KOMITE NASIONAL KESELAMATAN TRANSPORTASI
NATIONAL TRANSPORTATION SAFETY COMMITTEE

OVERVIEW OF AIRCRAFT ACCIDENT & INCIDENT IN INDONESIA

ICAO Regional Runway Safety Seminar Asia Pacific
Bali, 21-24 May 2012

Under Aviation Act no.1, 2009, Article 357, para. 1:

'KNKT / NTSC to conduct the investigation and to establish the cause(s) of aircraft accident and serious incident within the territory of Republic Of Indonesia'

KNKT / NTSC Investigation Data Period 2007-2011

No	Years	KNKT / NTSC Investigation	Type of Occurrence		Injury Level	
			Accident	Serious Incident	Fatal	Injured
1	2007	21	15	6	125	10
2	2008	21	14	7	6	2
3	2009	21	13	8	40	9
4	2010	18	8	10	5	46
5	2011	32	19	13	71	8
Total		113	69	44	247	75

Source: NTSC Database December 2011

Occurrence Locations Within Indonesia Archipelago Territory

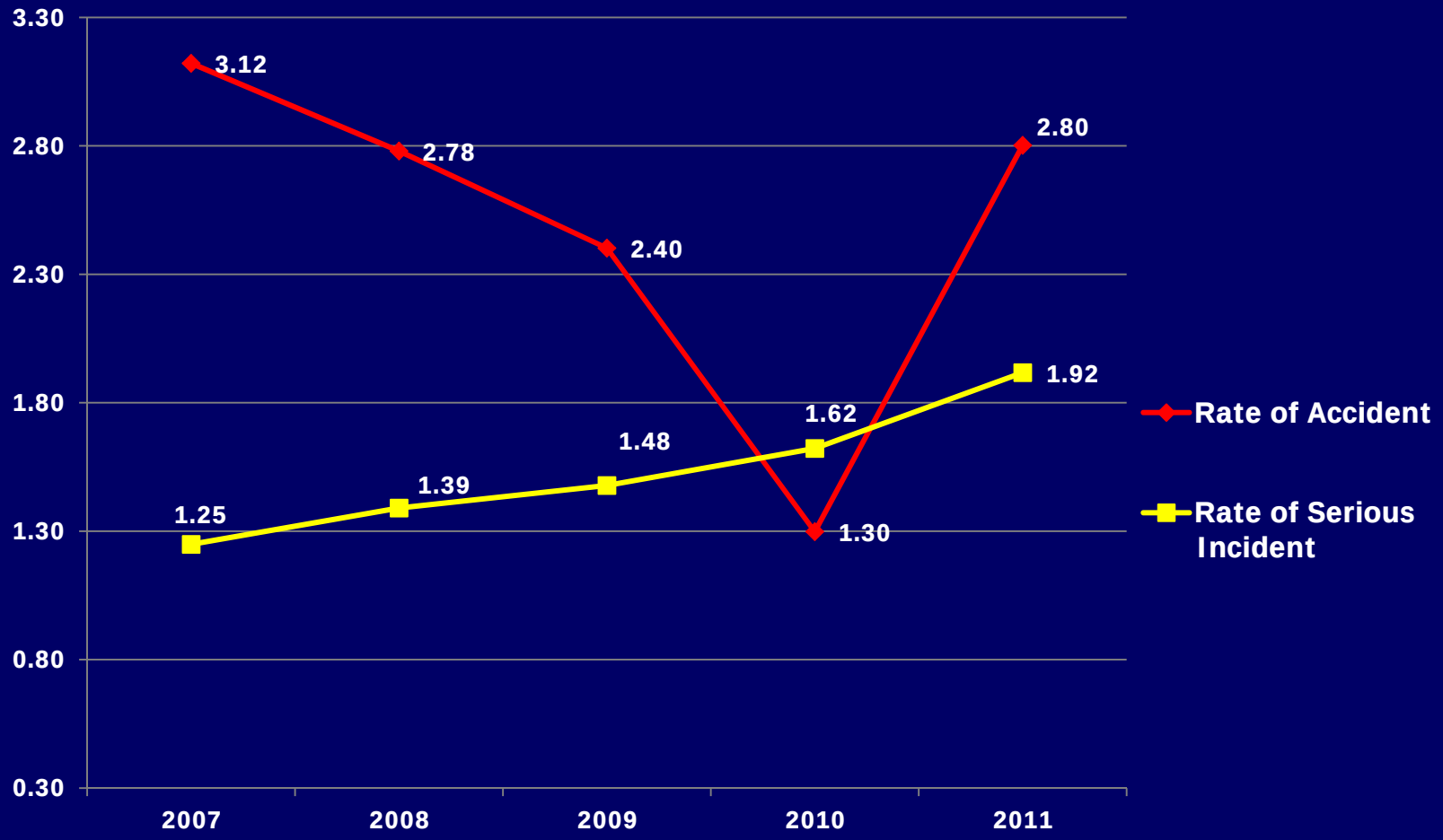
Number of Accident and Serious Incident in Indonesia Period 2007 – 2011

	2007	2008	2009	2010	2011
Total of Aircraft Departure*	480,553	503,581	541,272	616,389	678,028**
Total of Accident	15	14	13	8	19
Total Of Serious Incident	6	7	8	10	13

