RUNWAY SAFETY ISSUES and MITIGATION OPTIONS

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AOT's Airports

Airports of Thailand Public Company Limited

- 2 international airports in Bangkok and perimeter
  - Suvarnabhumi International Airport
  - Don Muang International Airport
- 4 international airports at regional sites
  - Chiang Mai International Airport
  - Chiang Rai International Airport
  - Phuket International Airport
  - Hat Yai International Airport

Safety Policy

1. To develop aerodrome safety standards and management in concurrence with the growth of the air transport industry under standards and recommended practices of ICAO.

2. To encourage airport staff to be aware of their responsibilities and accountabilities in relation to aerodrome safety activities and to give their full cooperation in this matter.

3. To ensure that all senior management and heads of units have their duties to supervise the continuing implementation of the aerodrome safety to be consistent with relevant regulations and safety standards.

Safety Policy

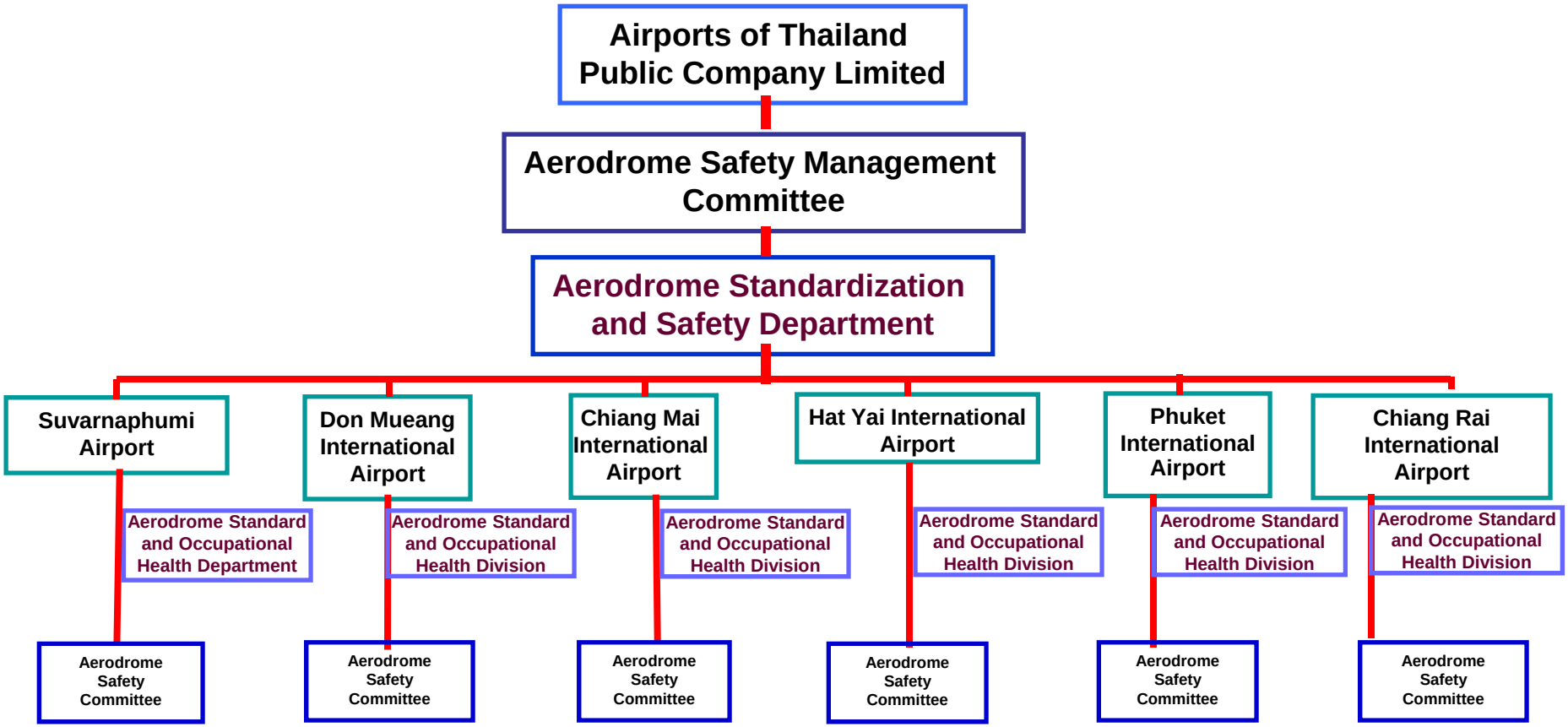
4. To ensure that sufficient skilled and trained resources are available continually to implement safety strategy and policy.

