

# **Aviation Safety Management – The Way Ahead**

**CAPTAIN SAMIR (SAM) KOHLI**

# LEST WE FORGET...

Linate - 2001



**¡Non-compliance with standards!**

# MANGALORE - 2010



**¡Non-compliance with standards!**



# QUITO, ECUADOR – 2012 (OLD AIRPORT)

Playing 'Chicken' with aircraft ... Who will blink first???



**¡Non-compliance with standards!**

# JAIPUR, INDIA - 2014



**Tree 52 m S of  
runway edge at  
1340m down the  
2780m Rwy 27.**



**¡Non-compliance with standards!**

- Fog
  - Diverted Delhi-Jaipur
  - Unable to land
  - Visibility Below Minima
  - Low on fuel
  - Landed manual
  - Burst tyres
  - Runway excursion
  - ¡HIT A TREE!
- Questions about Pilot training & CRM.

**My Qs:**

**¡¡¡A TREE !!! ¿¿INSIDE  
RUNWAY Strip (Code 4D  
150m strip)??**

**¡¡¡ARFF could not find its  
way to the aircraft due to  
Fog!!!**

# MH370 - 2014



Lithium Batteries?

Unsheathed electrical wires?

Unlawful interference?

...?

Satellite tracking?

Flight following?

**¡Non-compliance with standards!**

# MH17 - 2014



¿So, who is responsible for our safety?

# WHERE ARE WE?

**Commercial aircraft accident rate < 0.5 per million.**

**A focused and consistent reduction achieved in recent years.**

**However,**

- February 16 – **Nepal Airlines Flight 183**, all 18 on board.
- February 21 – **Libyan Air Cargo Air ambulance Flight**, all 11 on board.
- March 8 – **Malaysia Airlines Flight 370**, all 227 passengers and 12 crew
- July 17 – **Malaysia Airlines Flight 17**, all 283 passengers and 15 crew
- July 23 – **TransAsia Airways Flight 222**, 48 of the 58 on board.
- July 24 – **Air Algérie Flight 5017**, all 112 passengers and 6 crew
- August 10 – **Sepahan Airlines Flight 5915**, 39 of the 48 on board.
- Land Helicopter Operation (including Medical Helicopters) accident rate is about 40 times more than Commercial Aircraft accident rate.

**We often hear:**

- It had to happen!  
We are not surprised!  
Avoidable!



# ...SO WHAT WENT WRONG?

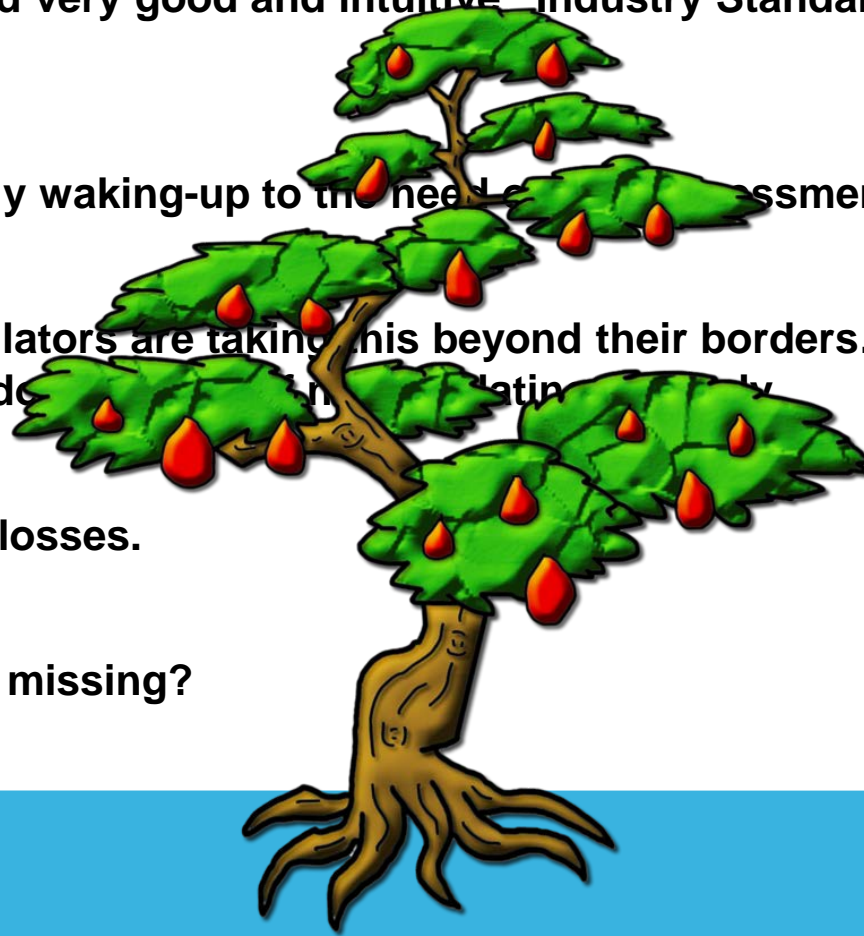
ICAO has developed very good and intuitive “Industry Standards and Best Practices”

