FLIGHT SAFETY FOUNDATION

ICAO GRSS Lima
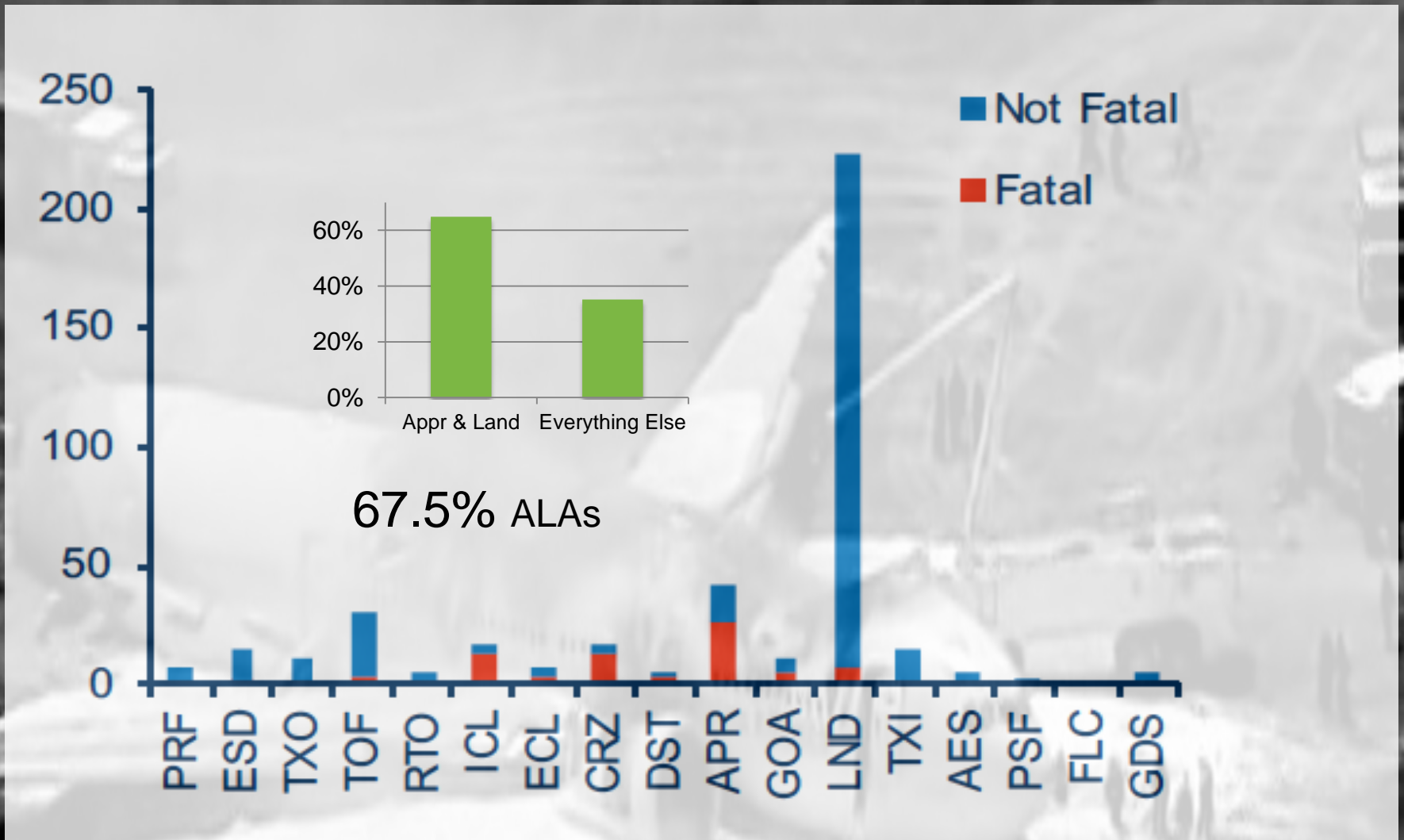
Capt. Bill Curtis

Chair FSF IAC

Co-Chair GADM&E Project

21 Nov, 2017

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Accidents per Phase of Flight (2011-2015)

67.5% ALAs

Inset chart:
- Appr & Land: ~62%
- Everything Else: ~35%

Main chart legend:
- Not Fatal (blue)
- Fatal (red)

X-axis categories: PRF, ESD, TXO, TOF, RTO, ICL, ECL, CRZ, DST, APR, GOA, LND, TXI, AES, PSF, FLC, GDS

Y-axis: 0, 50, 100, 150, 200, 250

Why not just eliminate Unstable Approaches?

