

360° PANEL – APPROACH PATH AND ENERGY MANAGEMENT

Safety in Aviation
Forum for Europe

Hotel nhow Brussels Bloom



Your safety is our mission.

An Agency of the European Union 

Slido poll question 1

- How many stakeholders are involved in the approach path management?
- a) 1,
- b) 2,
- c) 3,
- d) more than 3.



Introduction

- Why Approach path management is considered as a high priority safety issue?
- Safety issue assessment completed by CAT Aeroplanes collaborative analysis group in May 2022
- Resulted in 19 mitigating actions proposed to contain this safety issue
- Next steps: Best Intervention Strategy (impact assessment), then European plan for aviation safety (EPAS)



360° PANEL – APPROACH PATH AND ENERGY MANAGEMENT

- **Laszlo Ekes**, Head of Safety, Security and Compliance, Wizz Air Malta
- **Gunter Ertel**, System Safety - Senior Program Manager, Boeing
- **Christopher McGregor**, Flight Safety Officer, ATR
- **Gabor Vass**, Head of the Approach unit, HungaroControl, representing CANSO
- **Andre Vernay**, Human risk programme manager, DGAC France
- Moderated by **Renee Pelchen-Medwed**, Senior Domain Safety Risk Manager, EASA

Slido poll question 1 - results

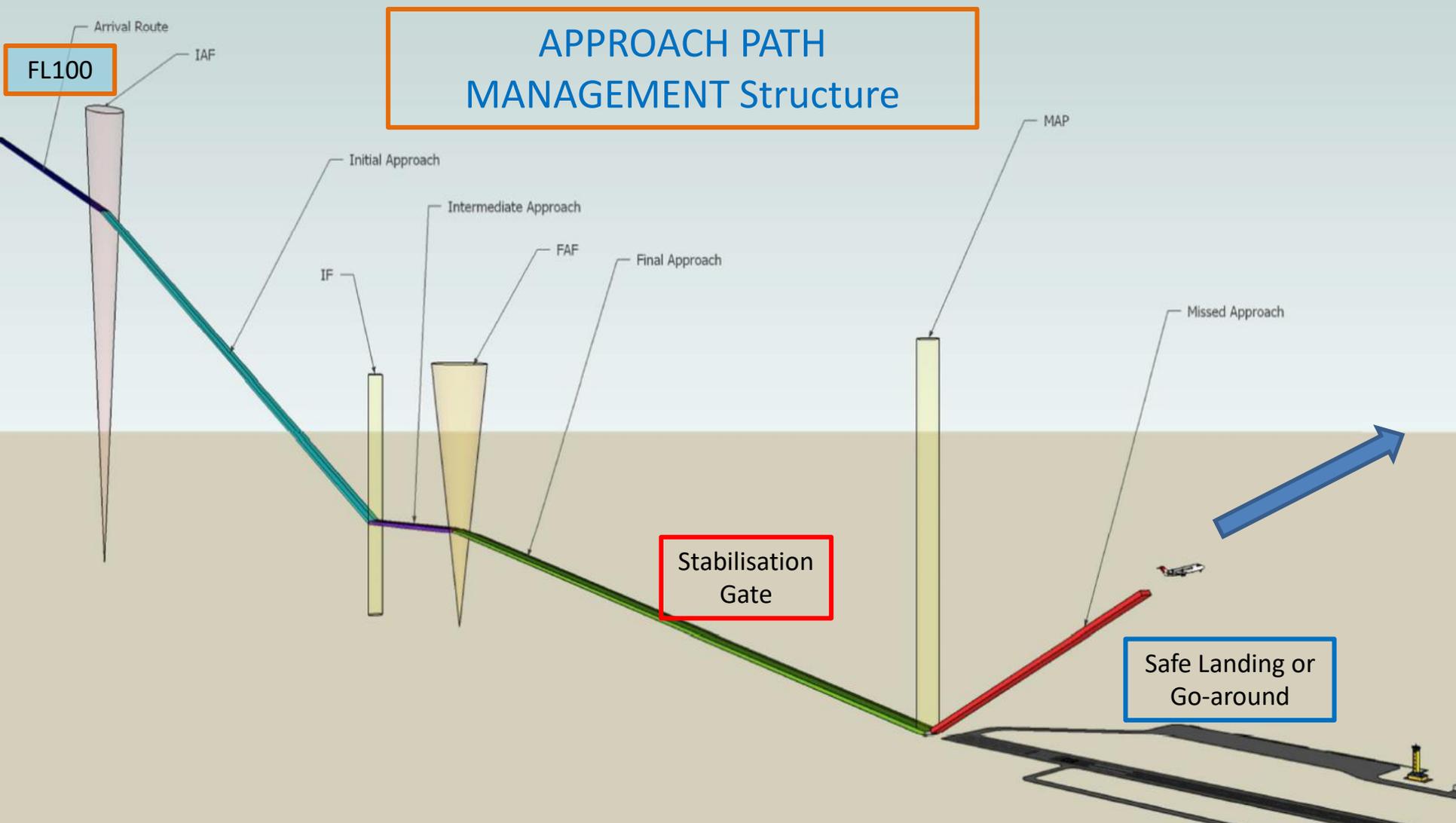
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Approach path management



