



Safety Management System Workshop



SPEAKER

Richard H. Wood
Certified Safety Professional
Aviation Safety Consultant



Background

- Professional Pilot – 6,000 Hours
- Professor – University of Southern California
- Author:
 - Aviation Safety Programs
 - Aircraft Accident Investigation

THE ECONOMICS OF AVIATION SAFETY





AVIATION SAFETY CONCEPTS

- Safety first?
- Randomness of Damage and Injury
- Zero Accident Rate?
- Multiple Cause or Single Cause?

AVIATION SAFETY TERMS

- Accident
- Incident
- Safety
- Risk





BUILDING AN AVIATION SAFETY PROGRAM

1. Who is in charge of the program?
2. What is the scope of the program?
3. What are the program goals and objectives?
4. Let's get organized.
5. Safety Program Development



PREVENTION METHODS

1. SET YOUR STANDARDS
2. COMPLY WITH YOUR STANDARDS
3. IDENTIFY HAZARDS
4. RESOLVE THOSE HAZARDS



RISK MANAGEMENT

1. RISK MANAGEMENT LOGIC
2. RISK ACCEPTANCE
3. RISK REJECTION

THEORY OF RISK



WHY DO PEOPLE TAKE RISKS?

Undisciplined

Time Pressure

Highly Motivated

Supervisory Pressure

Ignorant or Untrained

Action Tolerated

Correct Equipment
Not Available

Small Risk – Big Benefit



Risks... Change and Prevention

- Can we change risky behavior?
- Punishment: Does it prevent accidents?
- Are unintentional errors causes of accidents?
- Does punishment eliminate those errors?



Risks - Basic Risk Management

- Internal Reporting Systems
- Information Distribution Systems
- Aviation Safety Committees
- Aviation Safety Inspection Programs
- Aviation Safety Education and Training
- Aviation Safety Awards Programs



Risks... Preparation & Analysis

- Accident Preparation and Investigation
- Analytical Techniques
- When is an Aircraft Accident not an Accident?



ICAO

- 190 Member States
- Annex 13 – Aircraft Accident and Incident Investigation
- Definitions of “Accident”

