



**BusAv Safety  
and Ongoing  
Safety  
Initiatives**

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**eurocopter**  
an EADS Company

## Question:

Is your operation safe?

Is your operation safer now than six, twelve months ago?

How do you know?

Can you prove it?

# Safety Management Systems ~ SMS

Mandated by ICAO

Required worldwide in 2009

Some States farther along than others

Some States are *way* behind

Framework for safe operations

Adds to traditional safety programs

# Safety Management Systems ~ SMS

What's new?

ID & correct hazards *before* work

Risk based

severity & probability

Document

Implement

Metrics

# Daily Pre-Work Risk Assessment

## Flight

Mission

Environment

Aircraft

People

Time & Duty

## Maintenance/Ramp

Tasks

Environment

Vehicles

People

Time & Duty

# Risk Assessment

Risk criteria defined

Severity

High	Death, destruction
Medium	OSHA reportable injury, damage
Low	Little or no damage, injury

Probability

High	Daily, every flight
Medium	Occasional
Low	Never, once a year



# Risk Matrix

## ***SEVERITY***

**High**

**Med**

**Low**

***P***

**High**

**5**

**4**

**3**

***R***

**Med**

**4**

**3**

**2**

***O***

**Lo**

**3**

**2**

**1**

***B.***

# Risk Assessment

## Risk Matrix

**Green:** Go, but mitigate hazards

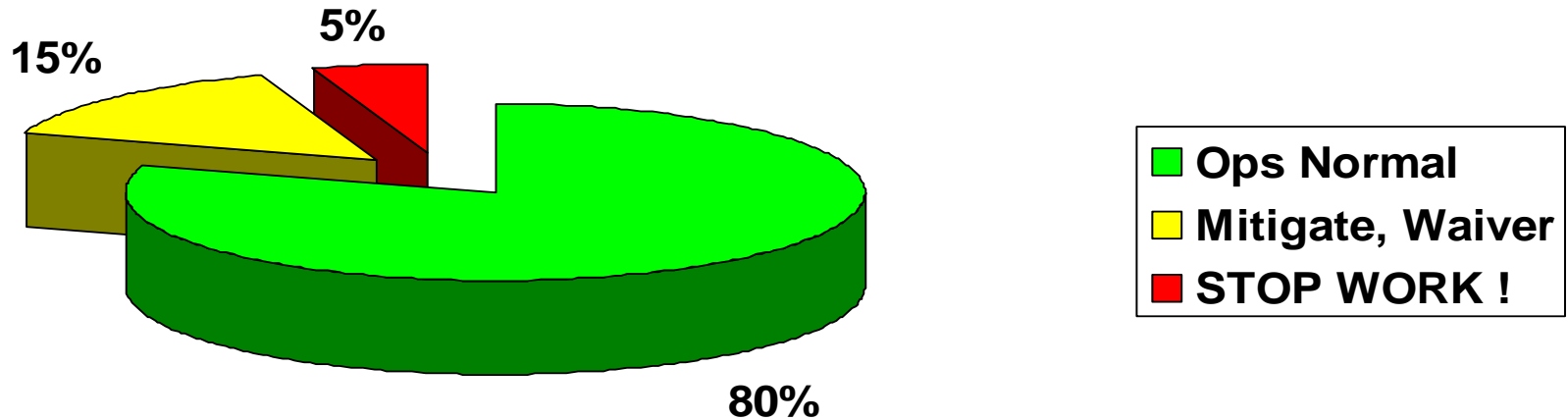
**Yellow:** OK with mitigation, waiver or approval