Runway Excursions

48%
Follow Unstable Approaches

52%
Follow Stable Approaches

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Let's look at this another way…

Reason's Swiss Cheese Model

"a trajectory of accident opportunity"

Stable Approach Defense

Go Around Defense

Eliminating Unstable Approaches

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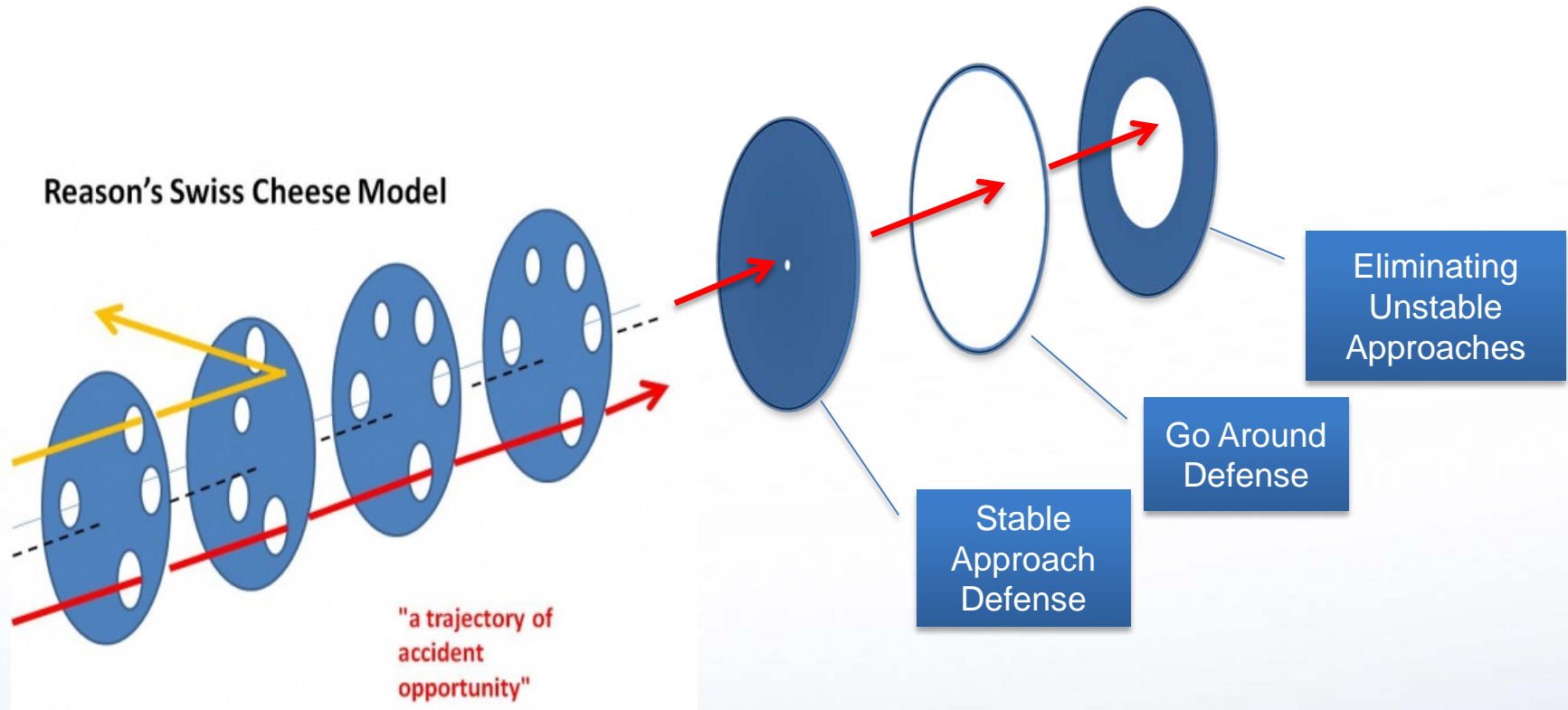
FSF:SA,SL,& GA QA Cycle