*Source: *Buku Statistik Angkutan Udara, DGCA*

** *Total Aircraft Departure on 2011 based on 10% increase assumption*

Rate of Accident and Serious Incident in Indonesia Period 2007 – 2011*



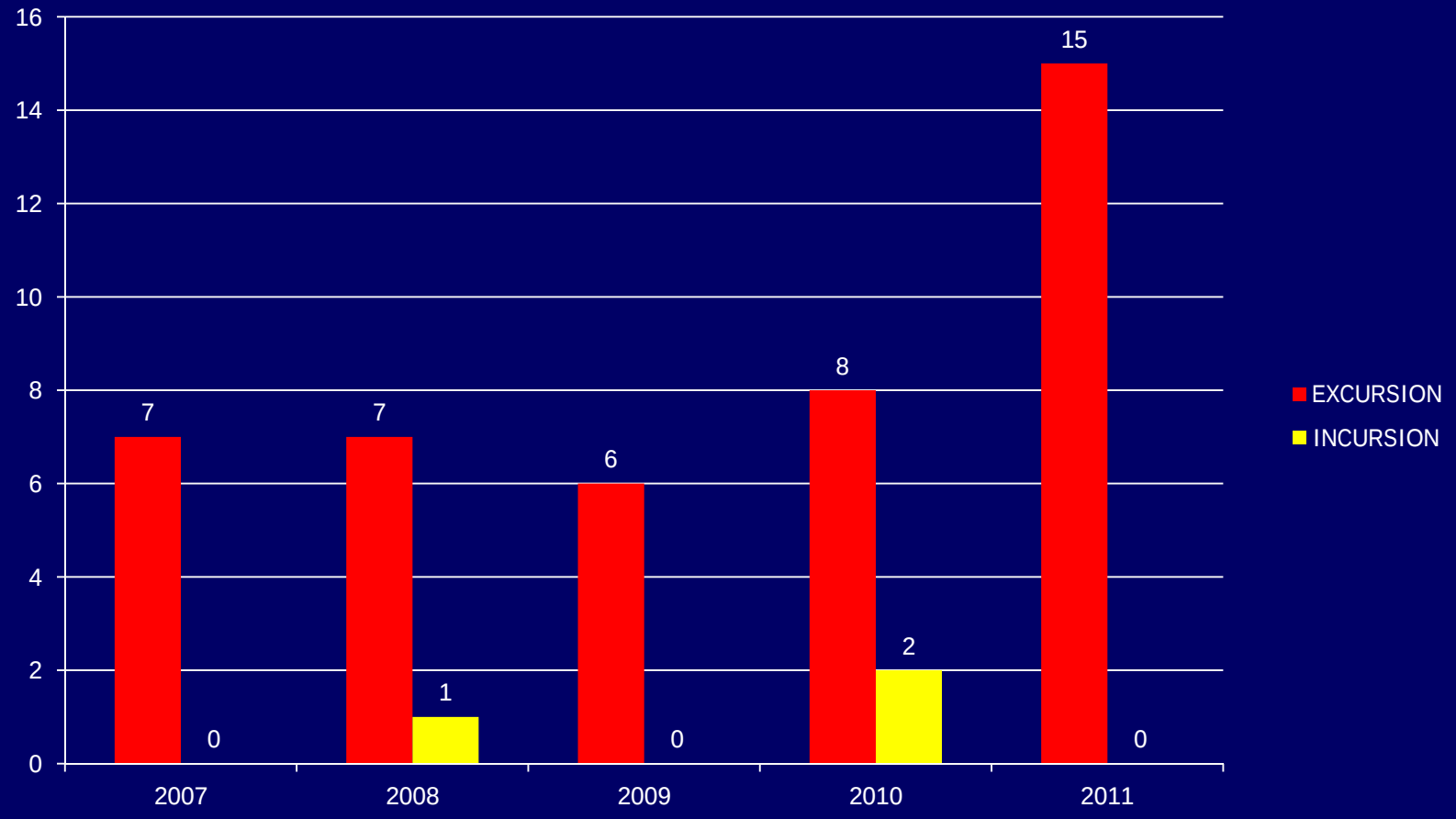
KNKT / NTSC INVESTIGATION RELATED TO RUNWAY SAFETY (EXCURSION & INCURSION)

Numbers of Runway Excursion and Incursion in Indonesia Period 2007 – 2011

	2007	2008	2009	2010	2011
Total of Aircraft Departure*	480,553	503,581	541,272	616,389	678,028**
Total of Excursion	7	7	6	8	15
Total of Incursion	0	1	0	2	0

*Source: *Buku Statistik Angkutan Udara, DGCA*
** *Total Aircraft Departure on 2011 based on 10% increase assumption*

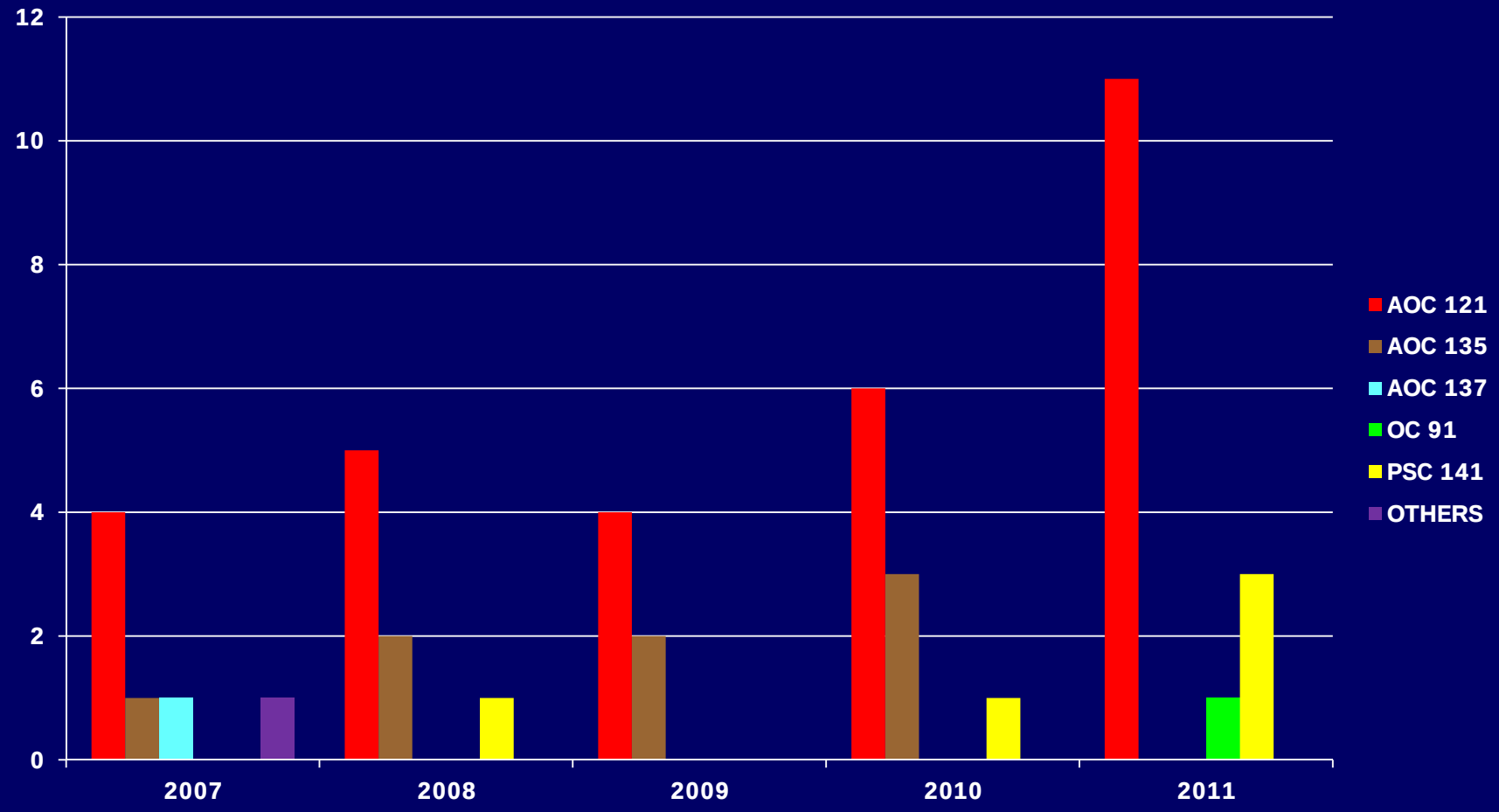
KNKT / NTSC Investigation Related to Runway Safety (Excursion & Incursion) Period 2007 - 2011