**Red:** STOP WORK. Must mitigate

Documented

# Pre-Work Risk Assessment

## Risk Assessments NOV 2009



# Pre-Work Risk Assessment Review

30 days worth



80 in the green



15 in the yellow



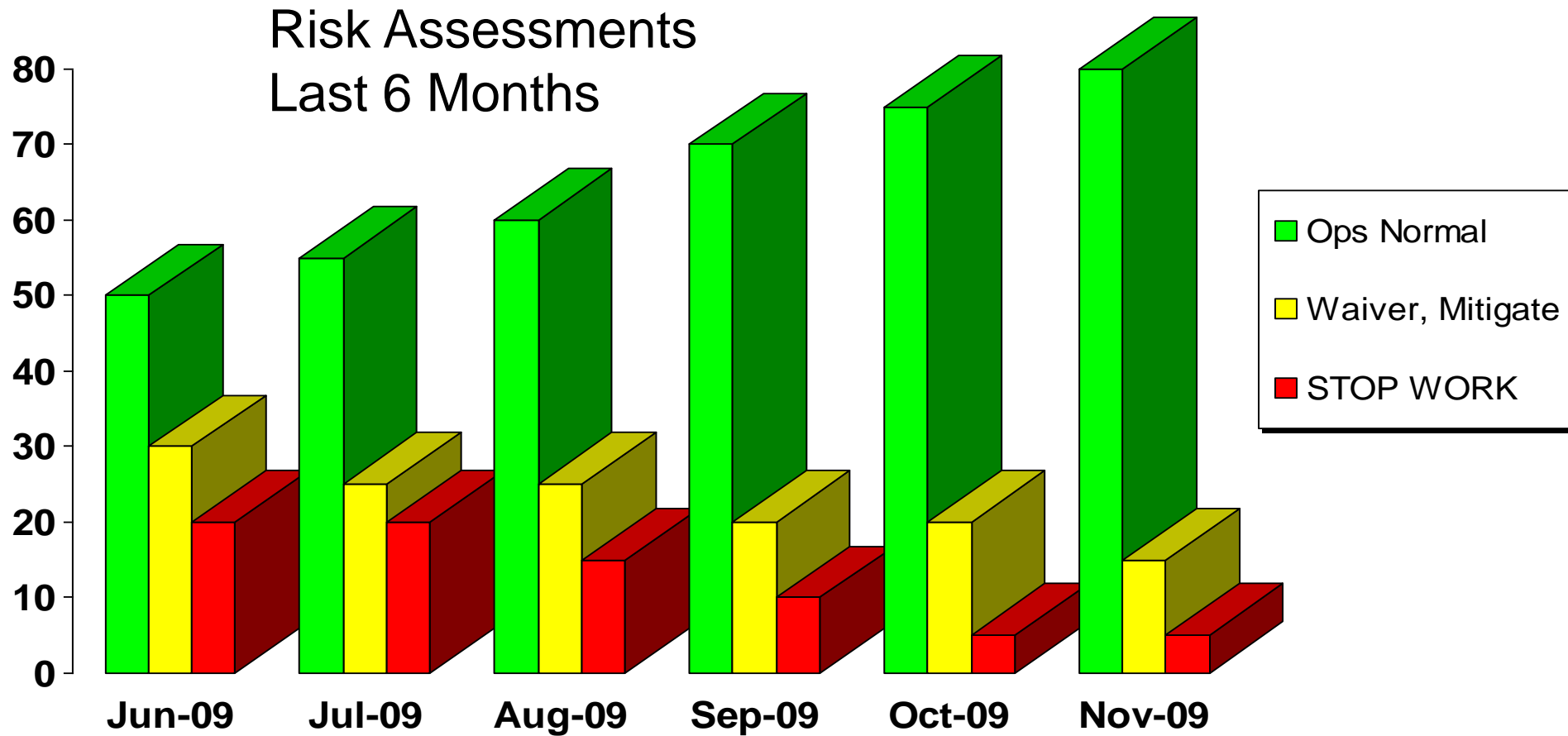
05 in the red

What caused risky scores?

Are there systemic factors?