Industry is s l o w l y waking-up to the need for assessments as a way of life.

FAA and other regulators are taking this beyond their borders...by auditing other regulators and developing international standards.

Yet, we have these losses.

WHY? What are we missing?



# LETS TALK FOOTBALL



# SO, WHO WON THE MATCH?

Germany's Manuel Neuer won the World Cup 2014 Golden Glove award for the tournament's best goalkeeper after helping his side to a 1-0 victory over Argentina.

So, did he win the match?

Was he solely and alone responsible for Germany's world cup performance?

Would Germany have won if **ONLY** he had played with others remaining slack and listless?



# LETS TALK BRAZIL

## **Brazil is the most successful national team in the history of the World Cup**

- won five titles
- second-place, third-place and fourth-place finishes twice each
- one of the countries besides Argentina, Spain and Germany to win a FIFA World Cup away from its continent (Sweden 1958, Mexico 1970, USA 1994 and South Korea/Japan 2002).
- The only team to have played in all FIFA World Cup editions without any absence nor need for playoffs.
- has also the best overall performance in World Cup history in both proportional and absolute terms with a record of 70 victories in 104 matches played, 119 goal difference, 227 points and only 17 losses.

**Lost 1-7 to Germany in 2014 Semi-finals.**

**Was missing the star player Neymar to injury.**

## **One man show Vs. team effort?**



**You could have the best trained and qualified Pilot in the world and yet have an accident! (Remember Tenerife?)**

# YOUR TEAM TO MANAGE AVIATION SAFETY

<b>Manager:</b>	<b>Your National Government (Min. of Civil Aviation or equivalent)</b>
<b>Coach:</b> NTSB, AAIB	<b>ICAO and an Independent Accident Investigation body (e.g. etc.)</b>
<b>Captain:</b>	<b>National Regulator (e.g. FAA, EASA, DGCA etc.)</b>
<b>Forwards:</b>	<b>License holders “Accountable Managers”</b>
<b>Midfielders:</b> Regulator	<b>Managers in License holders organization, Auditors of the</b>
<b>Defenders:</b> Investigators, ...	<b>Line Management, Ground crew, Engineers, Air Accident</b>
<b>Goal Keeper:</b>	<b>Pilots</b>



# PRIMARY CIVIL AVIATION REGULATION

## ICAO An 14 Vol 1 Chapter 9 - Response time

- 9.2.23 The operational objective of the rescue and fire fighting service shall be to achieve a **response time not exceeding three minutes to any point of each operational runway**, in optimum visibility and surface conditions.
- 9.2.24 **Recommendation.**— The operational objective of the rescue and fire fighting service should be to achieve a response time not exceeding **two minutes to any point of each operational runway**, in optimum visibility and surface conditions.
- 9.2.25 **Recommendation.**— The operational objective of the rescue and fire fighting service should be to achieve a response time **not exceeding three minutes to any other part of the movement area**, in optimum visibility and surface conditions.

