

Approach Center Organizational Models & Airspace Structure

Short-Term Training Exchange Program

by AEROTHAI Business Unit



OBJECTIVE

This course provides participants with a comprehensive understanding of:

- AEROTHAI's Provincial APP organizational model and airspace organization, including the rationale, scope, and measured outcomes of the transition to a regional approach control structure.
- The technical systems and requirements associated with operating a regional APP, including surveillance, communication, and backup system architecture.
- The human resource and training model supporting Provincial APP operations, including licensing, rating, and ongoing competency development.

Participants will observe live operations at both a headquarters-based approach control center and a regional approach control center, examine how airspace responsibilities, control sectors, and coordination procedures are established and measured, and explore how each center manages its operations together with connected tower facilities.

COURSE DETAILS

Duration :	5 Days
Participants :	6 participants per course
Training Period:	● Group 1: 17 – 21 August 2026
	● Group 2: 24 – 28 August 2026
Training Price :	15,000 USD/group

LEARNING OUTCOMES

- Describe the organizational structure and staffing model of Approach Centers at both national and regional level, including the rationale for AEROTHAI's transition to a Provincial APP model.
- Explain the measurable outcomes of the transition before and after implementation, including the reduction in workload and personnel, the reduction in operational and management costs, the resulting increase in air traffic control capacity, and lessons learned from any failures or setbacks.
- Explain how areas of responsibility are defined and allocated between an Approach Center and its associated towers.
- Understand the regulatory basis for Control Zone and Terminal Manoeuvring Area (CTR/TMA) design, publication, and amendment, including the rationale for specific vertical boundaries and the basis for Letters of Agreement.
- Describe the principles of control sector design, including the conditions under which sectors are split or merged, and the methods used to measure controller workload and assess airport and sector capacity.
- Identify the technical requirements for developing a Provincial APP, including surveillance, communication, and backup system architecture and DataLink Communications System such as DCL and CPDLC.
- Identify how call signs, communication frequencies, and operating hours are assigned across a distributed tower network.
- Discuss transfer and coordination procedures between an approach center and connected tower facilities.
- Describe the human resources and training model supporting Provincial APP operations, including ATCO licensing and rating structures, on-the-job and simulator training, recurrent/refresher training, and competency assessment.
- Compare how coordination is managed at a major Approach Center versus a regional Approach Center, and draw observations relevant to the VATM context.

SCHEDULE

Venue: AEROTHAI Headquarters, Bangkok

Day 1 – Monday | Orientation, Transition Overview & Organizational Structure

Program overview and objectives

Introduction to the full five-day program, expected outcomes, logistics, and participant roles.

Development process and rationale for the transition to Provincial APP

Why AEROTHAI transitioned to a regional APP model, the challenges faced prior to centralization that the transition was intended to resolve, and the key milestones along the way – instructor draws on direct experience.

Effectiveness and outcomes before and after implementation

KPIs used to evaluate the transition, the resulting reduction in workload and personnel, the reduction in operational and management costs, the rate of increase in air traffic control capacity, and lessons learned from any failures or setbacks encountered along the way.

Independent APP models: organizational structure

Staffing model, decision-making hierarchy, and how responsibilities are delineated within an approach center.

Bangkok Approach Control: facility briefing

Overview of Bangkok Approach Control's area of responsibility, traffic volumes, operating structure, and its network of approximately 20 connected towers across Thailand.

Venue: AEROTHAI Headquarters, Bangkok

Day 2 – Tuesday | Airspace, Control Sectors, Technical Systems & Human Resources

Site visit: Bangkok Approach Control Center

Observation of live approach control center operations – control room layout, display systems, communication setups, and controller working positions.

Airspace organization and CTR/TMA design principles

How control zones and terminal areas are defined, published, and amended, with reference to

Bangkok Approach Center's airspace boundaries — including the rationale for the 2,000 ft–11,000 ft APP / 11,000 ft–FL460 ACC division, the relationship to the TMA upper limit, the basis for developing Letters of Agreement, the criteria for dividing responsibility between ACC and APP, and the resulting impact on the Aerodrome Control Tower (TWR).