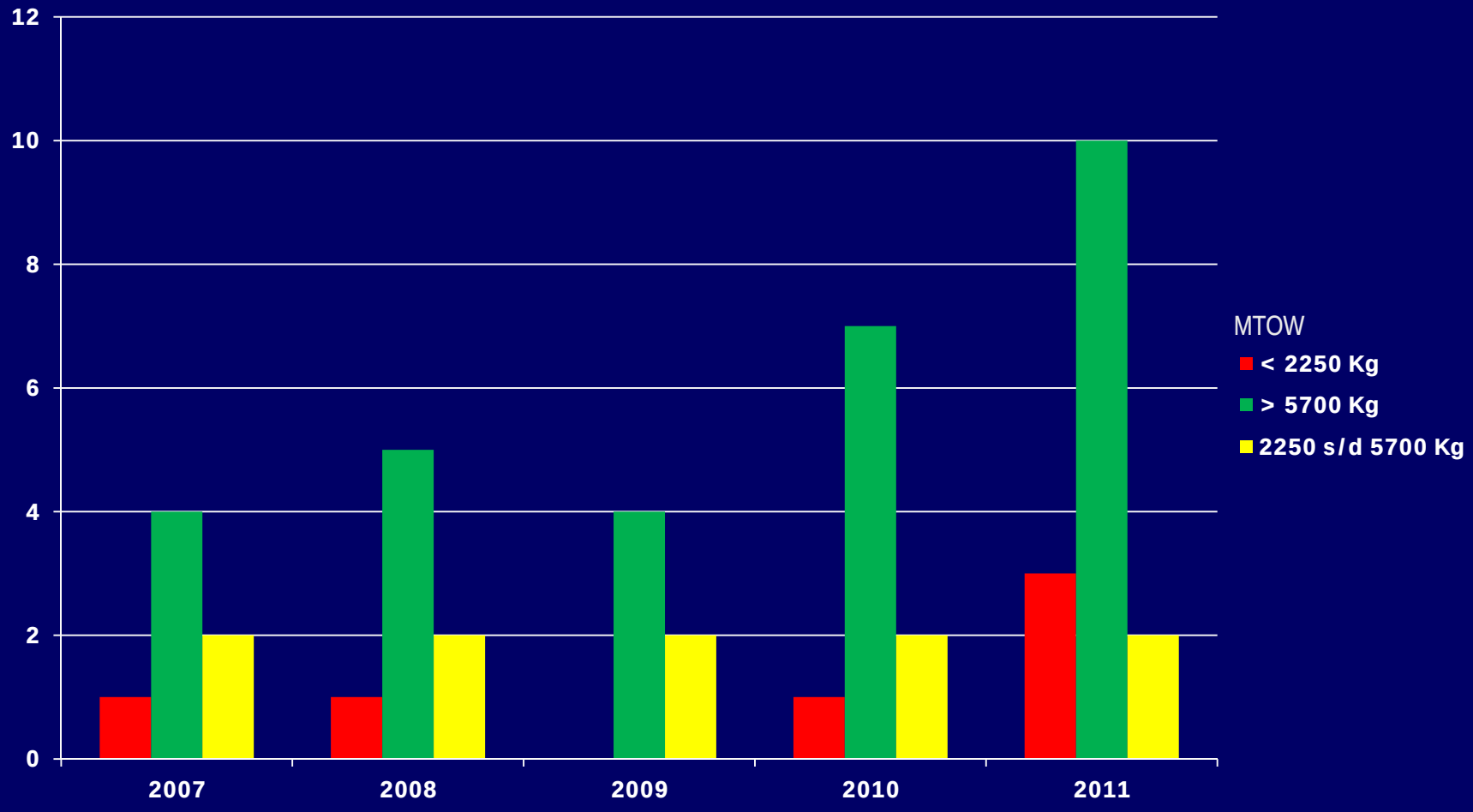
Runway Excursion & Incursion Locations Within Indonesia Archipelago Territory