PLANNED
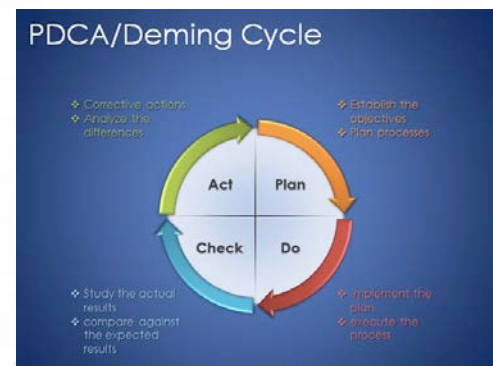- ✓ ALAR TASK FORCE

DID
- ✓ ALAR Tool Kit & Killers in Aviation Publication

CHECKED
- ✓ Stable Approach Policies - successful
- ✗ SL & Go Around Policies - not successful

ACT
- ✓ GADM & E Project

FINAL REPORT TO FLIGHT SAFETY FOUNDATION

Flight Safety Foundation
Go-Around Decision-Making
and Execution Project

Tzvetomir Blajev, Eurocontrol
(Co-Chair and FSF European Advisory Committee Chair)
Capt. William Curtis, The Presage Group
(Co-Chair and FSF International Advisory Committee Chair)

JANUARY 2017

GADM&E Finding

- Stable Approach objective and Go Around (Discontinued Approach) objective are different – time to separate them
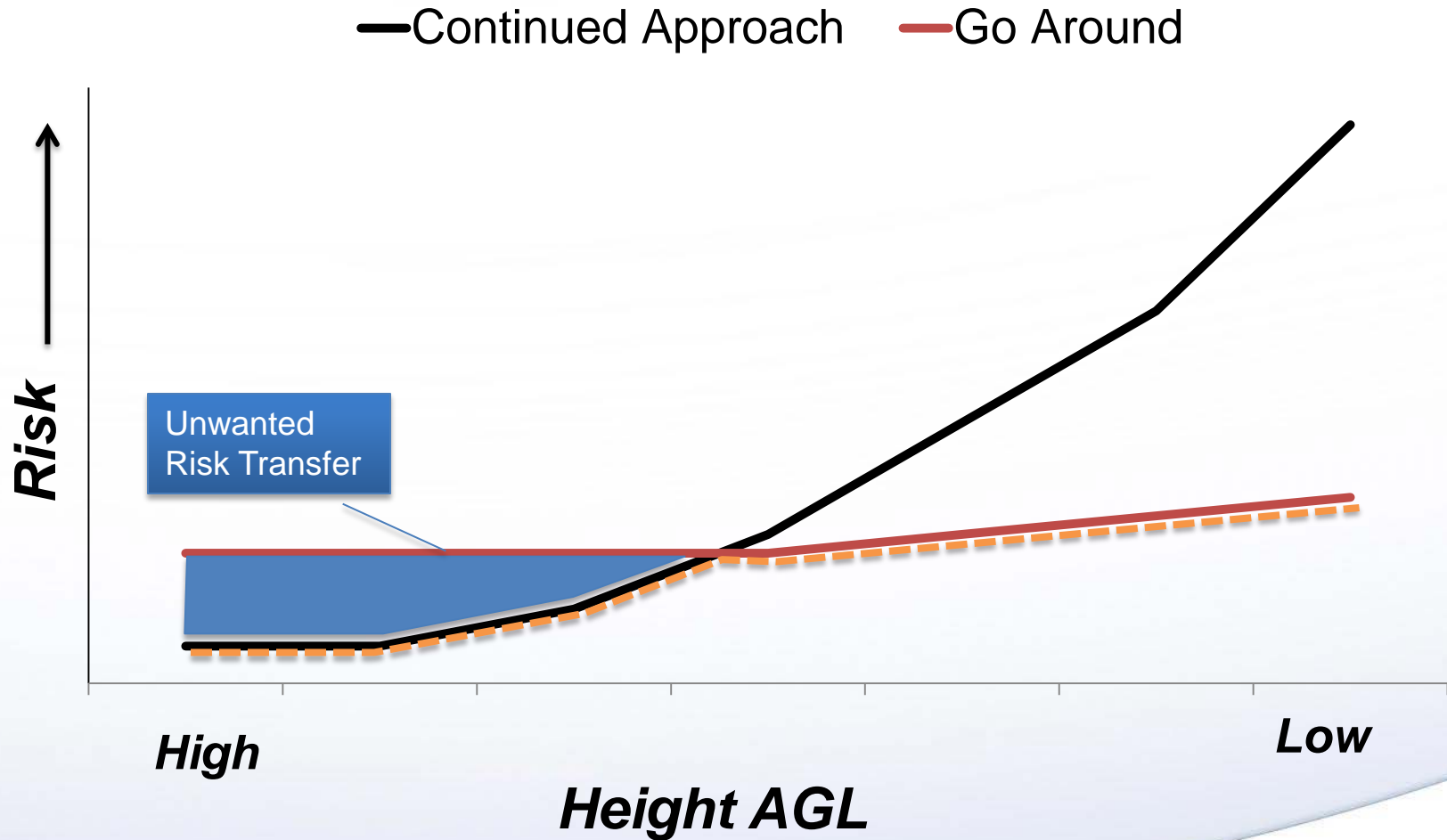
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What about Transfer of Risk; Approach and Landing … to Go Around?

