



SAFE SKIES.
**SUSTAINABLE
FUTURE.**



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Thailand ATFM Experience
Our Story, Our Lessons Learned, and Our Future

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Thailand ATFM Experience

01 **The Beginning**
BOBCAT ATFM Service

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From 2014 to Where We Are Today

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Challenges and Lessons
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Looking Ahead

The Beginning: From Back in 2007...

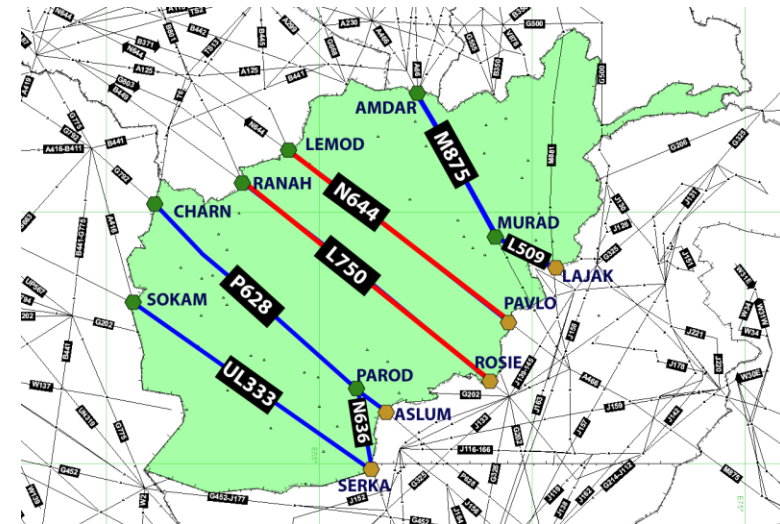


The Operating Environment

Nighttime curfew at European airports causes flights from South/Southeast Asia to converge over Kabul FIR while enroute to Europe between 2000 – 2359 UTC

The Problem Statement

Smooth traffic flow through the limited routes and flight levels available in Kabul FIR



The Beginning: The BOBCAT ATFM Service



(And we did that from a small room with a few computers...)

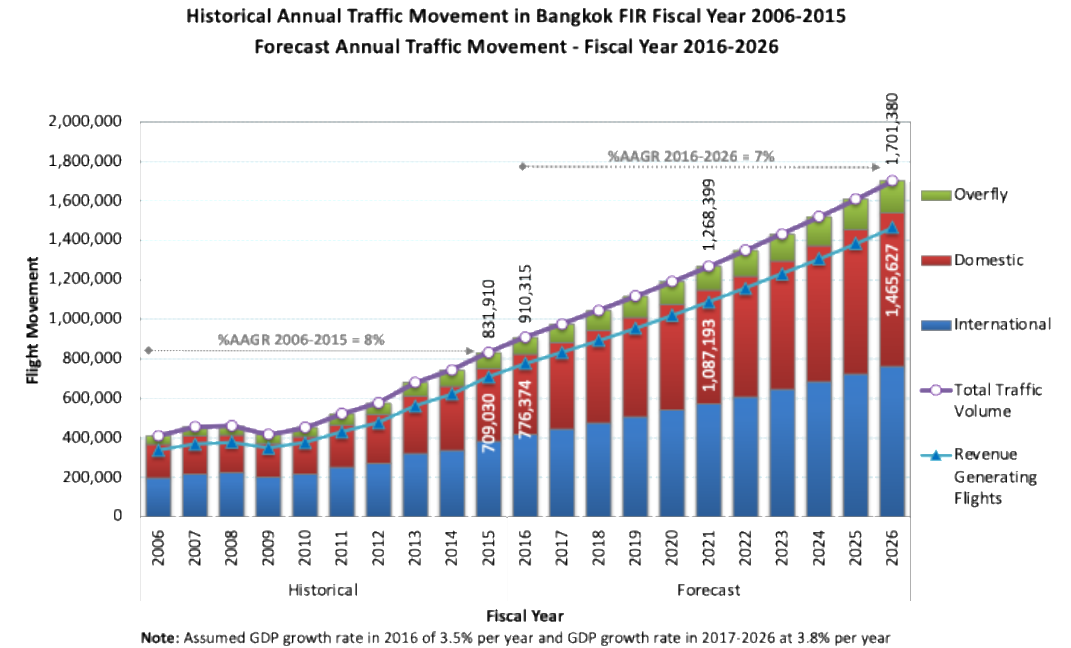
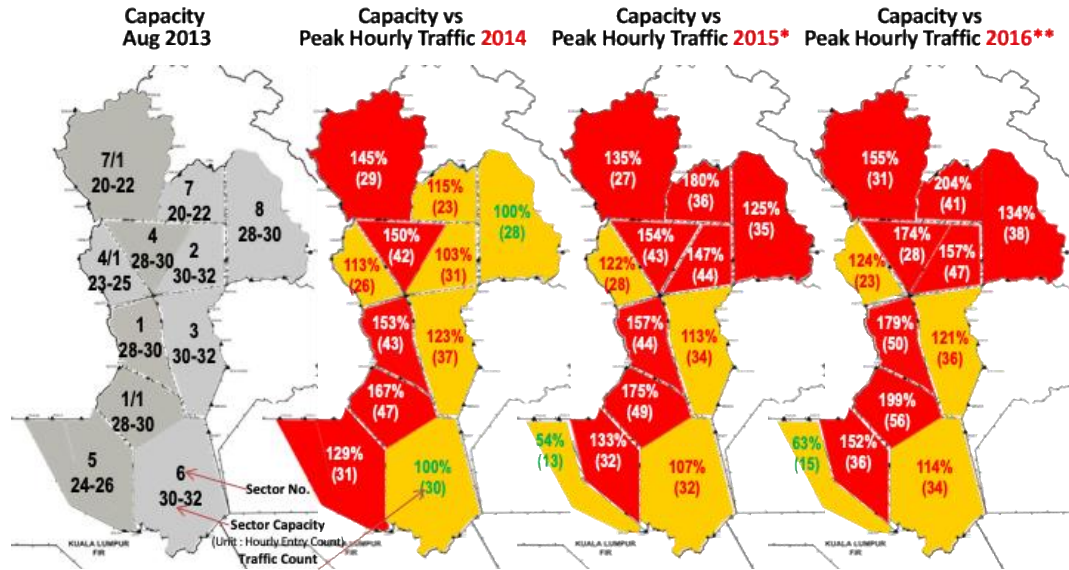
Assignment of **ATFM slots** with **CTOT, CTO & FL allocation** based on airlines' requests