Rate of Runway Excursion and Incursion in Indonesia Period 2007 – 2011*

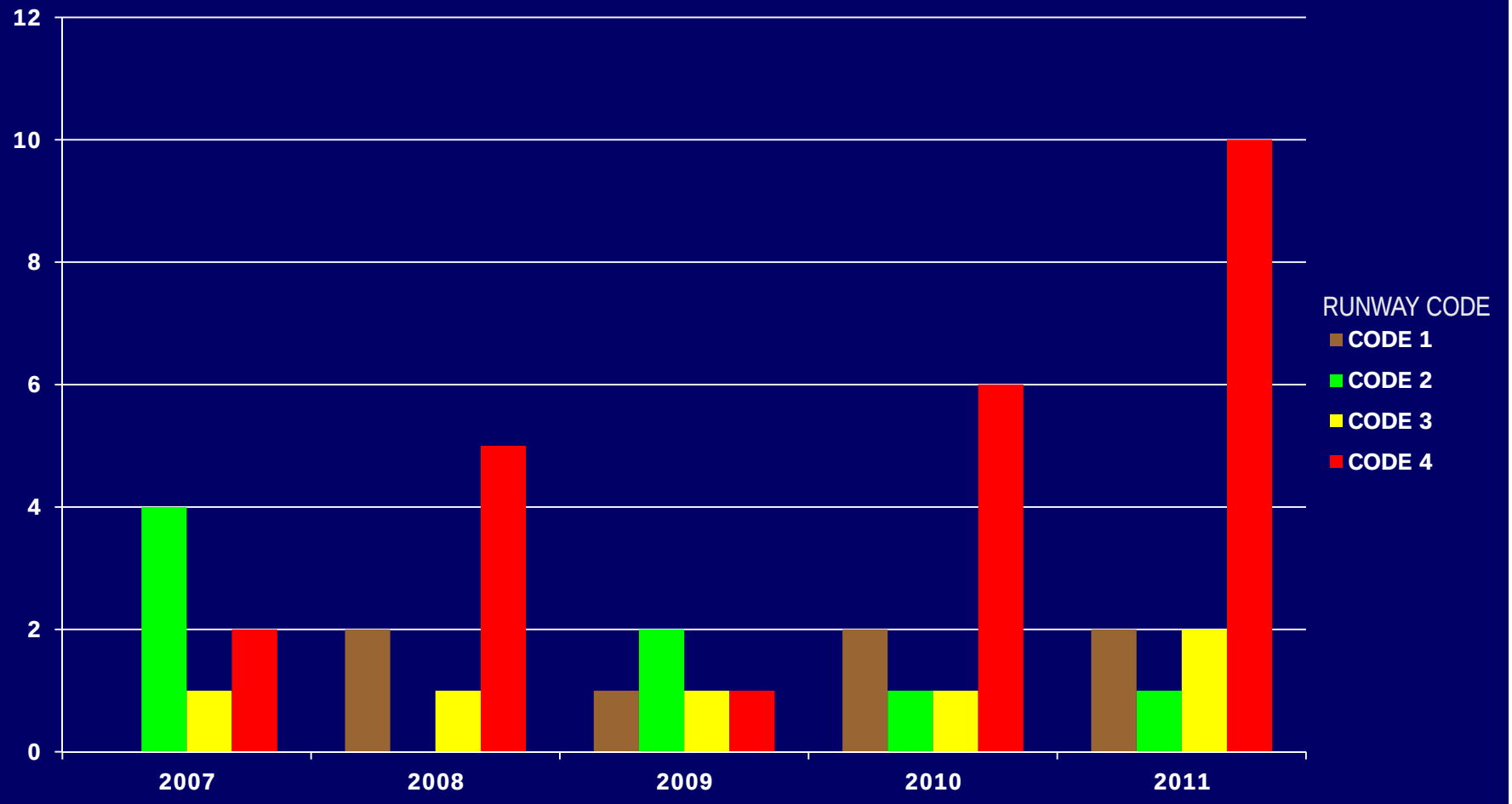
Kind of Operations Related to Runway Excursion and Incursion



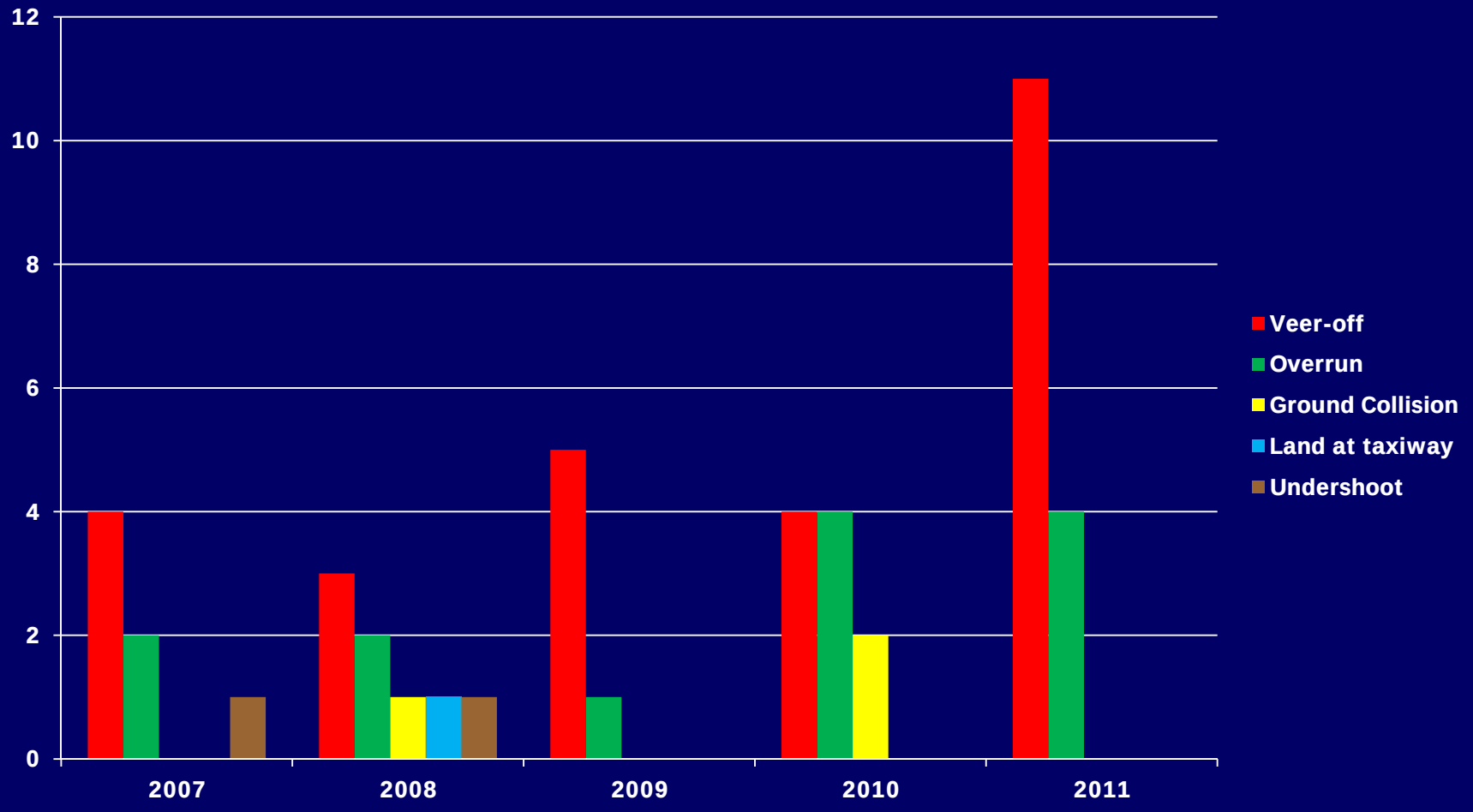
Aircraft MTOW Related to Runway Excurcion and Incursion



