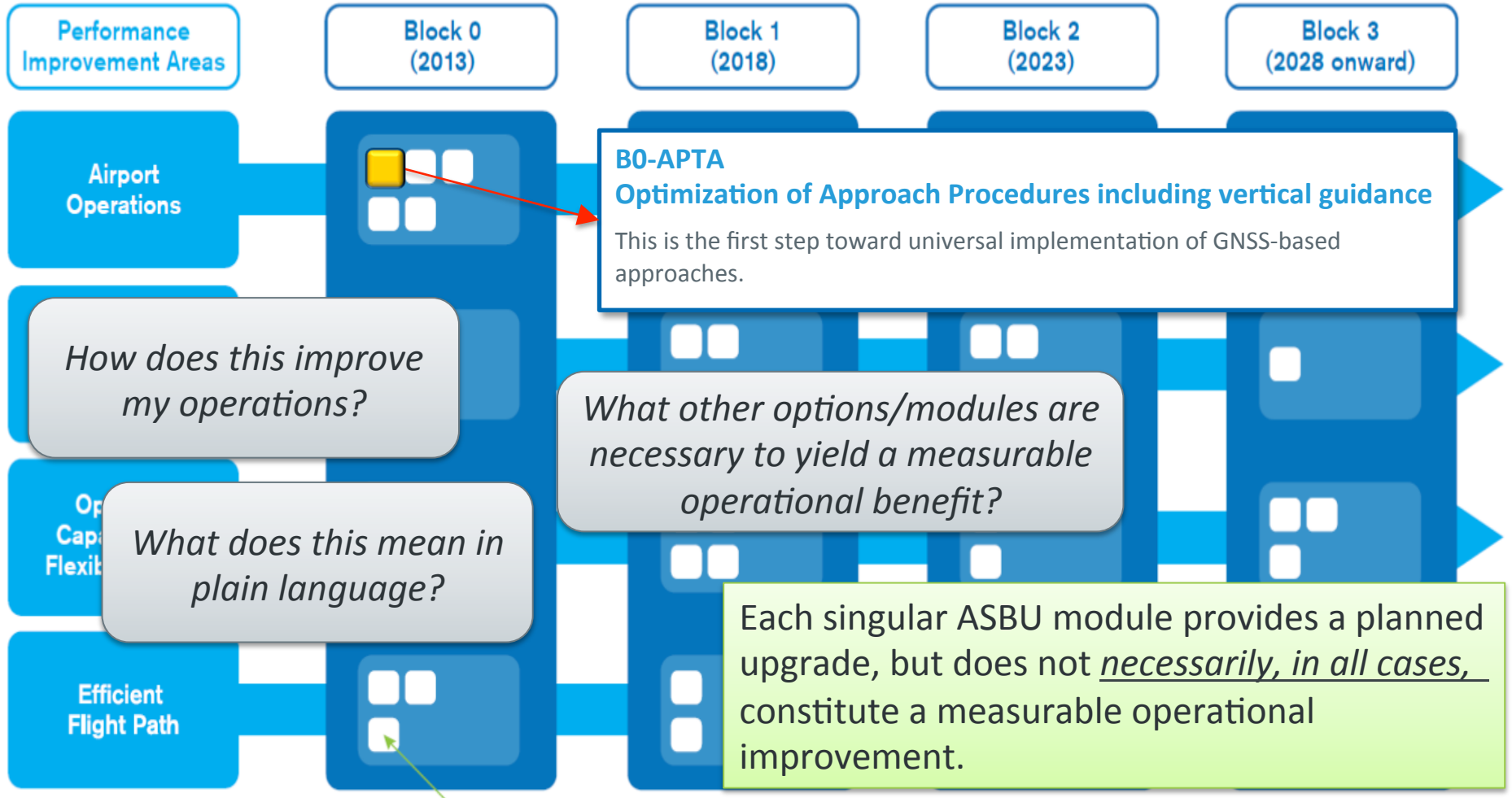




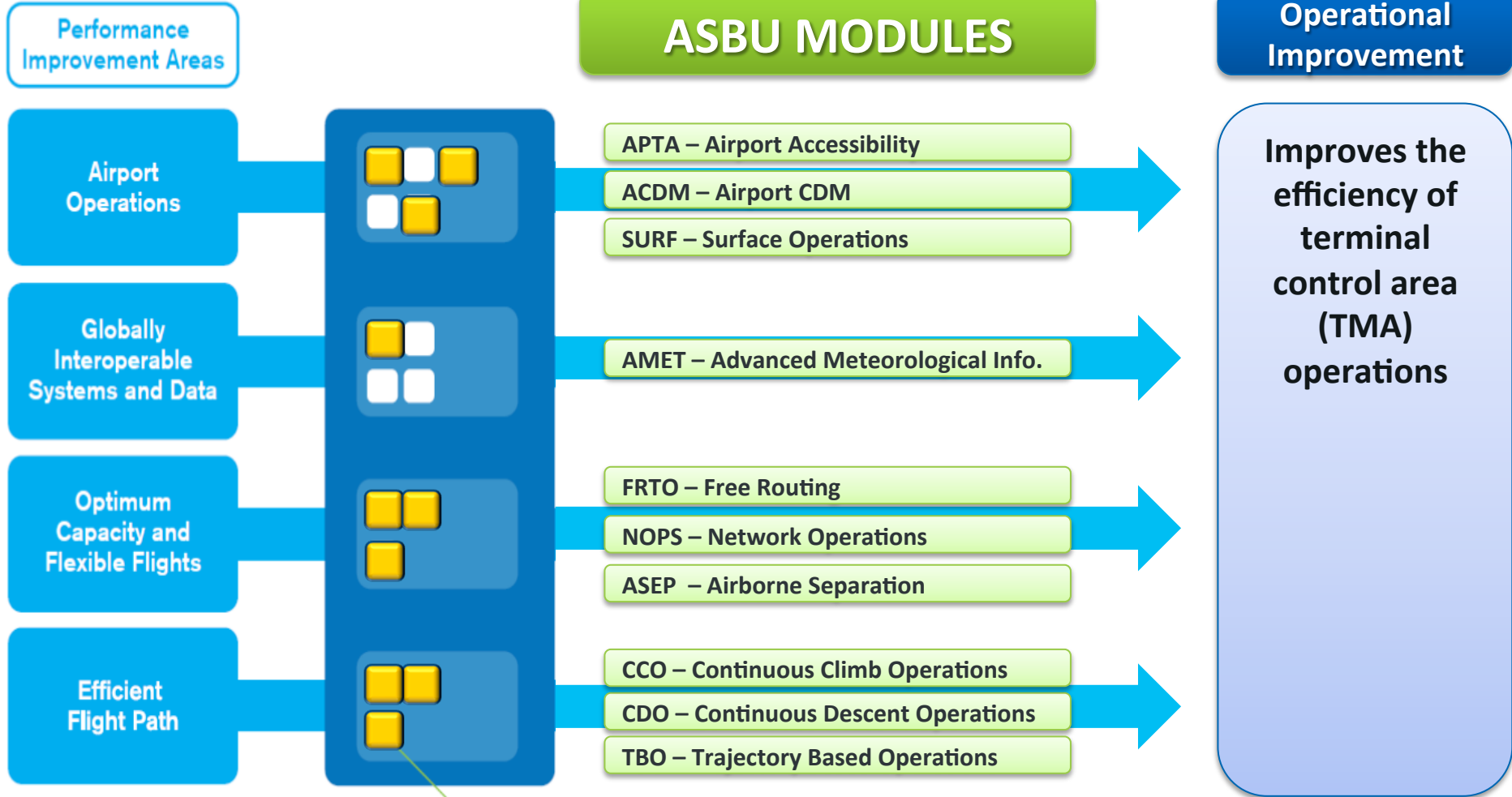
Putting the Global Air Navigation Plan Into Everyday Operations

Extending our planning from the
Aviation System Block Upgrade Modules to
Detailed Implementation Tool Kits (iKITS)