JUNE 1983

DC-9 Air Canada

Dallas-Fort
Worth Texas
To
Toronto
Canada

Inflight Fire
Emergency
Landing at
Cincinnati,
Ohio

46 Passengers
23 Survivors
23 Fatalities

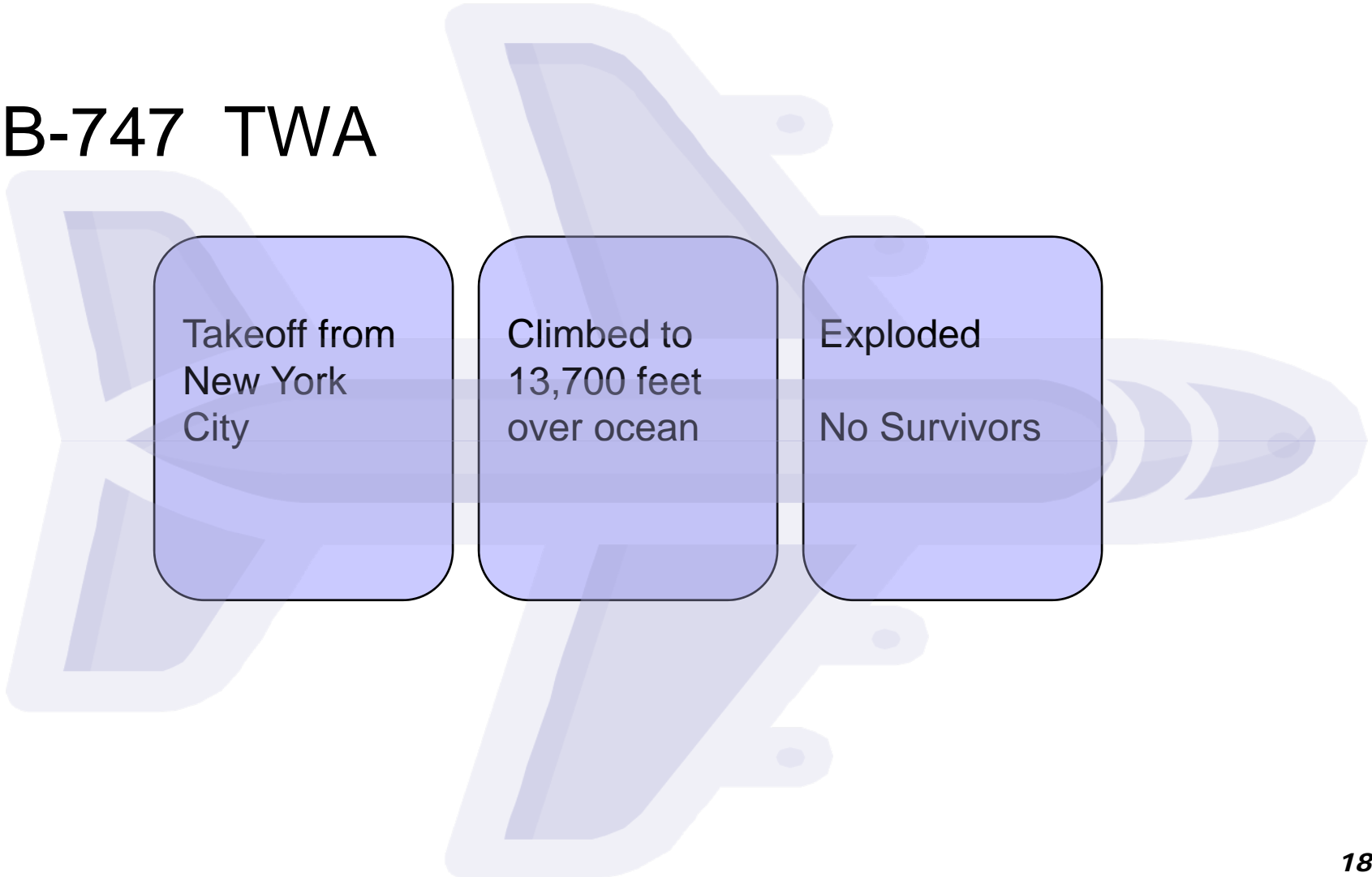
JUNE 1983 DC-9 Air Canada





JULY 1996

B-747 TWA



Takeoff from
New York
City

Climbed to