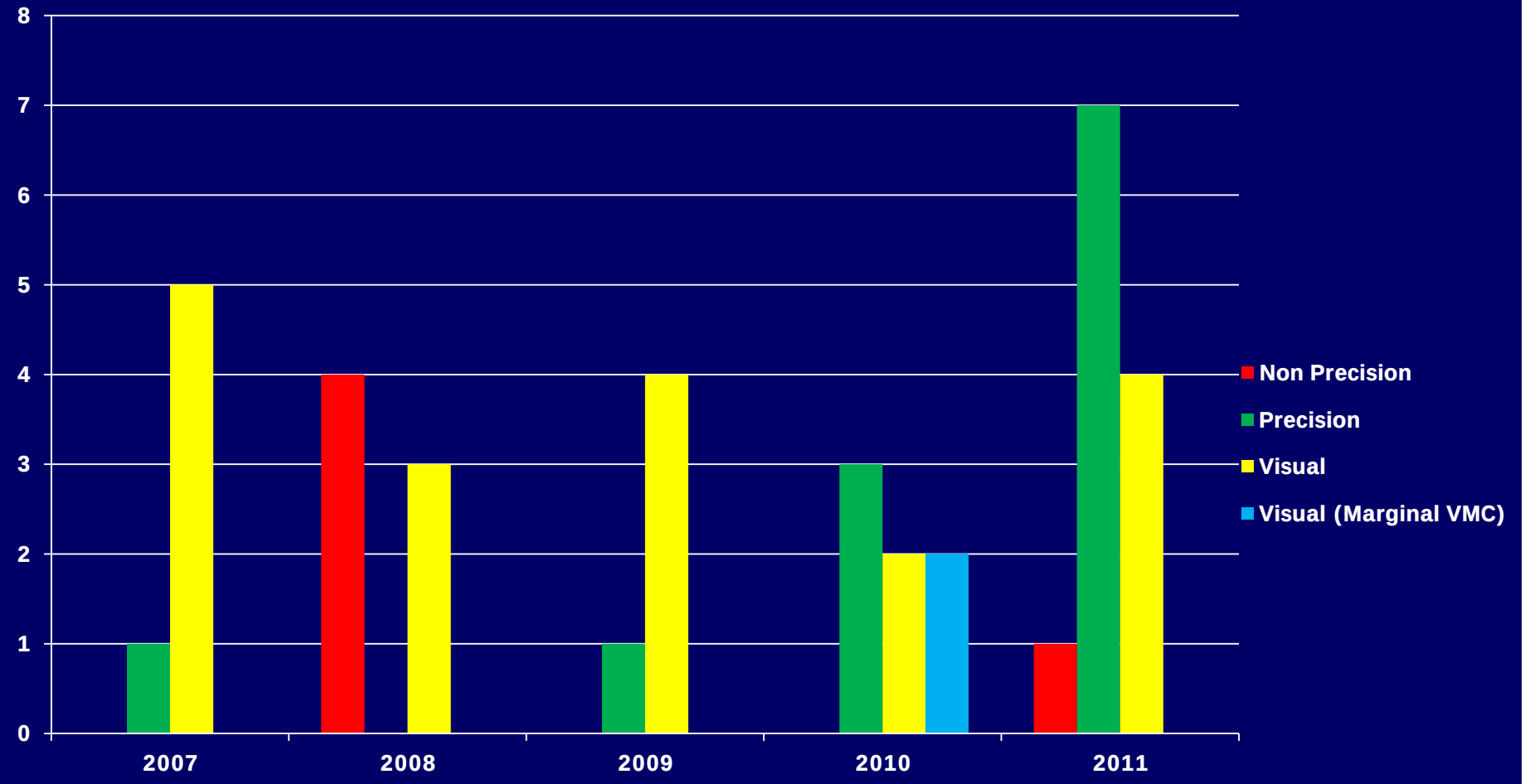
Runway Code Related to Runway Excursion and Incursion



Natures of Runway Excursion and Incursion



Types of Approach Related to Runway Excursion and Incursion



Examples of Runway Overrun Incidents on Code 4 Runways

PARAMETER*	PRECISION APPROACH	VISUAL APPROACH
Height and speed above threshold	52 feet / 154 knots (Vref: 132)	90 feet / 170 knots (Vref: 138)
Distance touchdown point from beginning of runway	± 873 meters	± 1113 meters
Speed at beginning landing roll	144 knots	153 knots
Deceleration devices status	-Spoilers extended -Idle reverse -Delayed braking	-Half braking capacity -Spoilers extended -Full – idle – full reverse
Runway condition	Dry	Wet combined w/rubber deposit
Speed at 2,000 feet from end of runway	103 knots	108 knots

