

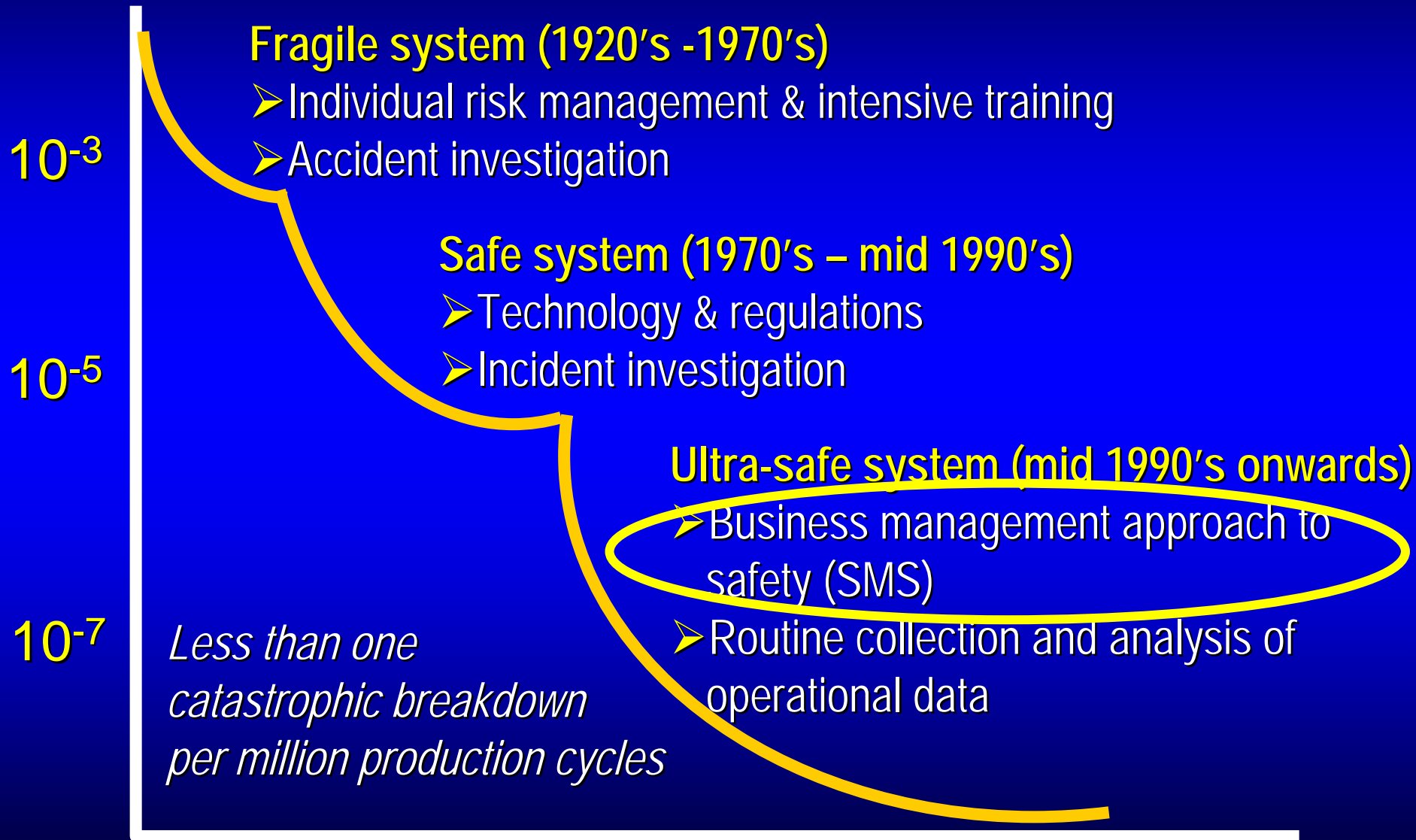
The background features a large, semi-transparent watermark of the International Civil Aviation Organization (ICAO) logo. The logo consists of a globe with latitude and longitude lines, surrounded by a laurel wreath. Above the globe, the acronym 'ICAO' is written in a stylized font, and below it, the Chinese characters '国际民航组织' are visible. The entire logo is set against a dark blue background.