13,700 feet
over ocean

Exploded
No Survivors

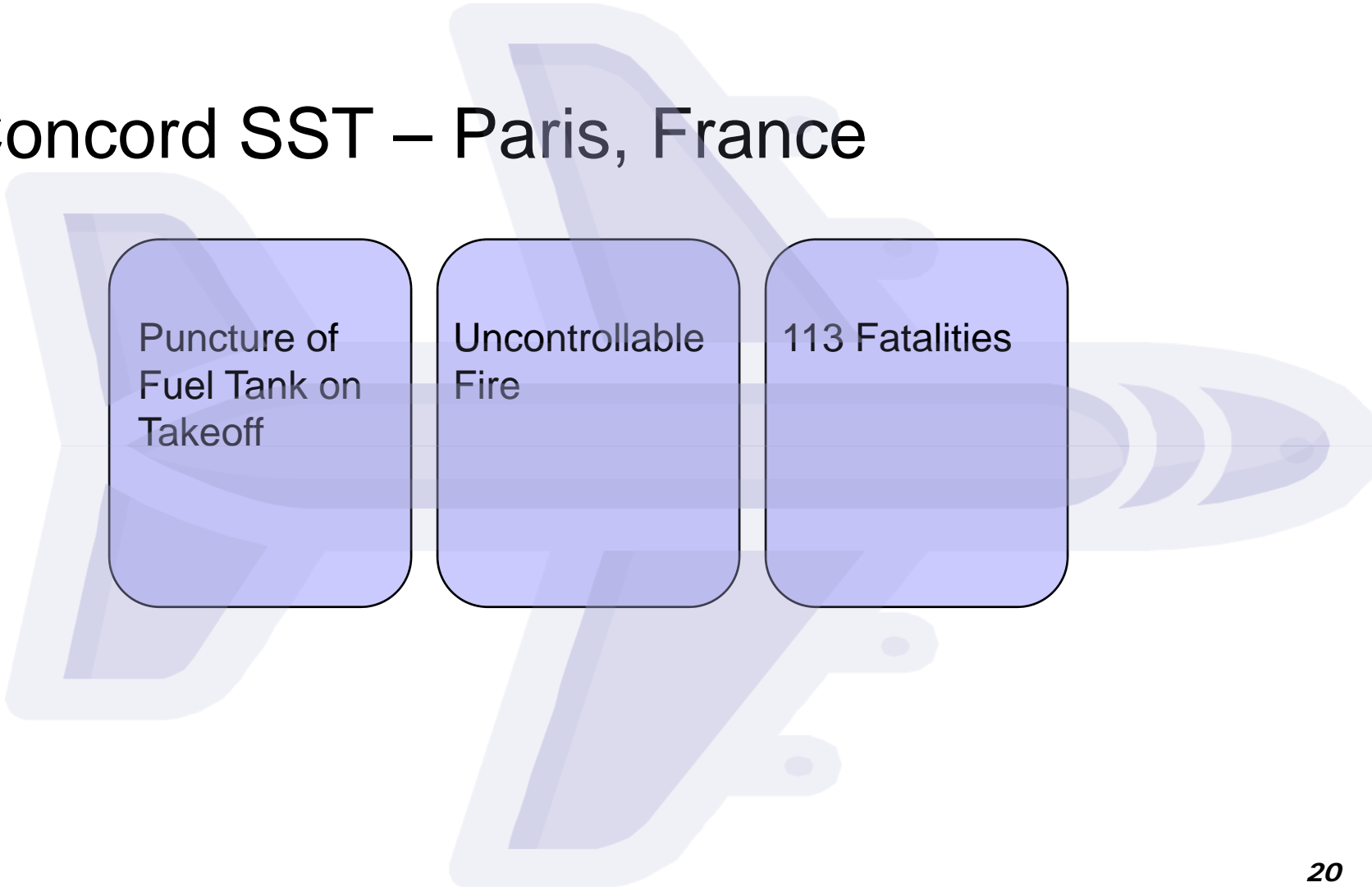
JULY 1996 B-747 TWA





JULY 2000

Concord SST – Paris, France



Puncture of
Fuel Tank on
Takeoff

Uncontrollable
Fire

113 Fatalities

JULY 2000 Concorde SST Paris, France



NOVEMBER 2000

B-747 SIA (Singapore)