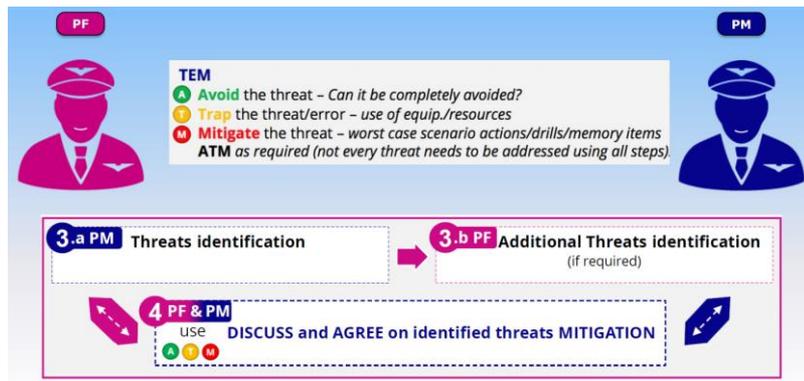
APPROACH PATH MANAGEMENT Structure



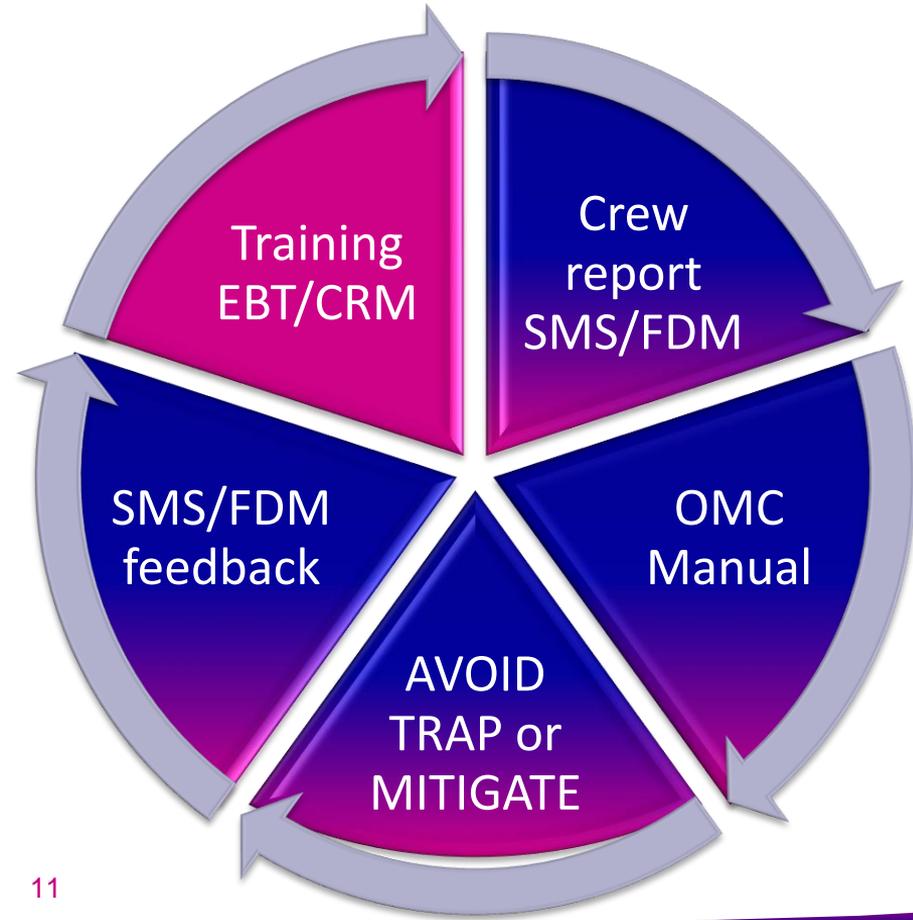
Approach path management

TEM in Approach Path Management

- TEM 'focused' crew briefing - Preparation
- Identification of threats and risk mitigation actions -> **ATM**
- TEM 'promotion' during CRM trainings
- Development of guidelines
- SOP Trainer - practise
- SIM (EBT) and crew consultation session