5. To launch campaigns and other means of public relations in order to encourage all parties concerned acceptable in compliance with regulations, legislations, and standards of aerodrome safety and also assimilate it into the organizational safety culture.

6. To monitor and evaluate the implementation of these policies consistently in order to achieve the practical results and enhance continuous development.

7. To provide adequate personnel and budget for appropriate operation of the Safety Management System (SMS) all times.

Safety Structure and Committee



Runway Safety Program

Runway Safety

Runway safety covers all matters concerned with the identification and prevention of hazards that might impede the safe take off, taxiing and landing of all types of aircraft at an aerodrome.

Runway safety includes runway incursion and runway excursion.

Runway Safety Program

- **Background of Runway Safety Program**
- **Purpose of Runway Safety Program**
- **Runway Safety Program Strategy**
- **Runway Safety Action Plan**
- **Role of the Safety Officer**
- **Runway Safety Team (RST)**

Runway Safety Program

Background

- **2005:** Appendix 1- 7- 06
  Findings and Recommendations related to
  Air Navigation Service:

Thailand

Period: 28/06/05 – 07/07/05
Document Reference: PAN Doc 4444, 2.5.2

Finding:

Department of Civil Aviation (DCA) had not established a Runway Safety Program

Recommendation:

DCA should ensure the establishment and implementation of a Runway Safety Program at all aerodromes.

Runway Safety Program

Background

- **2008:**

  DCA and AOT discussed on the establishment and implementation of the Runway Safety Program

- **Sept 2008:**

  AOT established Runway Safety Team in 6 airports

Runway Safety Program

Purpose of Runway Safety Program

To improve runway safety by decreasing the number and severity of runway incursions and excursions

Runway Safety Program Strategy

Promote technology
and improve training, infrastructure and procedures
to reduce the risk of runway incursions and excursions

Runway Safety Program

Runway Safety Action Plan

- Contents:
  - Runway safety concerns
  - Specific action items
  - Proposed implementation schedule
  - Party/parties responsible for implementing each action item.

Role of the Safety Officer

1. In planning airport construction

- Avoid runway crossings to prevent runway incursions and excursions
  - Build perimeter taxiway avoiding the need to cross Runways

2. In driver licensing

- Improve communication with line pilots, controllers and vehicle drivers
- Training on how to prevent runway incursions
- Initiate Runway Safety Awareness Campaign