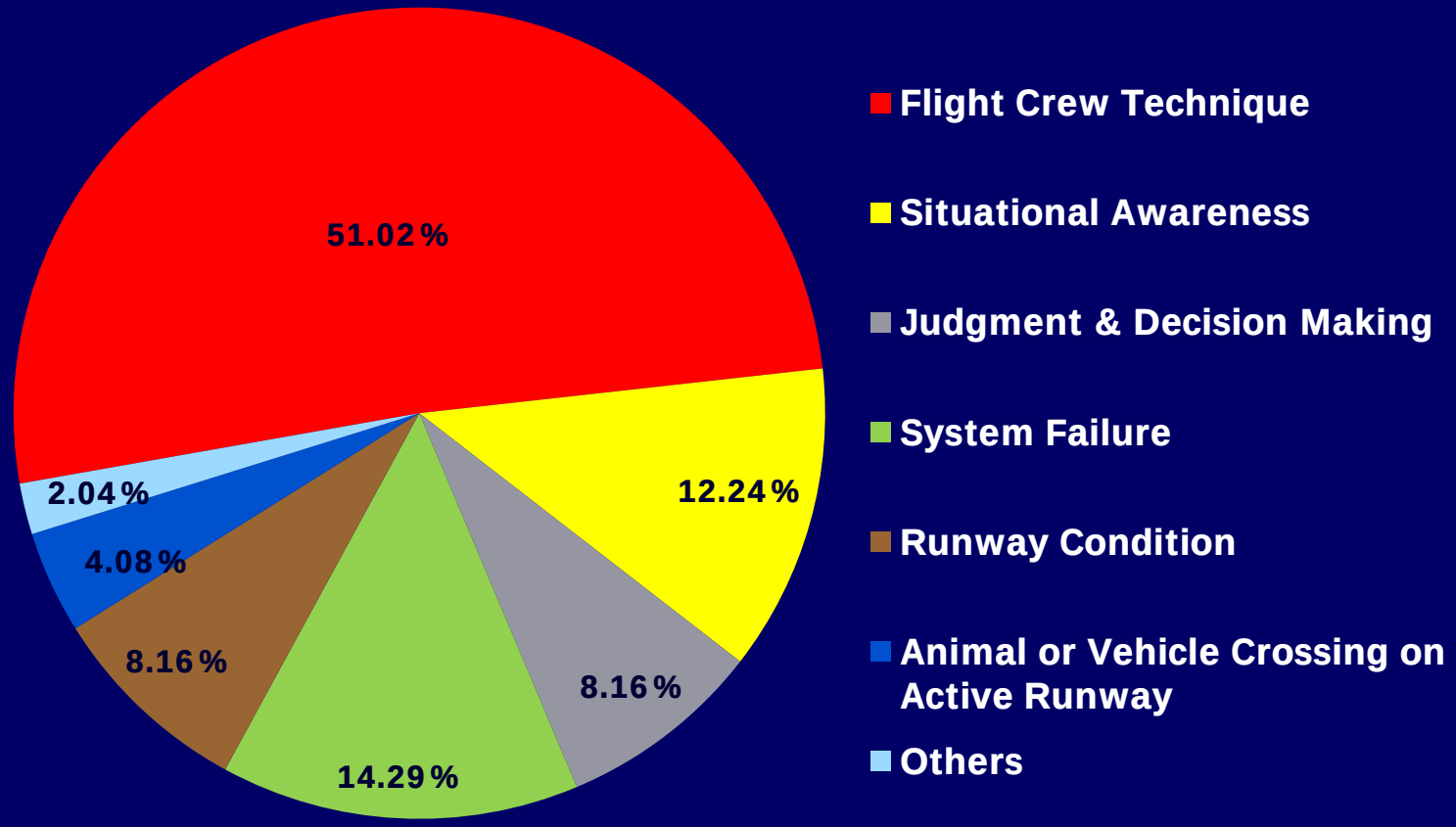
*** Refer to Safe Landing Guidelines ALAR Tool Kit Update, FSF**

Safe Landing Guidelines, FSF ALAR Tool Kit Update

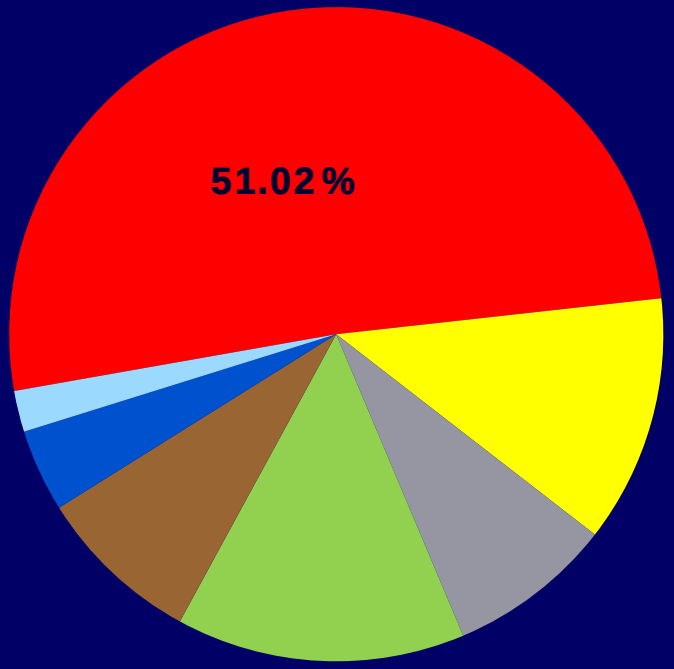
CRITERIA
Fly a stabilized approach
Height at threshold crossing is 50 feet
Speed at threshold crossing is not more than Vref+10 indicated airspeed and not less than Vref
Tail wind is no more than 10 kt for a non-contaminated runway, no more than 0 kt for a contaminated runway
Touch down on runway centerline at the touchdown aim point
After touchdown, promptly transition to the desired deceleration configuration: - Brakes - Spoilers/speedbrakes - Thrust reversers or equivalent (e.g., lift dump)
Speed is less than 80 kt with 2,000 ft of runway remaining