Control sector structure and workload management

Principles of sectorization, illustrated by BAPC's division into the Chiang Rai, Khon Kaen, Ubon, and Samui sectors covering 18 airports; limits on the number of airports and flights per sector; conditions for splitting or merging a sector; and the methods used to measure ATCO workload during high-demand periods and to assess airport and sector capacity.

Technical systems requirements for a regional APP

NAS MOPS operating concept; configuration of the surveillance (radar) system; ATM systems including Flight Data Processing, Surveillance Data Processing, and Surveillance Integration; communication systems including Voice Communication System (VCS), recording, data network, and synchronization; and the architecture of the backup system.

Implementing Data Link Communications systems; overview of data link application, architecture and operational methods, technical infrastructure requirements, procedures, safety assurance, and practical implementation experiences.

Human resources and training model

How an ATCO is licensed and rated — Sector Rating, Approach Rating, and Radar Rating; the number of airports a single ATCO may manage; on-the-job training (OJT), simulator training, recurrent or refresher training, and ATCO competency assessment; and how transition training between sectors is conducted. Staffing levels at BAPC (approximately 90 personnel) are referenced for context.

Call signs, frequencies, and operating hours across the tower network

How each connected tower is assigned its operational identity, frequency, and hours, and how Bangkok Approach Control Center coordinates and manages this across the connected tower facilities.

Transfer and coordination procedures

How control is transferred between Bangkok Approach Center and individual tower facilities for arriving and departing flights — coordination methods, timing, and communication protocols.

Briefing and preparation for regional visit

Overview of the regional Approach Center to be visited, observation objectives for Days 3 and 4, and travel and logistics arrangements.

Venue: Regional APP

Day 3 – Wednesday (Afternoon) | Regional APP: Structure & Operations

Welcome and facility orientation

Introduction by regional approach control center management – overview of the facility, its area of responsibility, traffic profile, and staffing model.

Site visit: regional APP center

Observation of live approach control center operations – differences in scale, traffic complexity, and display and communication setup compared with BAPC.

Debrief and Q&A with regional controllers

Exchange on daily operations, workload characteristics, and how the regional center manages coordination with its connected tower facilities.

Airspace responsibility and sector design at regional level

How the approach control center defines its area of responsibility, maintains its CTR/TMA boundaries, and coordinates with BAPC and other adjacent facilities.

Coordination procedures: regional APP center to connected towers

Transfer-of-control procedures for arrivals and departures between the regional approach control center and its local tower facilities – communication methods and coordination procedures.

Venue: Regional APP

Day 4 – Thursday | Tower Visit & Comparative Discussion

Site visit: connected ATC tower

Visit to one of the approach control center's connected tower facilities – observation of tower operations, communication with the approach center, and the transfer-of-control process from the tower controller's perspective.

Exchange with tower controllers

Discussion of the working relationship between the tower and approach center – coordination practices, non-standard situations, and day-to-day communication.

Comparison: Bangkok Approach Center vs regional APP Center model

Group discussion comparing the two approach centers observed — scale, staffing, airspace complexity, sectorization, coordination methods, and operational philosophy.

Transition procedures: lessons and applicability

Instructor draws on transition experience to discuss how procedural changes were managed across a distributed network of facilities, in relevance to the VATM context.

Preliminary observations and debrief

Participants share key observations and questions from Days 3 and 4 before the return journey; initial notes toward individual takeaway plans.

Return to Bangkok

Day 5 — Friday | Return Journey & Close-Out

Optional debrief session (pre-departure)

A structured reflection covering the full five-day program — participants' observations, points for further consideration, and preliminary thoughts on how the approaches and procedures encountered may inform VATM's own operations.

Return travel to Bangkok

Participants return to Bangkok; no formal sessions are scheduled for this day. Participants are encouraged to use the travel time to review their notes and consolidate observations from the week.

Individual takeaway notes (self-directed)

Participants are encouraged to draft initial notes on key observations and questions to carry into Courses 2 and 3.