# Session No. 2

## Introduction to Safety Management

SMS Senior Management Workshop  
Rome, 21 May 2007

# The First Ultra-Safe Industrial System



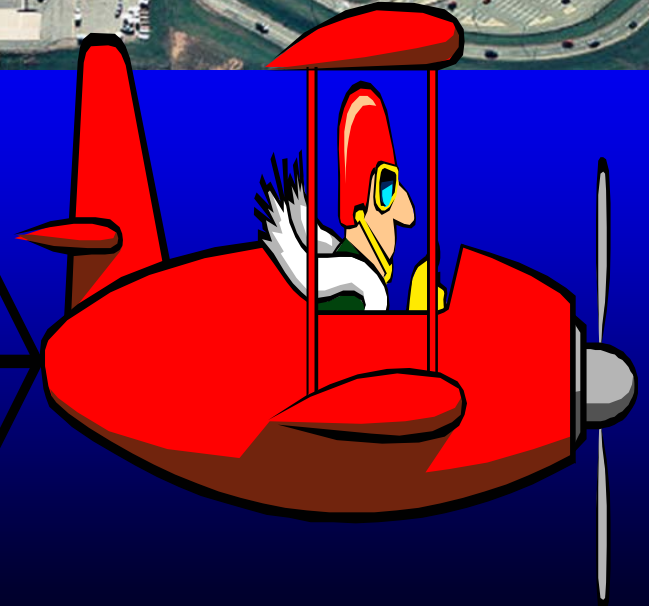
# Truth or Falsehood?

*In this  
unit safety is  
the first priority*



*In this  
airport  
safety  
is first*

*In this airline,  
safety comes first*



# Truth

What is the fundamental purpose of a business organization?