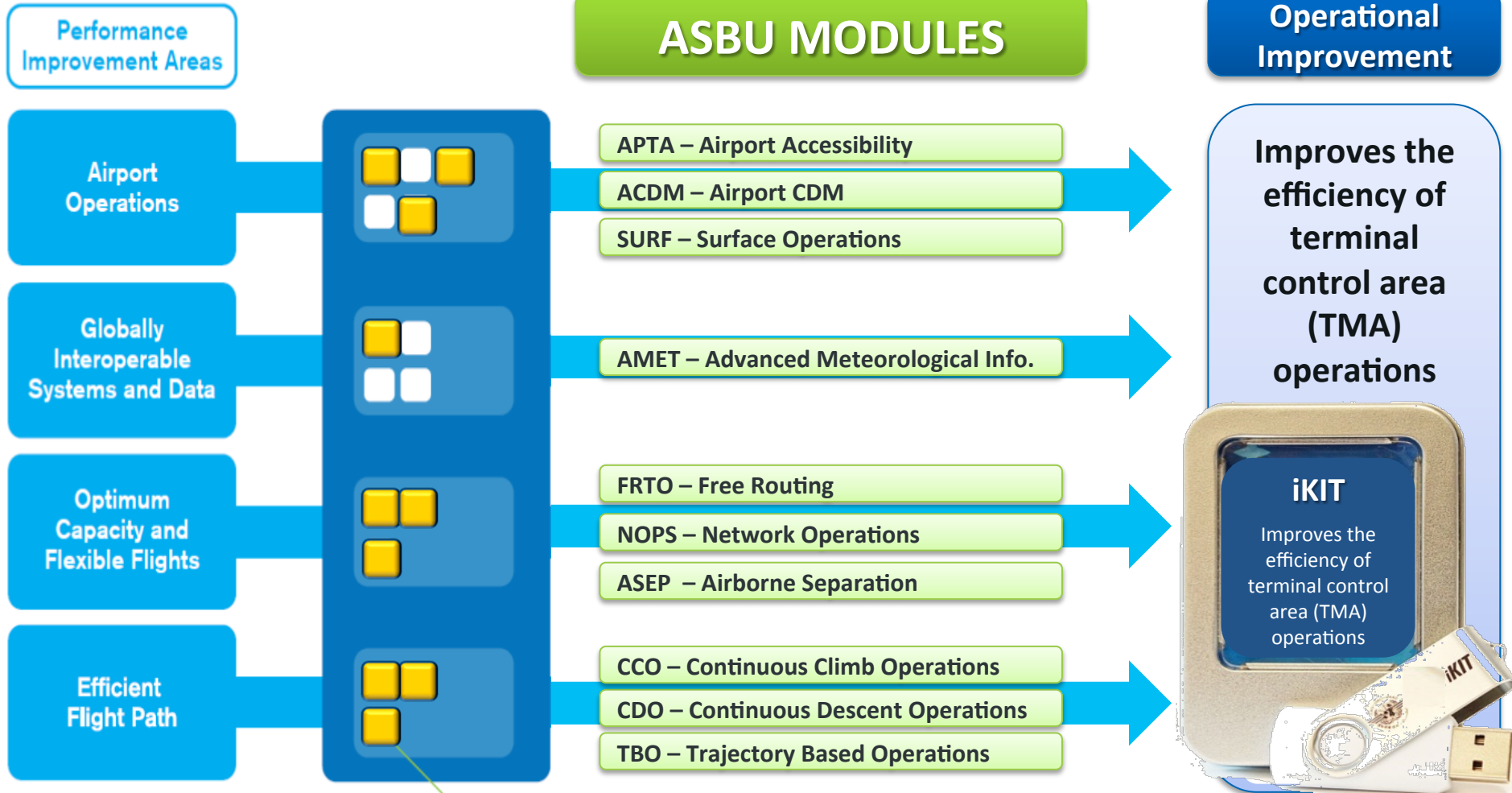
Extending Modules to Tool Kits



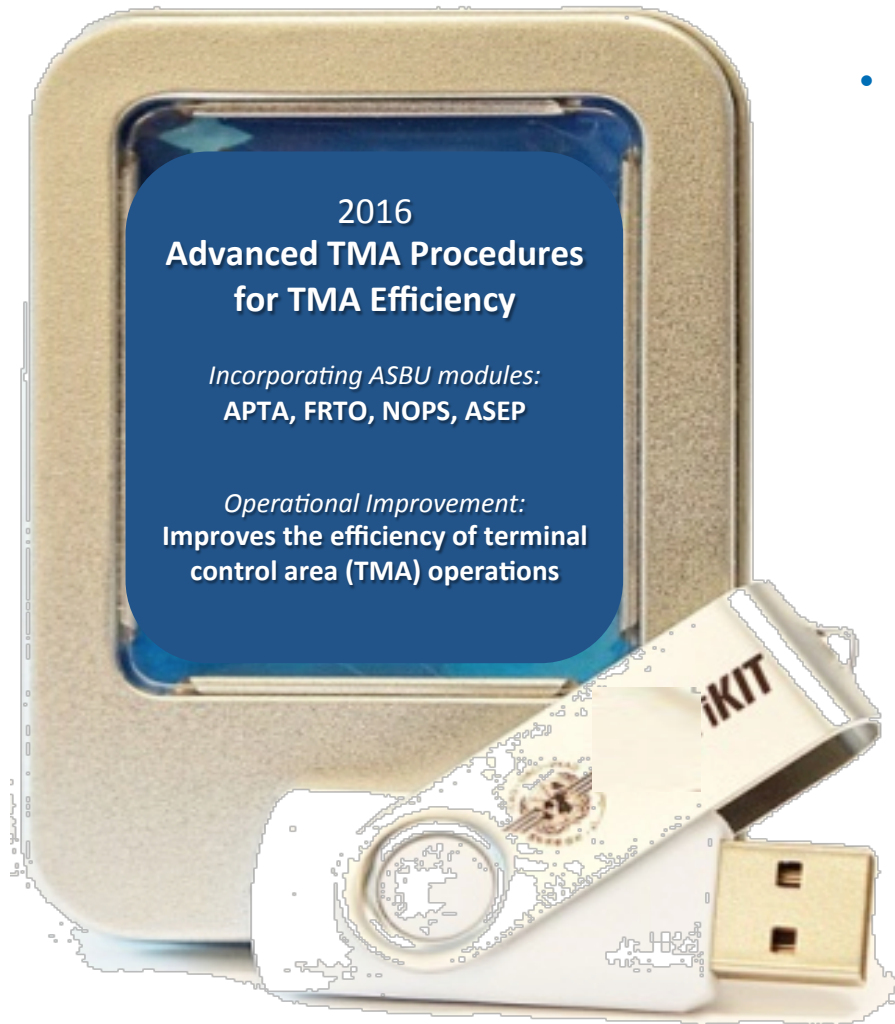
Extending Modules to Tool Kits



Extending Modules to Tool Kits



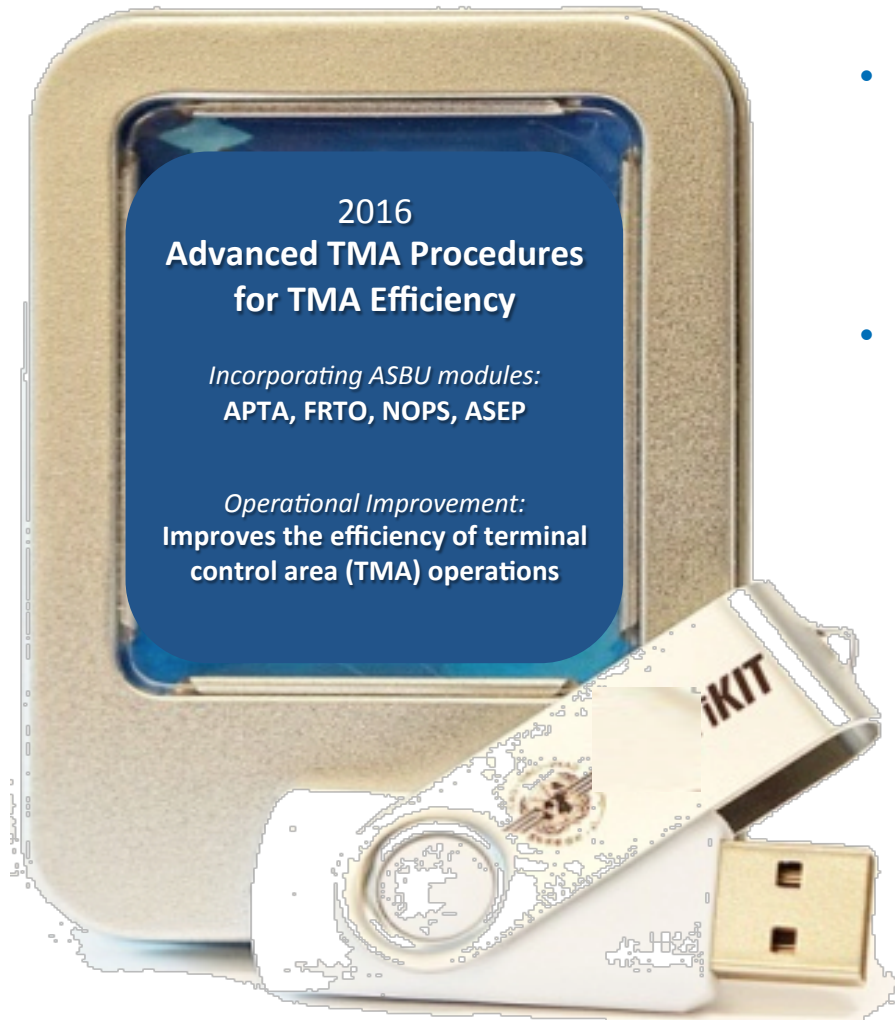
Extending Modules to Tool Kits



- **Updated PBN Flight procedures to complement the PBN NAVSPECs**
[APTA – Airport Accessibility]