TEM in Approach Path Management



- The concept shall be understood and used
- It can be adopted to any situation
- Organisational culture, policies, procedures are needed

Does the
successful
approach
depend only
on flight
crew?

design of the
approach
procedure,
infrastructure,
aircraft, ANSP,
oversight of
infrastructure

Regulatory
oversight to ensure
implementation,
effective APM
monitoring and
management

sharing best
practices (safety
promotion)

ANSP Procedures,
timely
interventions,
communications

Approach path management

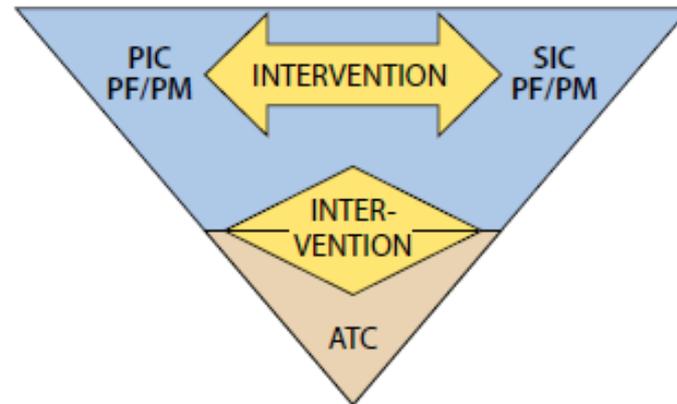
Slido poll question 2

- Safe approach and landing depend on:
- a) working on stable approach criteria/gates,
- b) energy management throughout the approach, not only focusing on stabilisation gates,
- c) communication between pilots and ATC,
- d) approach trajectory,
- e) technologies intended to improve safety,
- f) all of above,
- g) none of these

Safe landing concept

Stable approach and safe landing concept

- Safe arrival planning and descent
- Safe approach, landing concept
- Stabilised approach and landing
- Go-around policy
- Decision-making and pilot monitoring duties
- Crew training



Safe landing concept

- Aircraft stabilized attitude/pitch
- Crossing the threshold at appropriate speed
- Monitor appropriate speed reduction from the threshold until touchdown
- Touchdown at the appropriate point on the runway
- Appropriate and timely use of retardation devices such as speed brake, reverse and brakes
- *Initiate a go-around if appropriate speed, speed reduction, or touch down point is not achieved*



GO-Around Policy

It is one of the most effective tool to prevent approach and landing accidents:

- must be performed when any flight crew member calls for it
- execution should neither be delayed nor discussed
- can be initiated at any time during approach and landing until the selection of reverse thrust
- Once initiated, must be completed; and
- A pilot should never have to justify a go-around decision

Pre-flight	Pre-depart	Cruise	Top of descent	Descent	Pre-approach	Approach	Stabilised Gate	DH/DA	Below DH/DA
Training Awareness Bulletins Discussions Familiarity with SOPs	Briefing potential of go-around and contingency	Update arrival information Discuss approach, go-around and diversion	Brief STAR, instrument approach, go-around/missed approach, diversion and contingency	Update arrival information improve situational awareness	Brief specifics including, monitoring, task sharing, call outs for go-around	Monitor, cross-check, update situational awareness Prepare for decisions	From this point until touchdown, decide to continue or go-around	Decide to continue or go-around	Decide to continue or go-around

Decisions can be planned and rehearsed and relative merits tested for benefit in a variety of situations

Decision making is dynamic, and relies on situational information, policies, and procedures

Decision making is dynamic and relies on procedures and previously briefed options

Decision Auto-reactive



Compliant approaches

ATCO training syllabus on aircraft energy management

Manufacturers' safety initiatives



SAFE360 Approach Path Management

Brussels Sept 2022



ATR

- **Technology is available to support APM,**
 - LPV
 - LNAV
 - VNAV
 - RNP-AR
 - **Enhanced vision systems**
- **But continuous improvement of our product has to be matched by continuous infrastructure improvement.**
- **Including enhanced threat & error management**
- **FDM to support approach design & SOPs**



Approach Path Management

- Effective decision-making on approach
- Reinforced briefing in line with the situation of the day, include the identification & mitigation of the threats.
- The in-service feedback highlighted:
 - A stabilized approach must remain all the way to touchdown.
 - Follow the flight path until touchdown, do not duck & dive.
 - Be ready for a Go-around.
- Join us at
<https://safety.atr-aircraft.com>

F U T U R E



Manufacturers' safety initiatives

Continuous descent approaches and approach path management

Slido poll question 3

→ Now, after the session, if you hear approach path management safety issue, what is **the first word** that comes to your mind to describe it?

Wrap up

Thank you for your participation!



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