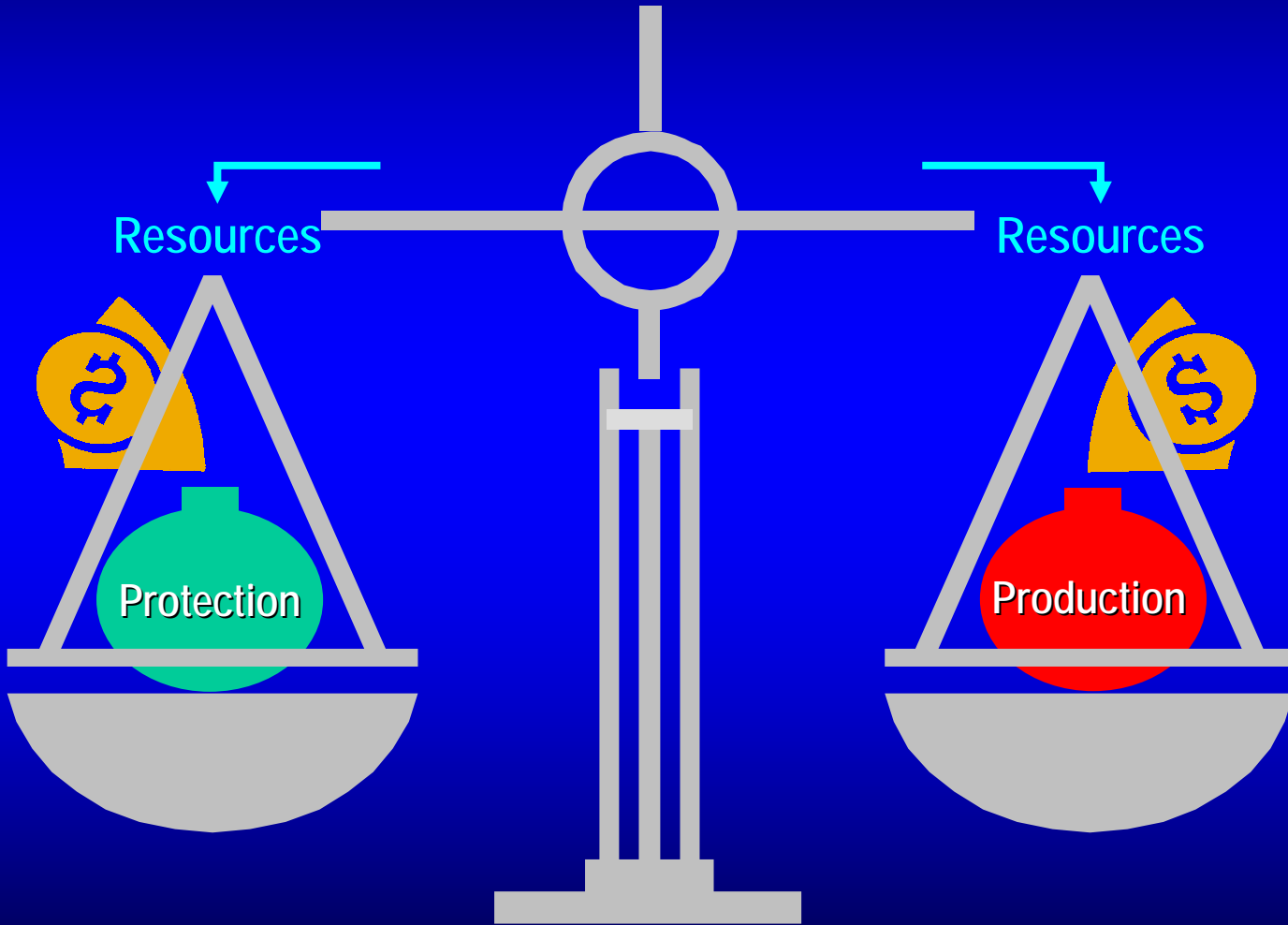


To achieve specific production goals

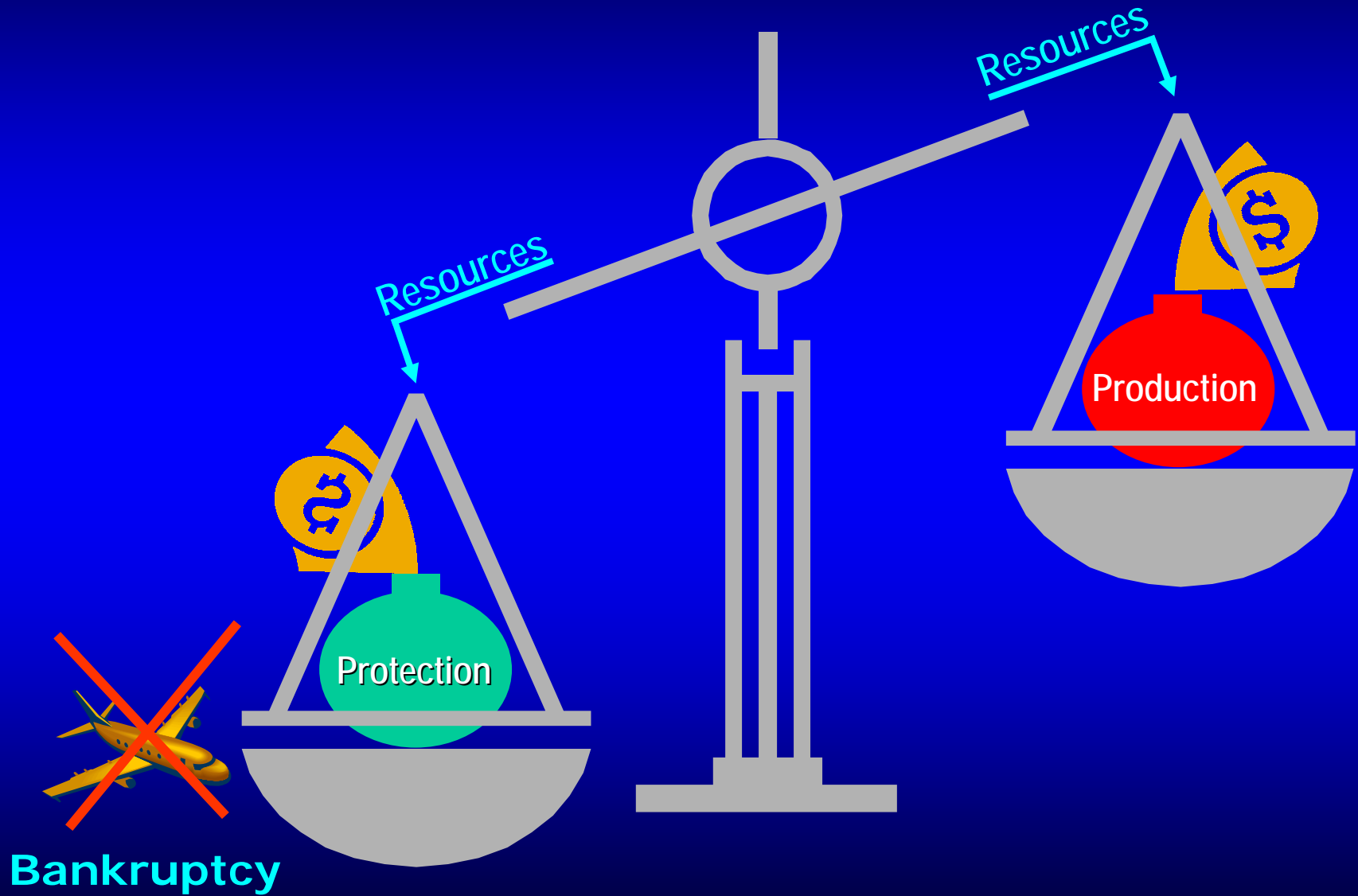
# The Business Management Perspective

- To achieve specific production goals, service providers must manage **core business processes**
  - ✓ Managing safety is one such business process
- ☑ Safety management is a **core business function** just as financial management, HR management, etc.