Dilemma…

- We want flight crews to follow GA Policies
- We don't want to have a go-around for every unstable approach
- Can't have both…

Continued Approach / Go Around Risk Relationship

Continued Approach — Go Around

Risk (y-axis)

Height AGL (x-axis): High — Low

Unwanted Risk Transfer

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GADM&E Finding - Management
Psychology of Systemic and Chronic Non Compliance

- Where is Management?!

- Management is disengaged from the issue
  - 55% stated they didn't know company's rate of compliance

- Of those who stated they knew
  - Only 12% estimated close (10%)

GADM&E Recommendation - ICAO

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- Communication procedures should be objective (i.e., they should state facts about the condition. This minimizes authority gradients within the cockpit.
- Communication procedures should be sequential and escalate (i.e., if the condition is not corrected to within limits, active calls continue and escalate to a defined point at which a new directive call is mandated). For example, if an "unstable" call at 500 ft AGL does not result in successful corrective action, the "unstable" calls continue every 100 ft until the condition is corrected or a critical point is reached, and then a directive call is made (e.g., "go-around"). This maintains

DM Recommendation 13. Operators should ensure no fault go-around policies are documented, implemented and understood by management and flight crew.

DM Recommendation 14. Operators should ensure that unstable approach and go-around policies are concise and unambiguous, including follow-up procedures and expectations for noncompliance.

DM Recommendation 15. Operators should communicate industry rates and internal go-around compliance rates, measures, targets and goals of performance to flight crews and the managers involved in achieving them. Operators also should commu-

DM Recommendation 16. State and industry audit programs, such as the IATA Operational Safety Audit (IOSA), should establish go-around compliance standards and recommended practices for operators to manage go-around compliance.

Capt. William Curtis, The Presage Group
(Co-Chair and FSF International Advisory Committee Chair)

and landing phase, including in the touchdown zone. Energy management monitoring and alerting systems will minimize the need for crew-initiated calls.

DM Recommendation 9. Operators should create standard pre-descent briefing guidelines that include:

- Environmental risk factors;
- Instability factors that will result in a go-around;
- A review of standard calls; and,
- Decision making in the landing phase.

DM Recommendation 10. Operators should create standard pre-approach briefing guidelines that update the pre-descent briefing at a low-workload period just before the approach is begun.

DM Recommendation 11. Operators should understand their respective managers' and flight crews' situational awareness levels and psychological profiles for managing internal go-around policies.

DM Recommendation 12. Operators should provide training to enhance psychosocial awareness and management, and how they contribute to noncompliant decision making.

to safety organizations such as Flight Safety Foundation.

DM Recommendation 19. The aviation community should develop and implement an initiative that communicates the industry's go-around compliance rate, and the risk-reduction potential that improved performance could have on the industry-wide ALA rate and the overall accident rate. This is a role suited to regulators, global associations and safety organizations such as Flight Safety Foundation.

DM Recommendation 20. The aviation community should establish a new information-sharing program to provide a method for operators to share effective strategies to improve go-around compliance rates. Alternatively, the information should be incorporated into an existing program.

DM Recommendation 21. The industry should establish an identifiable "label" for the threat/causal effect of the phenomenon of noncompliance with go-around polices. As labels such as controlled flight into terrain (CFIT) or loss of control (LOC) make it easier for the industry to relate, discuss, understand and manage a phenomenon, a label for this phenomenon will do the same, and in so doing, will help provide a foundation for essential awareness.

GADM&E Recommendations - ICAO

2 New Standards recommended

- Operators, through FDM, must track go-around compliance
- Operators, should set go-around compliance rate targets

1 Current Standard Doc 8168 Procedures PANS OPS

- Elements of a stable approach; change 'shall' to 'should'

ATS Providers

- several GADM&E recommendations for simplified GA procedures

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"There is no other single decision that can have as much impact on accident reduction today as the decision to go-around"

Cpt. Bill Curtis
Chair, FSF IAC
Co-Chair, FSF GADM&E Project

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