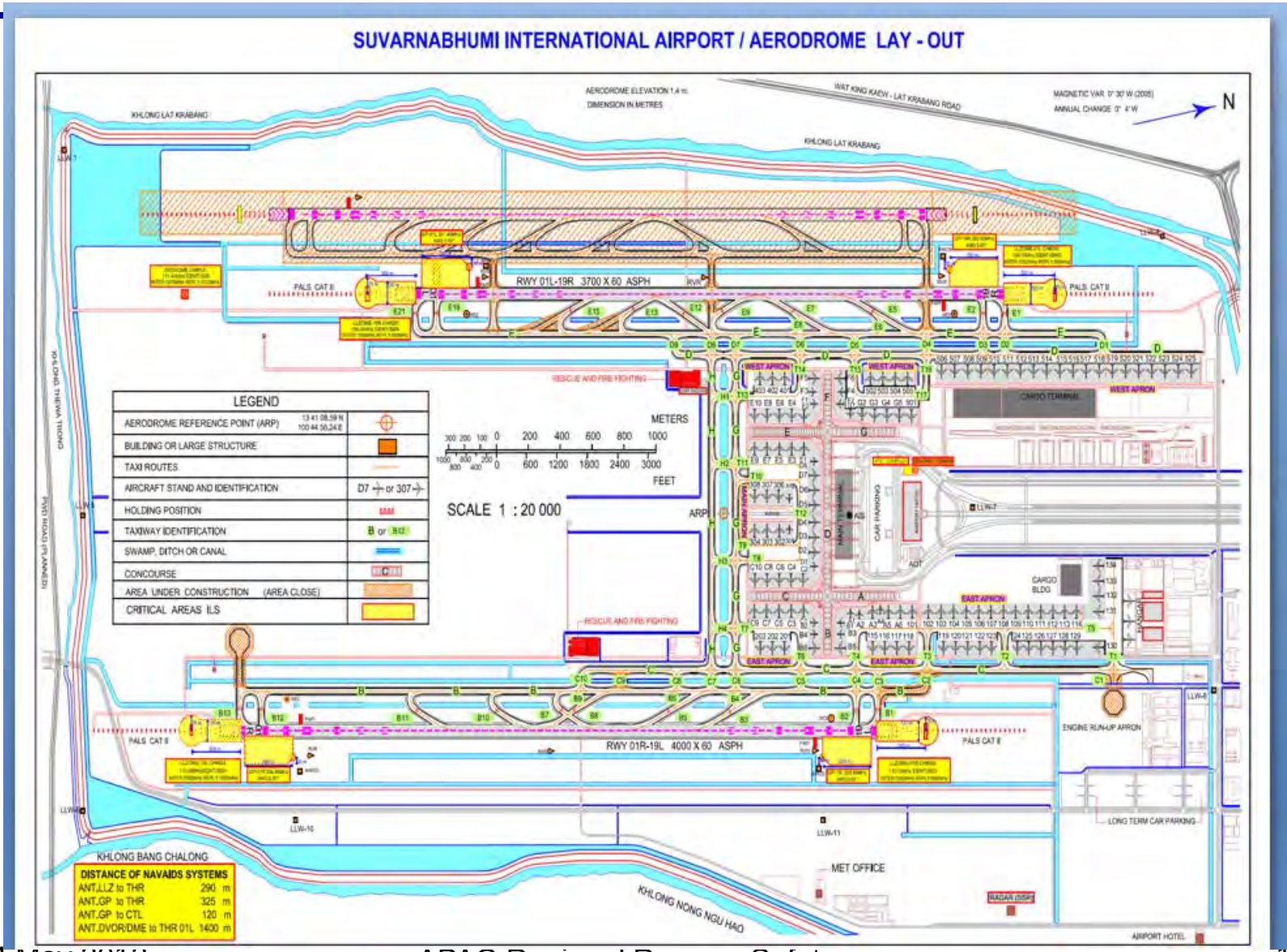
Runway Safety Program

Runway Safety Team (RST)

- RST members:
  - people at the local level representing aerodrome operator, air traffic control, pilots, airlines and other tenants.

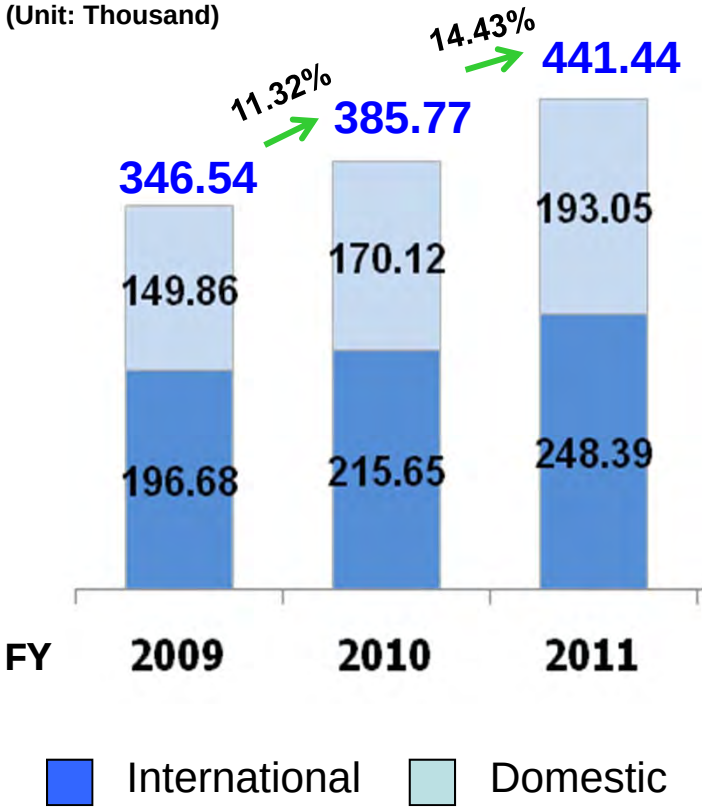
- RST Responsibilities:
  - To address existing runway safety problems and issues.
  - To identify and address potential runway safety issues.
  - To develop runway incursion prevention action plan to reduce the risk of runway incursion in “HotSpot”