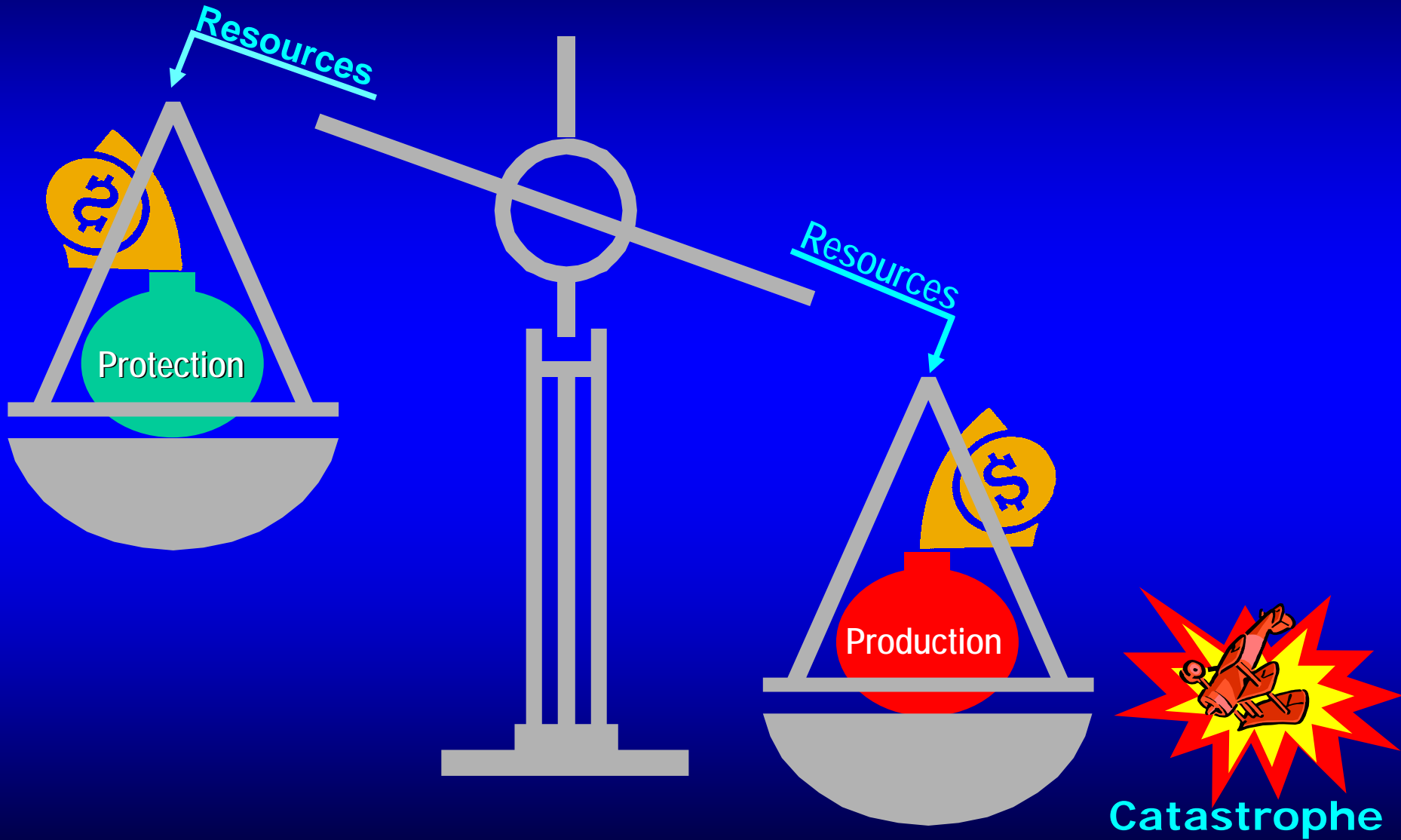
# A Balanced Compromise



# The Dilemma

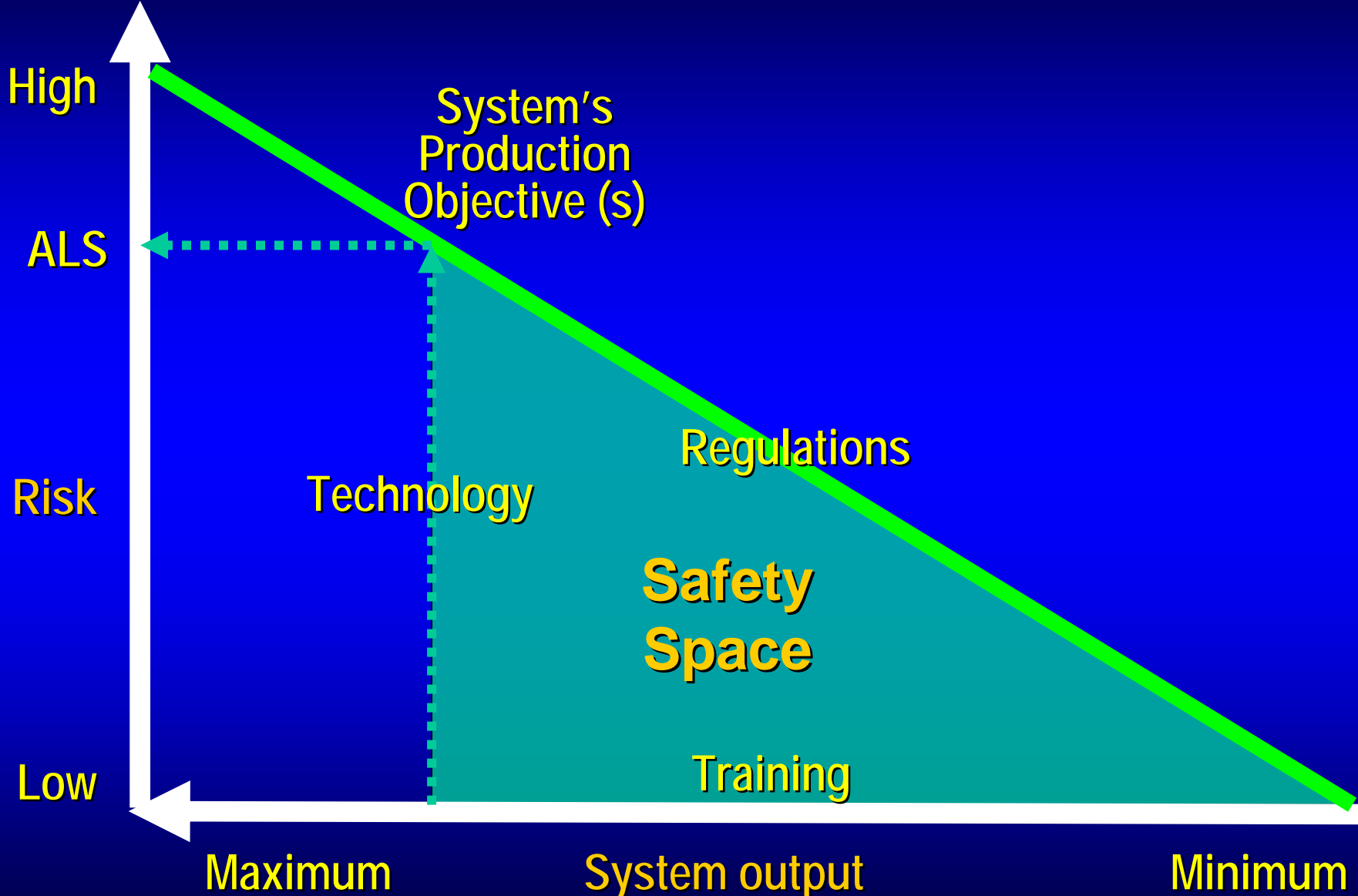


# The Dilemma





# Building Safety Resilience...



# ...Upon Business Management Practices

- Safety issues are a **byproduct** of activities related to production/services delivery
- Managing safety – A constant analysis of an organization's resources and goals leading to
  - ✓ Balanced and realistic **allocation of resources** between protection and production goals
  - ✓ Support of the **needs** of the organization

# The Constant Balance

- Provision of services require a constant balance between
  - ✓ **production goals** (*maintaining regular aerodrome operations during a runway construction project*)
  - ✓ **safety goals** (*maintaining existing margins of safety in aerodrome operations during runway construction project*)
- It **may not be** cost-effective to eliminate many hazardous conditions, even when operations must continue

# Two Key Definitions

- **Hazard** – Condition, object or activity with the potential of causing **injuries** to personnel, **damage** or **loss** of material, or **reduction of ability** to perform a prescribed function
- **Risk** – The chance of injury, damage/loss or reduction of ability to perform, measured in terms of **probability** and **severity**
  - ✓ *A wind of 15 knots blowing directly across the runway is a **hazard***
  - ✓ *The possibility that a pilot may not be able to control the aircraft during take off or landing, resulting in an accident, is one **risk***

# Risk Assessment

Risk probability	Risk severity				
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
5 – Frequent	5A	5B	5C	5D	5E
4 – Occasional	4A	4B	4C	4D	4E
3 – Remote	3A	3B	3C	3D	3E