 - Harmonization of Charting Criteria, Databases of Criteria, and Avionics Systems with IFP design
(Annexes 4, 11 and 15; AIS Manual, Aeronautical Chart Manual)
 - Amended SARPs to differentiate NAVSPECs that require operational approval and those that do not
(Annex 6 Parts I, II and III)
 - GBAS Landing System (GLS) approaches to parallel runway operations
(PANS-ATM)
 - PANS-OPS procedures connecting PBN with XLS final approach and APV; Procedure criteria for PinS route visual segment; Missed approaches; Visual procedures utilizing PBN
(PANS-OPS Volume I; Aeronautical Chart Manual)

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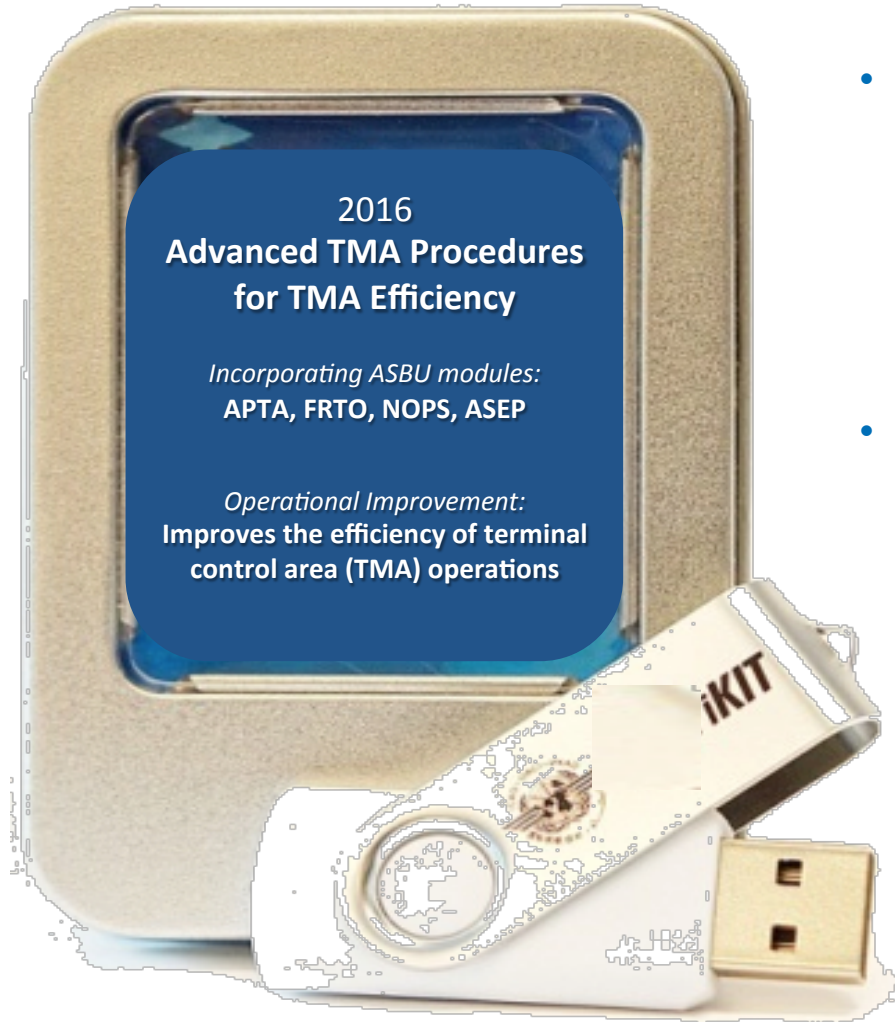
Extending Modules to Tool Kits