AOT's Runways



Runway Safety Issues

Aircraft Movement Statistics



Runway-related Incidents and Accidents

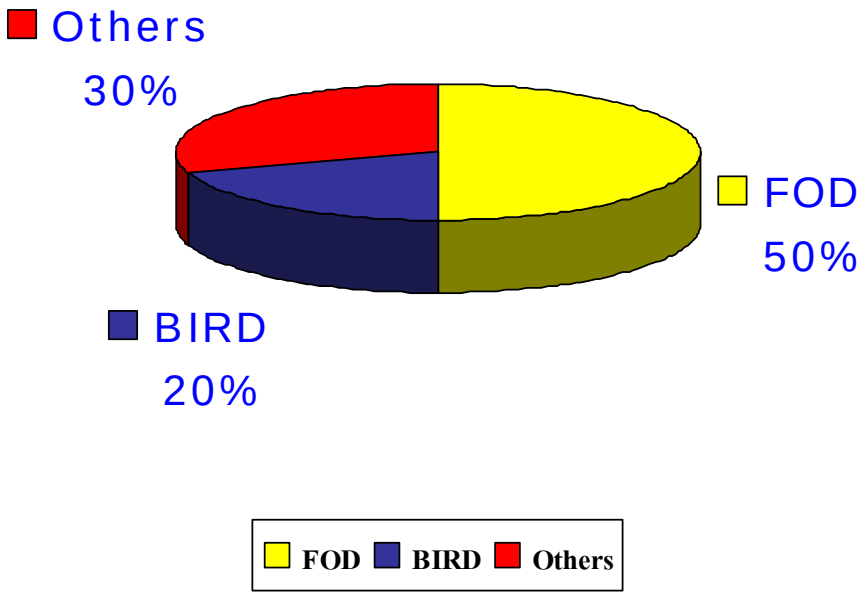
	Incidents	Accidents
2009	15	0
2010	14	0
2011	12	0

Note: 1. Fiscal Year starting from October to September
2. The percentage growth as shown is calculated from the full number of the air traffic statistics
3. * DMK had been closed from October 25th, 2011 (at 14.00 hrs) until March 5th, 2012 due to the flood disaster

Runway Safety Issues

Runway-related Incidents and Accidents:

MAJOR CAUSES

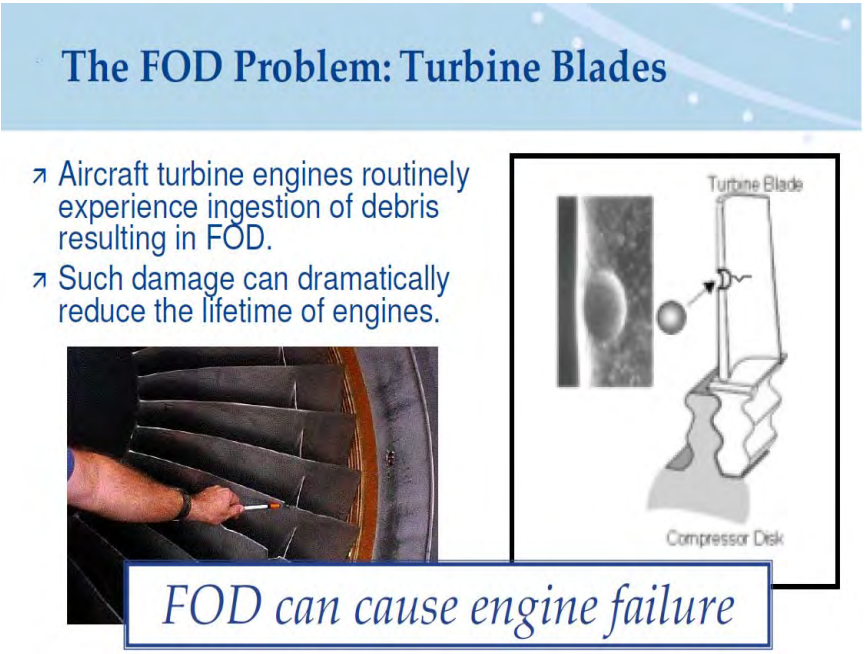


Runway Safety Issues

FOD

- Tire Incidents

- Turbine blades



Mitigation Options

Mitigation measures for Impacts from FOD

As Mr. Nutt, the Vice President of Aviation Safety at AOT notes: “Safety and security have and always will be our top priority. We are proud to utilize a cutting edge automated FOD detection technology. BKK will offer its operators, airlines and passengers the ultimate in runway safety”.

Mitigation Options

Mitigation measures for Impacts from FOD

FODetect is an automated FOD detection solution with superb detection capabilities deriving from a unique hybrid optical-radar sensing technology, advanced image processing software and close range detection. The system is embedded in Surface Detection Units (SDUs) that are co-located with the runway edge lights for easy installation. FODetect was found to meet or exceed the highest level of performance in every parameter required by FAA regulation

Mitigation Options

Mitigation measures for Impacts from FOD

1. **How important is the detection of FOD on your airport's runways?**

   Nowadays, there are increased numbers of aircrafts damaged from aircraft operation at Suvanabhumi's runways. This caused damages to the airlines who operate the aircrafts. It also affects our credibility and trustworthiness which airlines have in us. This is unacceptable for Suvanabhumi Airport because it is one of our aims to provide safety for airlines using our services which drastically increase every year. In order to comply with rules and regulations, and standard of ICAO Doc 9859 Safety Management Manual (SMM) on runway's safety, we saw the need to solidly solve this problem.

Mitigation Options

Mitigation measures for Impacts from FOD

2. What procedures do you have in place currently to deal with FOD?

Normally, we screen FOD six times a day with vehicles and man power by eyesight's according to instructions indicated in Aerodrome Manual. In case that FOD is found, it will be collected and recorded to generate hazardous statistics, together with the process of risk assessment in order to determine the suitable measure to solve the problem related to these FODs.

Mitigation Options

Mitigation measures for Impacts from FOD

3. How important is it to work with airlines when dealing with FOD detections?

We have monthly meeting with every stakeholders. If any airlines find difficulties in their operations, they can present it to the committee. In case of urgency, there is a communication channels that specific officers can be contacted. For instance, if airline officers found FOD on the runway, they will notify ATC who then will report back to us in order to proceed with those FODs.

Mitigation Options

Mitigation measures for Impacts from FOD

4. How has the process of FOD detection improved over the years?

In these recent years, AOT has implemented Safety Management System (SMS) at Suvanabhumi Airport for the process of reporting hazard, identification of hazardous condition, and risk assessment from FOD, together with measures in prevention and create solution. We also educate staffs and related stakeholders on the safety and knowledge on FOD in order to raise awareness on dangers of FOD towards airport's operation.

Mitigation Options

Mitigation measures for Impacts from FOD

5. How will the Xsight system compliment your current FOD detection procedures?

Due to the increasing of services used in Suvanabhumi Airport, runways are used continuously, which leads to less free time for runway inspection, which also cannot reach the instructed cycles. Time period in each examination session also is reduced. The implementation of Xsight system is the use of new technology which will enhance Suvanabhumi Airport's efficiency. FOD which will be found by Xsight system will be notified to related officers in order to collect FOD right at the spot. This is an accurate and fast action on real time basis. It also is less time consuming when compares with the use of man power to spot the FOD. Then information related to FOD found will be generated into risk assessment system according to SMS system.


XSIGHT


THAI

THANK YOU