## Civil Aviation Regulation:

- 9.2.21 A response time **not exceeding three minutes** shall be maintained by the rescue and fire fighting services **for any point of each operational runway and for any other part of the movement area.**
- 9.2.22 The operational objective of the rescue and fire fighting service shall be to achieve a response time **not exceeding two minutes to any point of each operational runway**, in optimum visibility and surface conditions.

**The Civil Aviation Regulations contain ONLY Standards. No Recommendations.**

**“We want to follow ICAO in its total, with no deviations from any item, not even Recommendations”!!!**

**Zero error syndrome? Lack of understanding of Risk management?**

# PRIMARY CIVIL AVIATION REGULATION

## ICAO An 14 Vol 1 Chapter 3 - Dimensions of runway end safety areas

**3.5.2** A runway end safety area shall extend from the end of a runway strip to a distance of at least 90 m.

**3.5.3 Recommendation.—** *A runway end safety area should, as far as practicable, extend from the end of a runway strip to a distance of at least:*

- 240 m where the code number is 3 or 4; and
- 120 m where the code number is 1 or 2.

*for Standards the operative verb “shall” is used, and for Recommended Practices the operative verb “should” is used.*

## Civil Aviation Regulation:

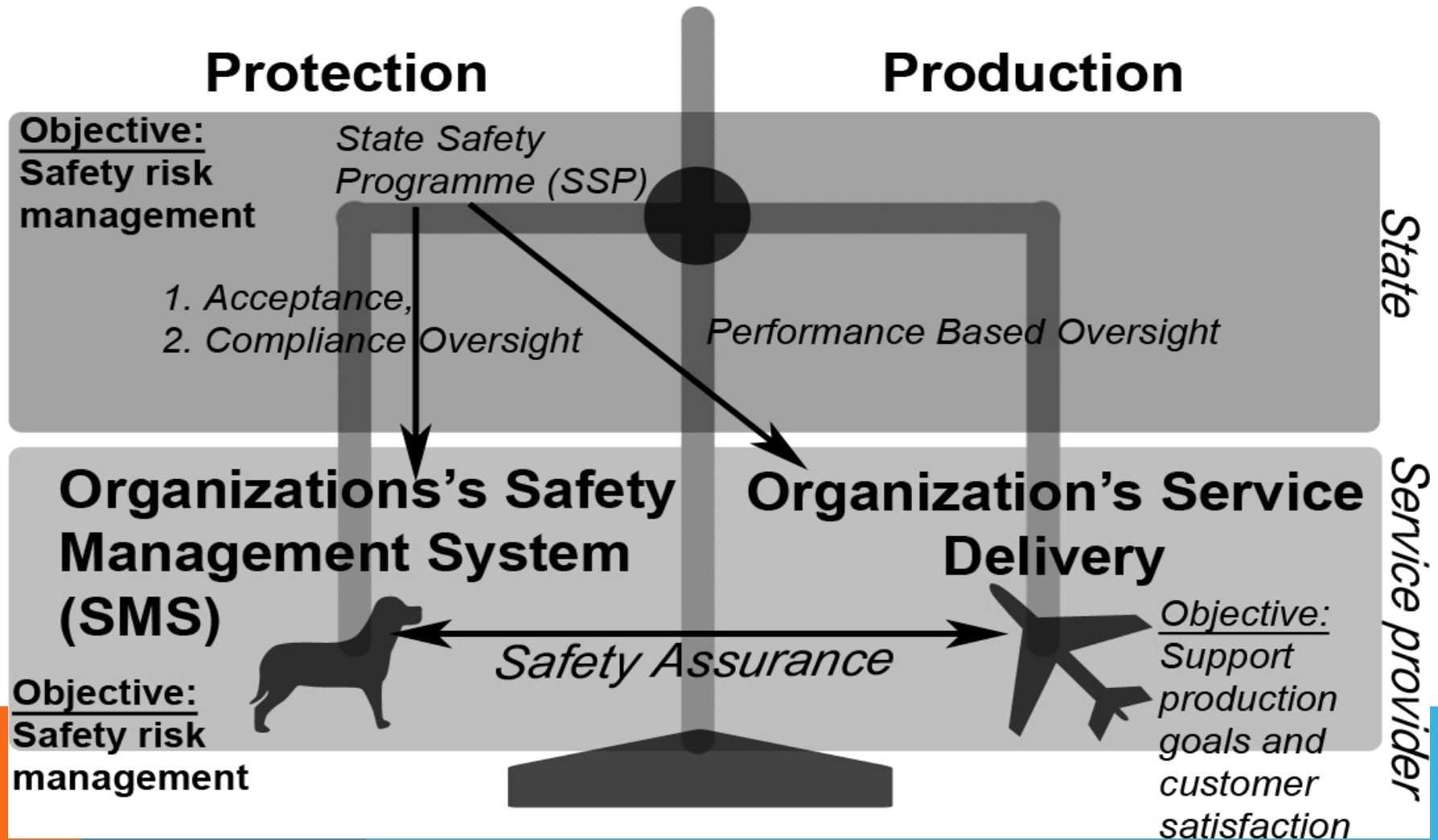
- Dimensions of runway end safety areas
- **3.5.2** A runway end safety area shall extend from the end of a runway strip to a distance of at least 90 m.
- **3.5.3** A runway end safety area, as far as practicable, should extend from the end of a runway strip to a distance of at least :
  - 240 m where the code number is 3 or 4; and
  - 120 m where the code number is 1 or 2.