- **Guidance on planning of airspace and ATS facilities**
[APTA – Airport Accessibility]
 - Procedures for application of GLS parallel approaches
(Manual on Simultaneous Operations on Parallel or near-parallel Instrument Runways)
- **ATM separation procedures and phraseologies**
[APTA – Airport Accessibility]
 - Clarification of procedures when being vectored for final approach
(PANS-ATM)
 - Enhanced separation minima addressing: VOR/GNSS lateral separation; 5nm RNP 1 terminal separation & Circular 324; 45 degree RNAV arrival and departure separation; PBN based separation for terminal airspace; PBN based lateral separation minima to special use airspace; separation of aircraft fly-by, radius to fix
(PANS-ATM)
 - Limits of a vector – review the intent of specifying a limit of vector and suitability of current PANS
(PANS-ATM)

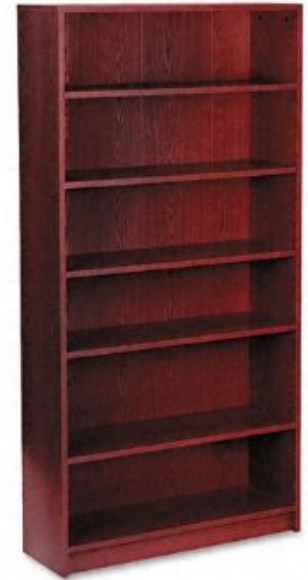
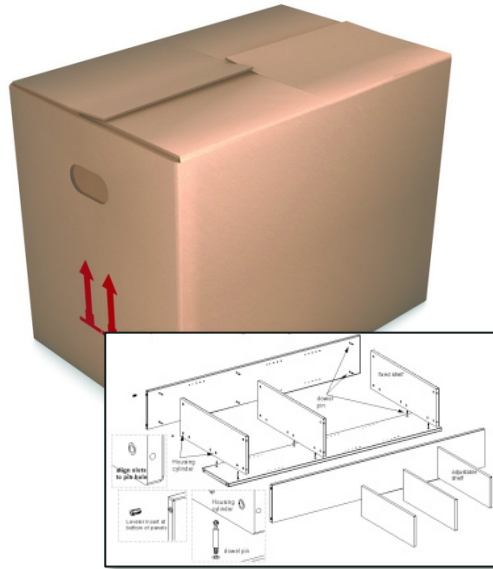
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Extending Modules to Tool Kits



- **Provisions on Interval Management procedures (merging and spacing)**
[ASEP – Airborne Separation]
 - Initial guidance to support interval management for flight crew and ATS units
(Airborne Surveillance Manual)
- **Guidance on Flexible use of airspace**
[FRTO – Free Routing, NOPS – Network Operations]
 - Guidance on cooperation on ATM between civil and military entities – improvement of circular towards an ICAO manual
(Circular 330)

Extending Modules to Tool Kits



ASBU Modules

Implementation Kit

Regulatory and
Operational
Improvement



ICAO

UNITING AVIATION



ICAO

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
(WACAF) Office
Dakar

European and
North Atlantic
(EUR/NAT) Office
Paris

Middle East
(MID) Office
Cairo

Eastern and
Southern African
(ESAF) Office
Nairobi

Asia and Pacific
(APAC) Sub-office
Beijing

Asia and Pacific
(APAC) Office
Bangkok



THANK YOU