

Pilot Decision-making

- Module 5- Risk Management

Outline

- Definitions
- Goal
- Risk Management Process
- Risk Assessment
- Risk Scoring
- Risk Criteria
- Options

Definitions

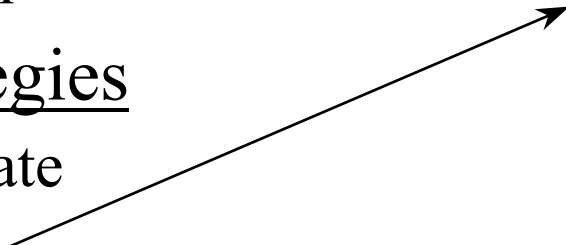
- Hazard
 - something can cause harm
- Risk
 - the probability or likelihood the hazard will cause harm
- Risk management
 - reduce likelihood of a hazard from occurring or minimize its consequences

Goal

- The elimination, reduction and/or control of pure risks; or
- The enhancement utility/benefit and avoid detriment from speculative risks.

Risk Management Process

- hazard/threat identification
- analysis/assessment
 - estimation
 - evaluation
 - decision
- risk strategies
 - Terminate
 - Treat
 - Tolerate
 - Transfer



Prevent/control

- engineering
- organizational
- procedural
- behavioral
- PPE

Risk Assessment

$$\mathbf{R = P \times C \times E}$$

Where...

R = Risk

P = Probability

C = Consequence

E = Exposure

Risk Scoring

Consequences	Exposure	Probability
1 = minor injury	1 = rare/never	1 = very unlikely (1 in 10 years)
2 = serious injury	2 = infrequent (1-3 months)	2 = unlikely (one in 1-5 years)
3 = major injury	3 = frequently (weekly)	3 = likely (one in next 12 months)
4 = multiple casualties	4 = high (daily)	4 = very likely (one this moth)
5 = at least 1 death	5 = constant	5 = inevitable

Risk Criteria

Risk Score

- High – 75 or over
- Med – 27-75
- Low – below 27

Action required

- Top priority, action now
- Deal with – weeks/months
- Deal if necessary

Risk Options

- Terminate - risks unacceptable
- Treat - risks acceptable if mitigated
- Transfer - risk acceptable if we share risks
- Tolerate - risk acceptable

Risk Management for Pilots

- Pre-flight yourself
- The “I’m SAFE” Checklist
- Decide ahead
- Apply a general rule
- Aircraft, environment, operation, situation

Risk Management for Pilots (cont'd)

- A matter of probabilities
- Identifying areas of risk
- Leave an “out”