Develop corrective, preventive actions

# Pre-Work Risk Assessment Review



# Eurocopter (ECG) SMS

SMS implemented at Eurocopter Training Service (ETS) center

Offers SMS services through ETS

- Short course at Marignane

- Three day course at operator's base

- SMS gap analysis at operator's base

SMS at ECG Part 145 repair station

To be implemented in Flight Test

# Accident Statistics

Helicopters	>10 per 100K hours
Corporate	~ .2 per 100K hours
Business	~ 2 per 100K hours
Both	~ 1 per 100K hours
Airline	~ .1 per 100K hours* **

\* estimated

\*\* different environment

Source: FAA Office of Accident Investigation

## International Helicopter Safety Team (IHST)

Goal: Reduce accidents by 80% by 2016

Two major teams

SAT: Accident investigation analysis

hundreds of accident reports

identify causes

SIT: Implementation team

recommendations

Modeled on successful CAST of the 90s

Main revelation of IHST 2009:

Accident causes and recommendations are similar worldwide

To drastically reduce accident rate, operators have to enhance:

- ▶ Training
- ▶ Safety Management System (improve safety culture & behavior, put in place risk management & Just Culture reporting system)
- ▶ Maintenance



## International Helicopter Safety Team

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AgustaWestland  
A Finmeccanica Company

**Bell** Helicopter  
A Textron Company

**eurocopter**  
an EADS Group

**Sikorsky**  
A United Technologies Company

### A Call for Action by Helicopter Owners

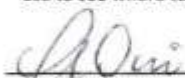
In recent years, recurrent media campaigns on helicopter accidents have focused the public's attention on helicopter safety, generating a negative perception of our Industry with regards to safety which has always been, and will remain, of utmost importance for us.

While safety performance varies greatly with helicopter uses and operators, **every accident is of our concern as well**, and we must all act now to improve the entire industry's safety practices. We, the undersigned helicopter manufacturers, call upon all who operate our products to implement, along with our own recommended maintenance and flight operations practices, the safety enhancements recommended by the International Helicopter Safety Team (IHST).

Since IHST's inception in early 2006, teams in North America, Europe, Brazil, India, and Australia along with members of the Cooperation Council for the Arab States of the Gulf have analysed hundreds of helicopter accident records to find the dominant causes and the strongest means of prevention. You can find reports on these studies at [www.ihst.org](http://www.ihst.org). The IHST recognizes that each helicopter make/model and operation may have unique needs to improve safety, however, our analysis identified four areas to concentrate on in the effort to reduce accidents:

1. Safety Management Systems (SMS)
2. Training
3. Use of advanced Systems and Equipment like:
  - a. Flight Data Monitoring (FDM) Systems,
  - b. Health Monitoring Systems where such systems are available,
  - c. Use of Mission-specific equipment such as night vision goggles for night flying, and avionics to avoid controlled flight into terrain where the operator's frequent mission profile involves flight in poor weather and/or at night in difficult terrain, landing in unimproved, unprepared areas, etc.
4. Strict compliance with the manufacturer's maintenance program.

The IHST has produced toolkits to help you with SMS, training and FDM (see the "Safety Resources" tab on the IHST website). A brief summary is attached, along with a risk assessment tool that we recommend you use to see where to focus your efforts to make sure the next accident is not yours.

  
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Eurocopter

  
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Attachments: Summary of IHST recommendations  
Risk Assessment Tool

US IHST team has released:

- ▶ SMS toolkit
- ▶ Training toolkit
- ▶ Risk Assessment toolkit
- ▶ HFDM toolkit (HFDM part of SMS)

# European Helicopter Safety Team (EHEST)

Has the same SAT, SIT composition  
analyzed 380 accidents  
similar conclusions

Also has subcommittees

Operations, communications, training, others

Coordinates with IHST

Will create Maintenance Safety Tool Kit

# EHEST and EASA

Both are considering IS-BAO

Goes beyond safety

Designed to provide operational structure to operators

Includes:

SMS	HR aspects	Training	OS&H
Flight Ops	ERM	A/C equipment	
Maintenance	Ops manual	International Ops	
DG	Security	Environmental management	

# Summary

Four CEOs got it right

SMS

Training

Technology

Maintenance

But this assumes:

Development and respect for SOPs

Good formula for all operations