Takeoff from
Taipei

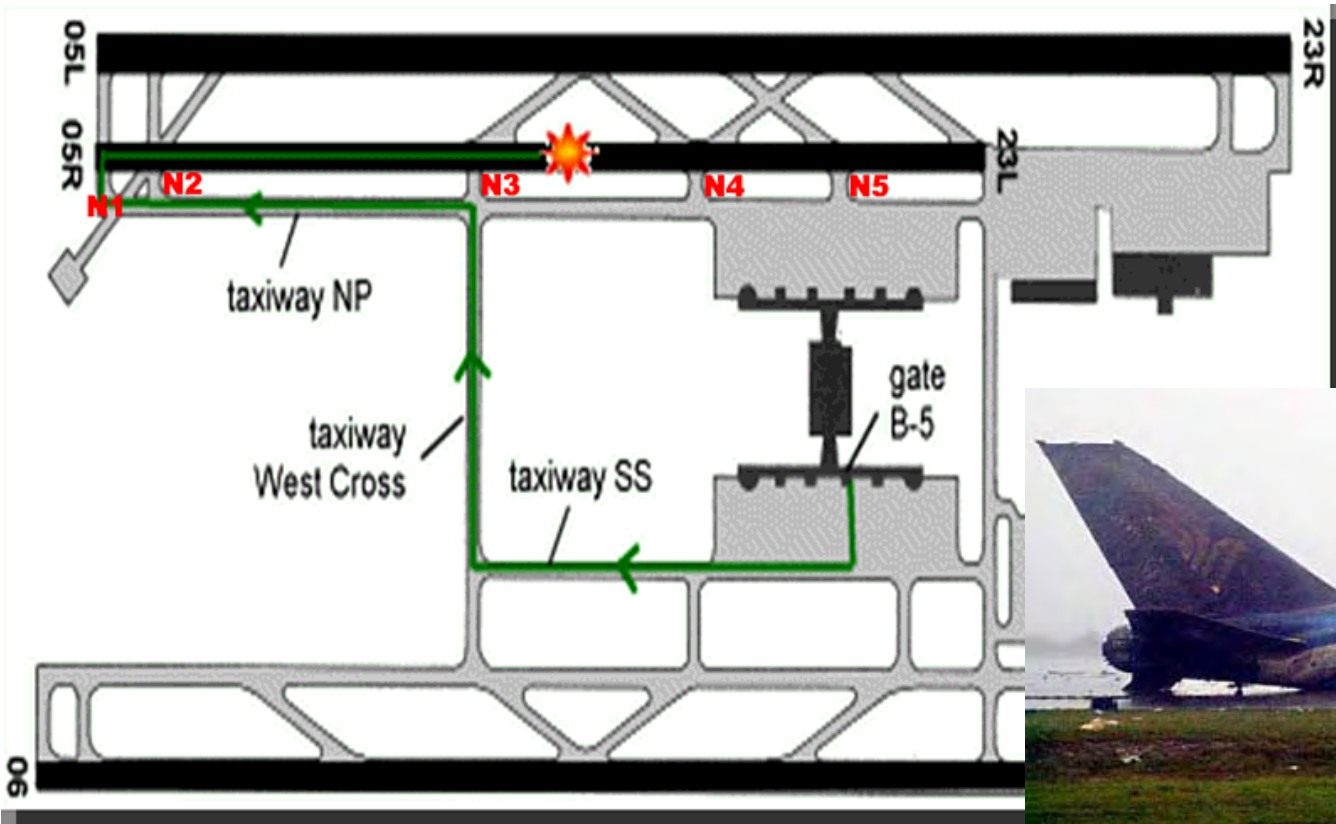
Bad Weather

Parallel
Runways -
One runway
under
construction

Crashed on
Takeoff

113 Fatalities
and Serious
Injuries

NOVEMBER 2000 B-747 SIA (Taipei)



SEPTEMBER 2006

Mid-Air Collision

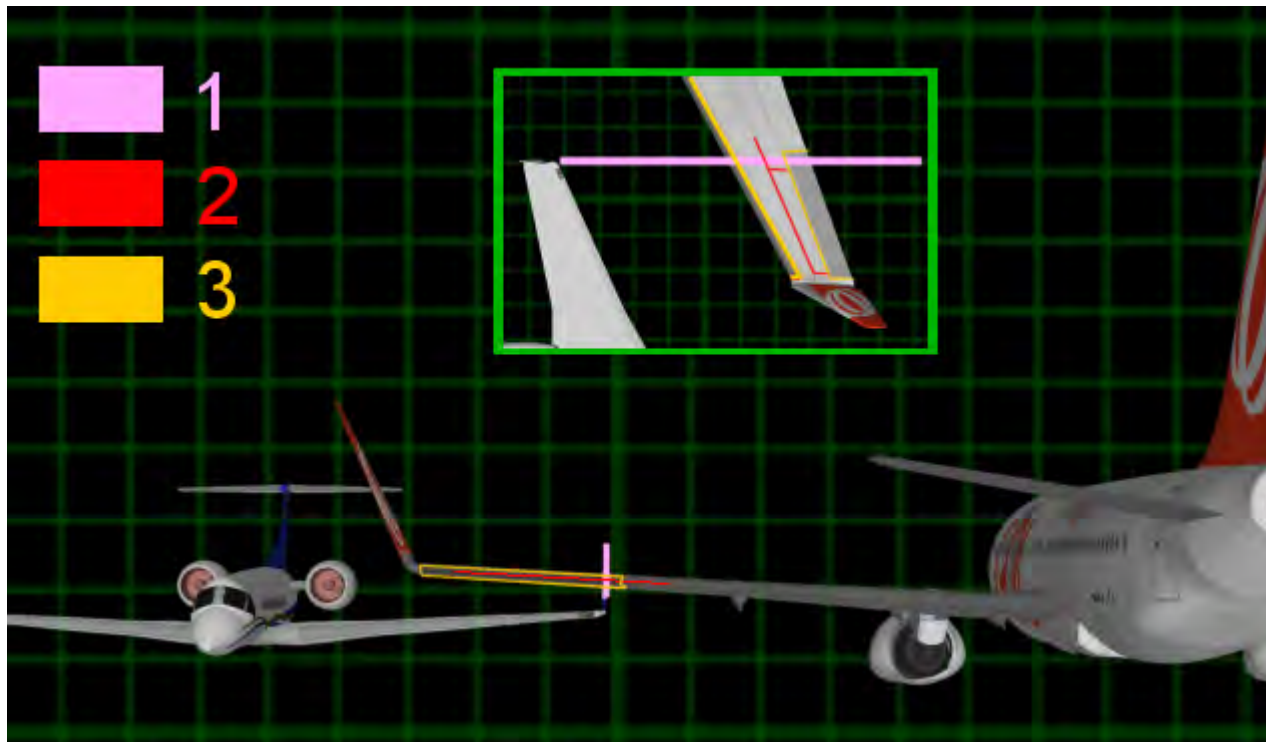
B-737 (GOL Airlines)
And
Embraer
Legacy (United States)

Both Aircraft
Operating as
Same Altitude

All Fatal on B-737

Legacy Landed
Safely

SEPTEMBER 2006 Mid Air Collision B-737 (GOL Airlines), Embraer Legacy US



SEPTEMBER 2006 Mid Air Collision B-737 (GOL Airlines), Embraer Legacy US



Questions?

Send me an Email:

woodrh@ix.netcom.com