Wherever the word ‘should’ is used in the requirement contained in this CAR, it is expected that endeavor is made to comply with the requirement by the aerodrome operator. In case of noncompliance of such requirement, the aerodrome operator shall take action in accordance with para 1.2.2 of the CAR.

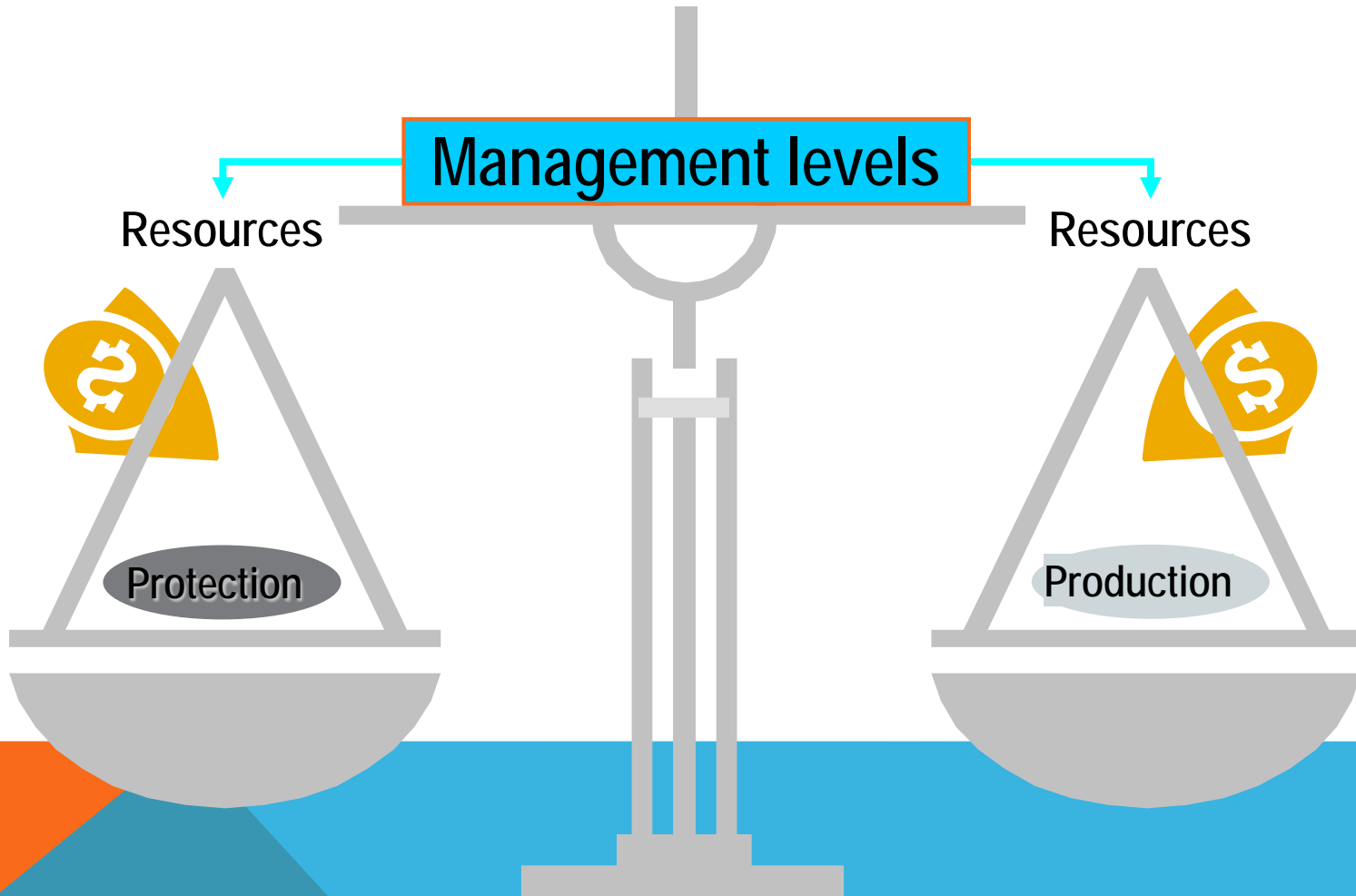
Those standards which include phrases such as “if practicable” still require an exemption to standards when license holder wish to take advantage of non practicability of full compliance.