2 – Improbable	2A	2B	2C	2D	2E
1 – Extremely improbable	1A	1B	1C	1D	1E

# Risk Tolerability

Assessment risk index	Suggested criteria
<b>5A, 5B, 5C, 4A, 4B, 3A</b>	Unacceptable under the existing circumstances
<b>5D,5E, 4C, 3B, 3C, 2A, 2B</b>	Risk control/mitigation requires management decision
<b>4D, 4E, 3D, 2C, 1A, 1B</b>	Acceptable after review of the operation
<b>3E, 2D, 2E, 1C, 1D, 1E</b>	Acceptable

# Safety management – Eight building blocks

- ① Senior management's **commitment**
- ② **Effective safety reporting**
- ③ Continuous monitoring through systems to **collect** and **analyse** safety data from normal operations
- ④ **Investigation** of safety events to identify systemic safety deficiencies rather than assigning blame
- ⑤ Sharing safety lessons through the active **exchange** of safety information

# Safety management – Eight building blocks

- ⑥ Integration of safety training for operational personnel
- ⑦ Effective implementation of Standard Operating Procedures (SOPs), checklists and briefings
- ⑧ Continuous improvement of the overall level of safety
  - ✓ An organizational culture that fosters safe practices, encourages safety communication and manages safety with the same attention to results as financial management



# Responsibilities for Managing Safety

These responsibilities fall into four basic areas:

- ① Definition of policies and procedures regarding safety
- ② Allocation of resources for safety management activities
- ③ Adoption of best industry practices
- ④ Incorporating regulations governing civil aviation safety

# Safety Management – Excuses and Fear

- ✓ Denial: ritualistic rejection of change
- ✓ Repair: cover-up, cosmetic adaptation denying progress
- ✓ Reform: engaging the will to change