RUNWAY SAFETY FACTORS (EXCURSION & INCURSION) IN INDONESIA PERIOD 2007 – 2011

Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011

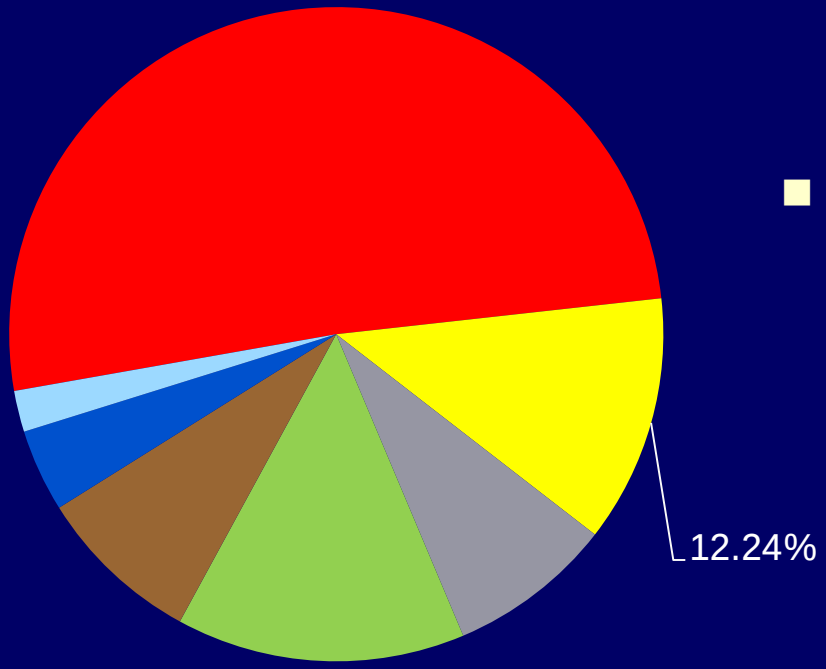


Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011



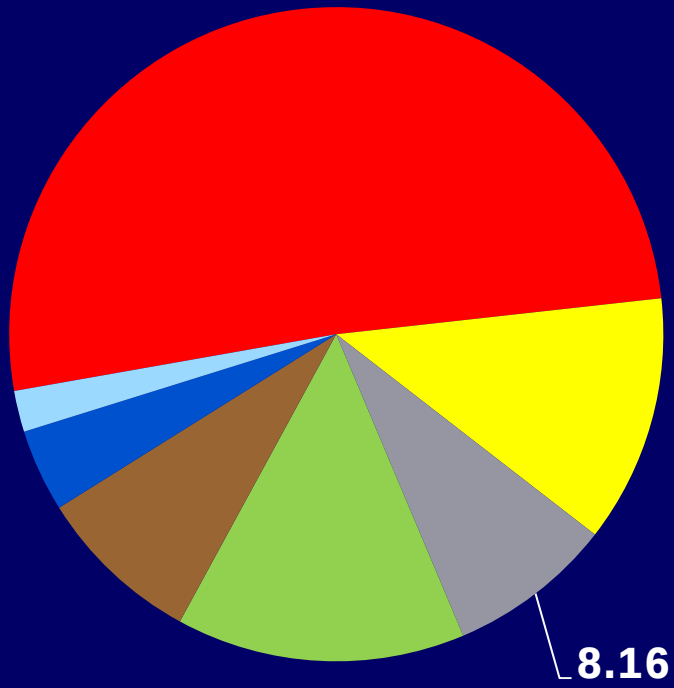
- Flight Crew Technique :
  - Ineffective directional control
  - Loss of directional control
  - Inappropriate steering during T/O
  - Inappropriate stopping technique
  - Excessive sink rate

Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011



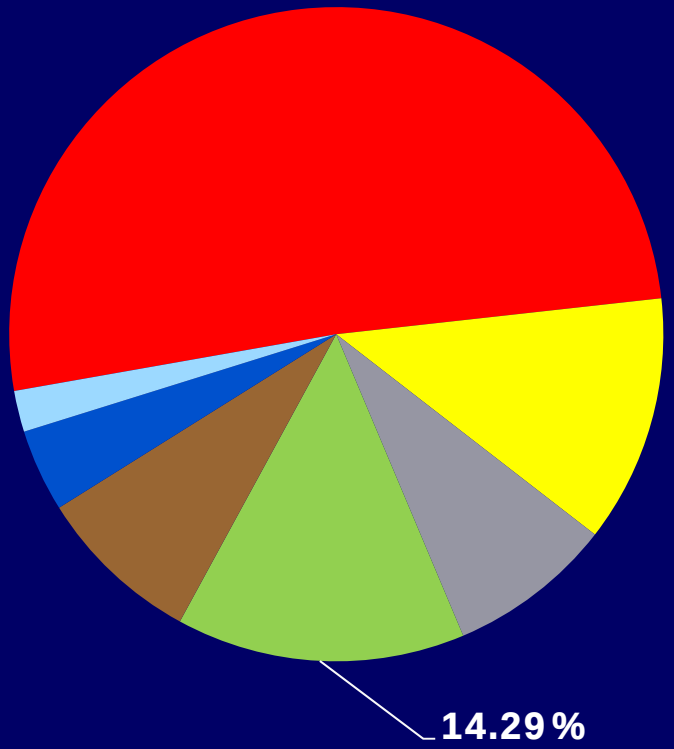
- Situational Awareness :
  - Inaccurate vertical and/or lateral awareness
  - Inadequate awareness of adverse wind condition

Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011



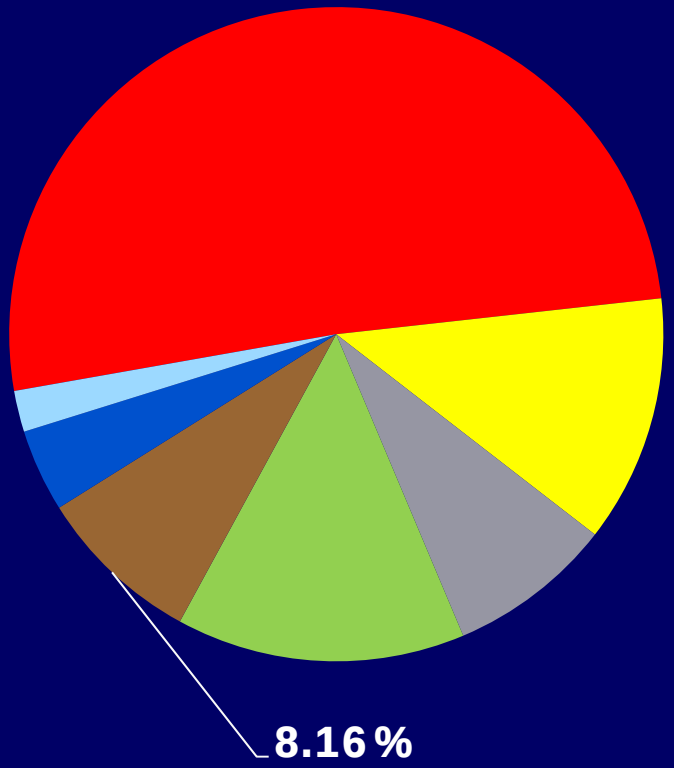
- Judgment & Decision Making :
  - Incorrect assessment of landing distance
  - Continuation through poor forward visibility before touchdown

Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011



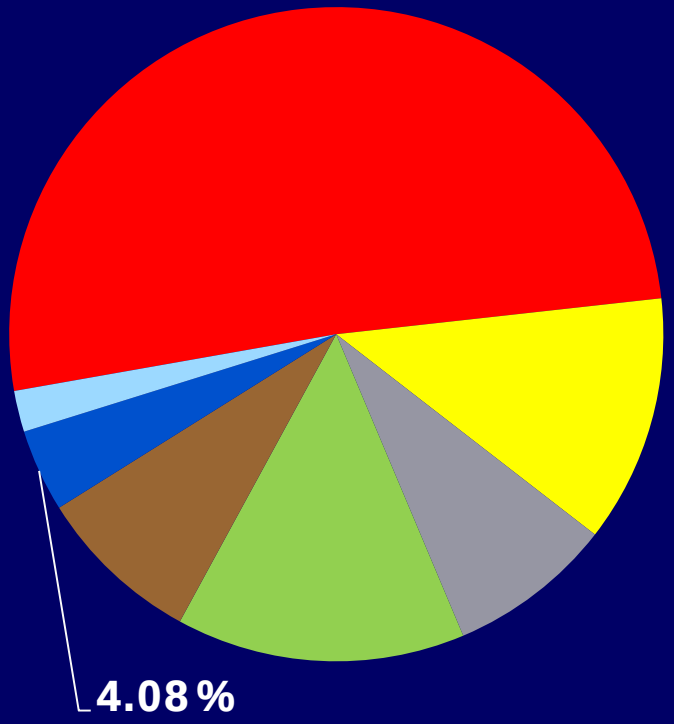
- System Failure :
  - Landing gear retracted on landing
  - Hydraulic system failure
  - Pilot seat move backward

Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011



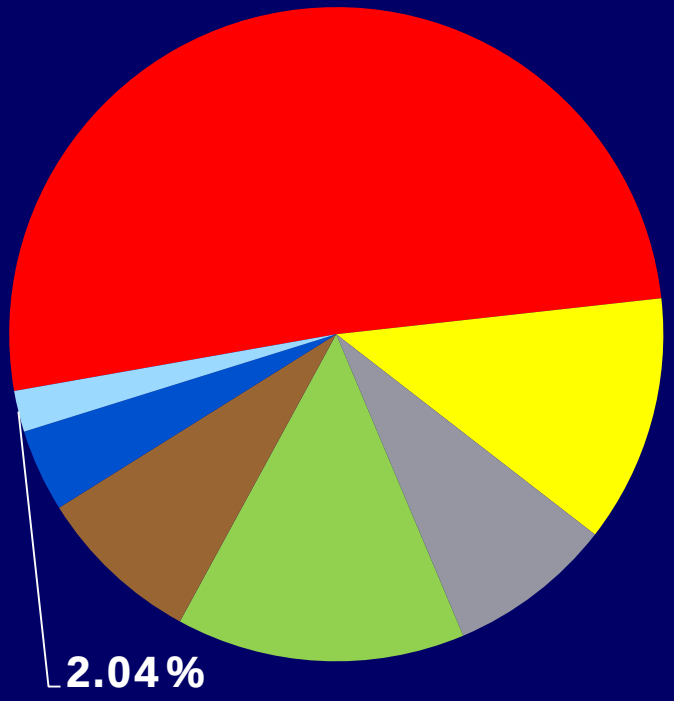
- Runway Condition :
  - water and/or rubber deposit
  - runway friction level maintenance

Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011



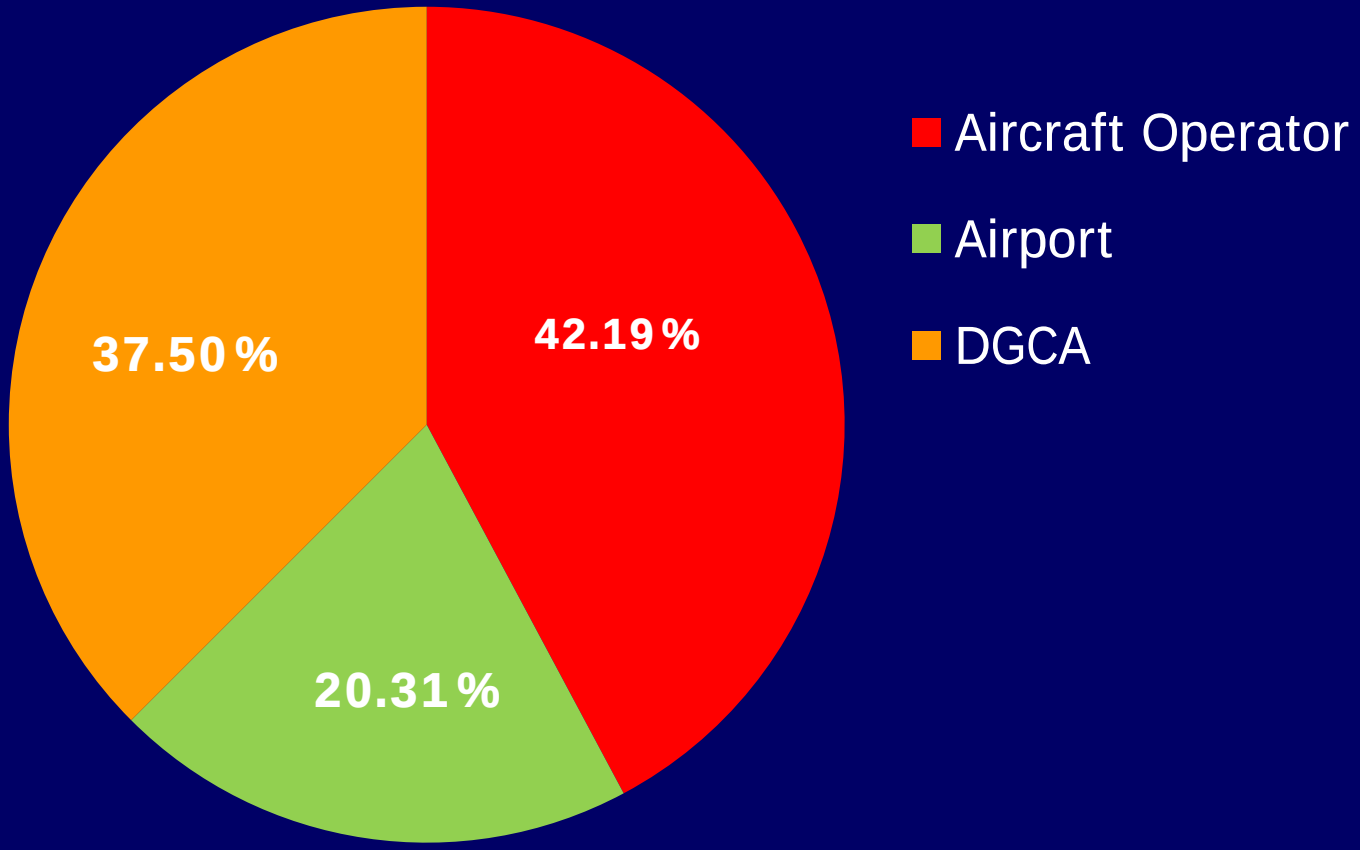
- Animal or Vehicle crossing on active runway

Runway Safety Factors (Excursion and Incursion) in Indonesia Period 2007 – 2011



- Others

KNKT / NTSC has made 64 Recommendations Related to Runway Safety (Excursion and Incursion) Period 2007 – 2011



Under Aviation Act no.1, 2009, Article 357, para. 5:

'Recommendation(s) made by KNKT / NTSC must and be immediately followed-up by involved parties'

THANK YOU

" Non Sibi Sed Patriae " - not for self but country

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