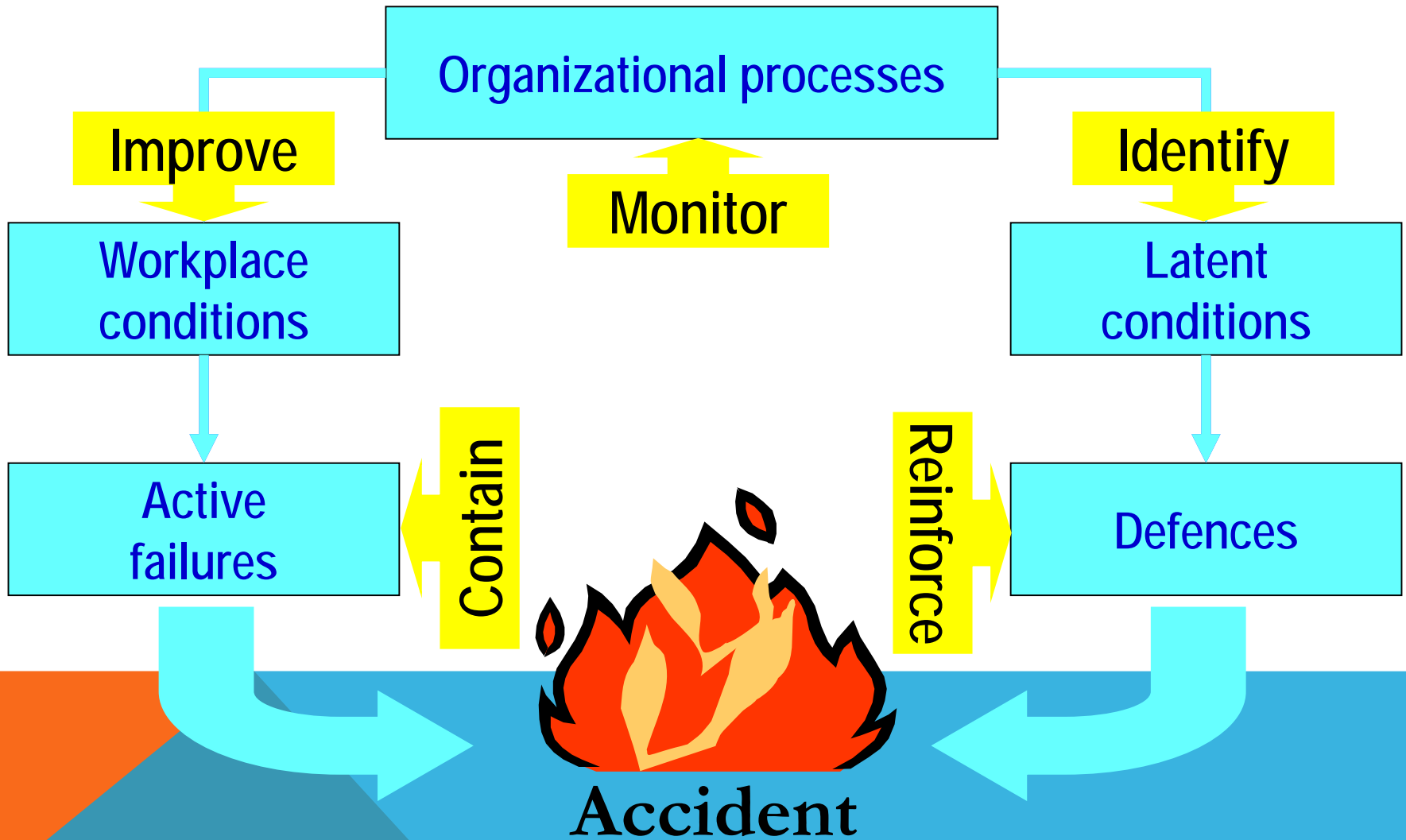
# THE “TWO P’S”