The screenshot shows the BOBCAT web application interface. At the top, there is a navigation menu with links: Home, System Configuration, Slot Request, Slot Allocation, Preference, Documents, Contact us, and Log out. Below the menu is a 'Menu' section with options: Flight Allocation (All Allocation), Waypoint Allocation, View Free Slots, and Allocation History. The main content area is titled 'Flight Allocation (All member) Refresh in 174 second(s)..'. It includes a form for 'Organization' (AEROTHAI) and 'Departure Date' (Thu, 15 Dec 2016). Below the form is a table titled 'Flights With Slot Allocation' with columns: Callsign, Aircraft, Dep, Dest, Date, ETD, AWUT, and Delay. The table lists 17 flights with their respective details.

	Callsign	Aircraft	Dep	Dest	Date	ETD	AWUT	Delay
1	ACA071	B787900	VIDP	CYYZ	15Dec16	1920	1935	0
2	AFL235	A333	VIDP	UUEE	15Dec16	1955	2014	0
3	AFR225	B77W	VIDP	LFPG	15Dec16	2033	2101	0
4	AIC101	B77W	VIDP	KJFK	15Dec16	2005	2025	0
5	AIC127	B77W	VIDP	KORD	15Dec16	2030	2050	0
6	AIC191	B77W	VABB	KEWR	15Dec16	2000	2015	0
7	AUA026	777-23	VTBS	LOWW	15Dec16	1655	1720	0
8	BAW12	A388	WSSS	EGLL	15Dec16	1515	1535	0
9	BAW142	B772	VIDP	EGLL	15Dec16	2150	2205	0
10	BAW16	B77W	WSSS	EGLL	15Dec16	1515	1535	0
11	BAW34	B789	WMKK	EGLL	15Dec16	1605	1625	0
12	DLH761	A388	VIDP	EDDF	15Dec16	2200	2223	0
13	DLH763	A346	VIDP	EDDM	15Dec16	2020	2043	0
14	DLH773	B744	VTBS	EDDF	15Dec16	1650	1710	0
15	DLH779	A388	WSSS	EDDF	15Dec16	1555	1615	0
16	HVN11	A350	VVTS	LFPG	15Dec16	1655	1717	7
17	HVN19	A350	VVNB	LFPG	15Dec16	1645	1710	10

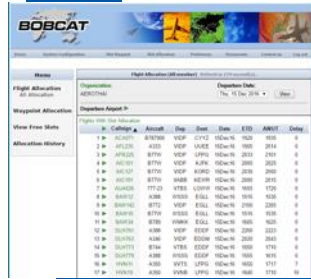
Service Expansion

Then came the mid-2010s...