# DILEMMA OF THE TWO P'S



# SAFETY IS AN ORGANIZATIONAL PROCESS



# WHAT IS THE WAY AHEAD?

**Move from the Individual to the Organization.**

**Focus on the Primary Civil Aviation Regulation.**

**Focus on Regulators understanding and application of Hazard Identification and Risk Management.**

**Audit the Process and Procedures, not the result.**

**Develop Organizational skills and a thought process for management of risks.**

**Safety is NOT everybody's business.**

**Safety is the business of an AOC holders accountable manager.**

**Act to strengthen accountability of the senior management.**

- Pilots of an AOC holder flew without Pre-flight medicals.
- Violation consistent over a 3 month period.
- Regulator suspended their (Pilots) licenses.
- No action against the AOC holder!

**WHY? It is not the regulators job to discipline employees that don't work for them.  
Discipline the AOC holder!**

# TO SUM-UP...

**We take a lot of pain and interest in strengthening the Management of our soccer/football team by hiring only the best Manager, Coach and Captain. Then why to manage our Aviation Operation we keep focus only on the Goal Keeper?**

**None of us can do what all of us can do and value of teamwork is most important in a high value, high risk operation like Aviation.**

**Human Error is a symptom, not a disease. It indicates to the disease called “Poor Organizational Management”.**

**And that, ladies and gentlemen, is where the future of safety Management lies.**

# REMEMBER ...

**THE MANAGER:** THE GOV'T. DEPT. RESPONSIBLE FOR CIVIL AVIATION

**THE COACH:** ICAO & AN INDEPENDENT ACCIDENT INVESTIGATION BODY

**THE CAPTAIN:** THE REGULATOR

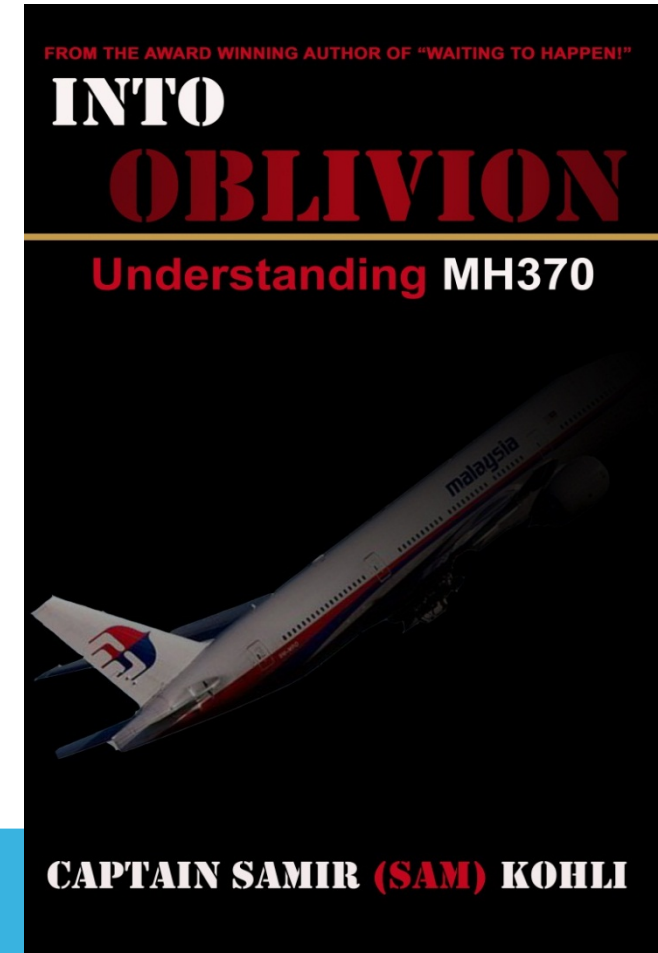
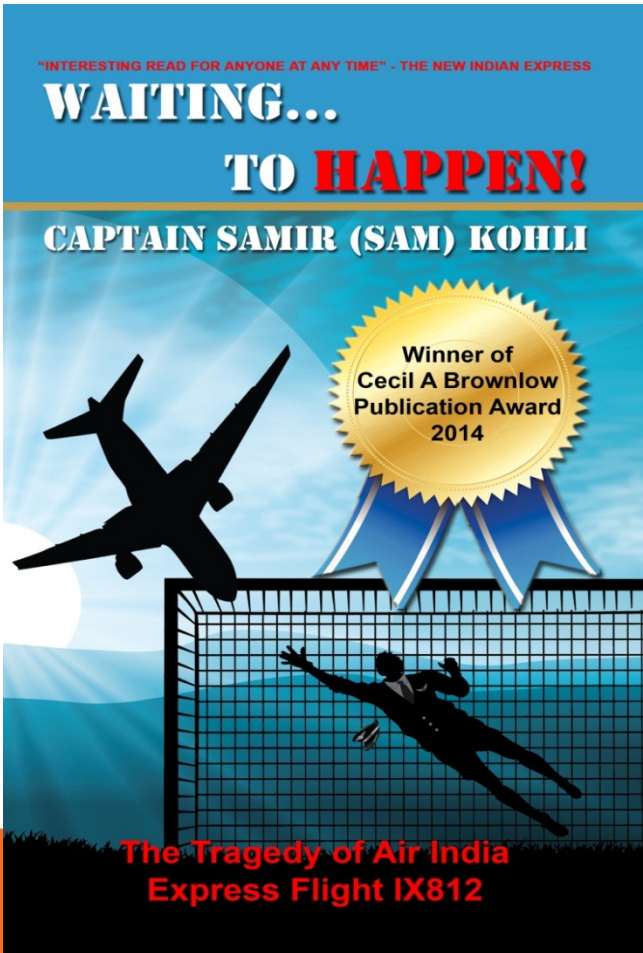
**RULES OF THE GAME:** THE PRIMARY CIVIL AVIATION REGULATION



# QUESTIONS?

*“One Person, One Pen and One Book can change this world.”*

– Ms. Malala Yousafzai  
Nobel Prize - 2014



[www.theerringhuman.blogspot.com](http://www.theerringhuman.blogspot.com)