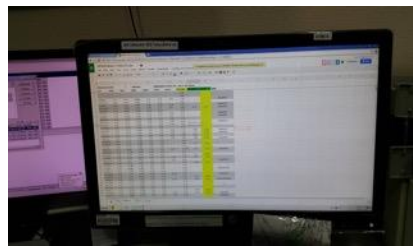
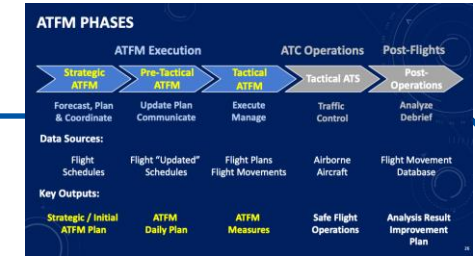
...when we needed to find ways to cope with the rising traffic demand

Service Expansion: From 2014 to Today



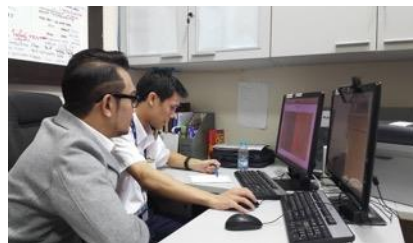
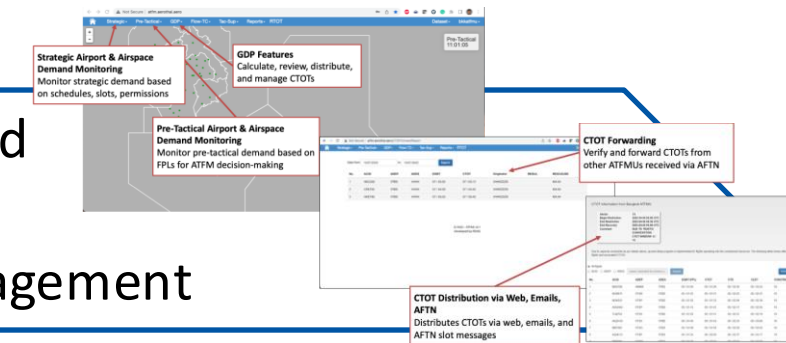
From initial focus on BOBCAT ATFM service

...to expanded ATFM service covering all phases of operations



From manual Excel spreadsheet...

...to automated ATFM system with slot management

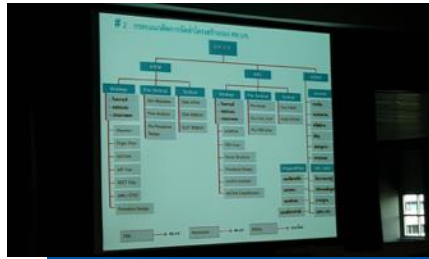


From the early days of developing expanded operating procedures...

...to a comprehensive set of operations manual and instructions



Service Expansion: From 2014 to Today



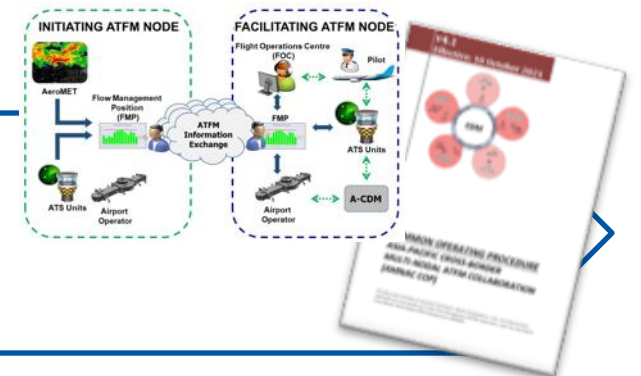
From independently establishing the ATFM service in AEROTHAI

...to being an approved ATFM service provider



From co-pioneering the concept development for APAC ATFM

...to co-leading an operational regional ATFM network



The Learnings



“Internal” Stakeholders Engagement

Engage ATC units early in the implementation
Set realistic expectation; differentiate ATFM from ATS



“Local” Stakeholders Engagement

Engage Airspace Users, Airport Operators, and Ground Services
ATFM is a “collaborative” service by design



“Regional” Network Connection

ATFM is best implemented as a regional network
Get regional partners involved



Well-Established Administrative System

SMS, QMA, HRD...it’s not just about ATFM “operations”
Regulatory framework support can go a long way



We are already doing well



We have some rooms to improve

The Learnings



Needs-Based
Software Development

Develop / procure software based on operational concept and true working requirements



Post-Operations Analysis
and Continuous Review

Conduct post-operations analysis regularly &
Use the analysis for ATM planning and improvement



Accurate ATC Capacity
Assessment

Accurate ATC capacity numbers need to be developed for
effective ATFM operations



We are already doing well



We have some rooms to improve

The Future: Where We Are Headed

Software enhancement, with improved DCB algorithm and integration with A-CDM process



Administrative improvement, through established quality management, human resource development, and regular audits



Furthering regional ATFM, by supporting other regional ANSPs and engaging in the review of APAC ATFM concept



Future-proofing ATFM operations, through engagement in forward-looking projects in ATFM-on-SWIM and ATFM/FF-ICE integration



Thank You!



Reach out if you want to connect!



Thank You

