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Risk

Hazard

FUEL

FIRE

PEOPLE

IGNITION SOURCE

FIRE GROWTH

FIRE SPREAD

Assessment of risk

Control measures

Prevention

Protection
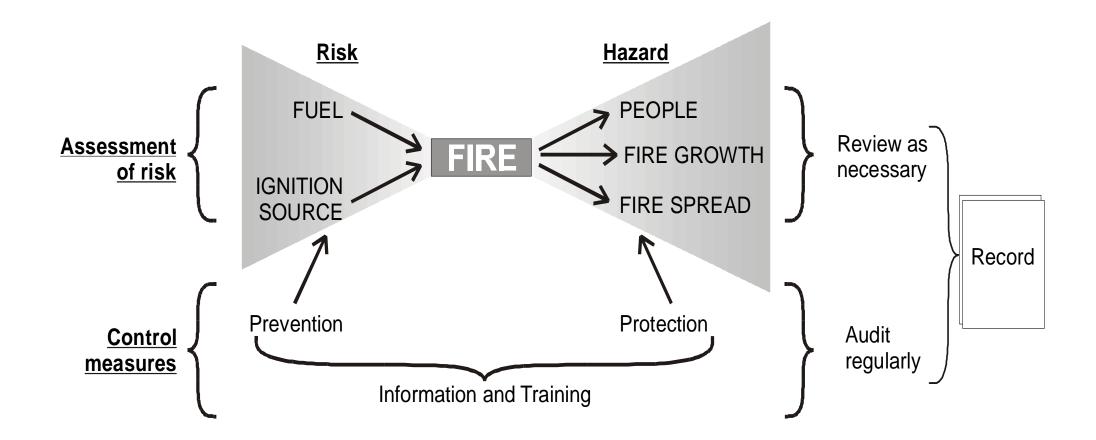
Information and Training

Review as necessary

Audit regularly

Record

SYSTEM FAILURE:

99% reliability required……………..

1 SYSTEM:
• System A: reliability = 99%

  probability of **total** failure = 1% (0.01)

SYSTEM FAILURE:

99% reliability required……………..

2 SYSTEMS:
- System A: reliability = 90%
                           probability of failure = 10% (0.10)
- System B: reliability = 90%
                           probability of failure = 10% (0.10)

Probability of **total** failure = $0.10 \times 0.10 = 0.01$ (1%)

SYSTEM FAILURE:

99% reliability required……………..

3 SYSTEMS:

System A   reliability = 79%
                            probability of failure = 21% (0.21)

System B: reliability = 79%
                            probability of failure = 21% (0.21)

System C: reliability = 79%
                            probability of failure = 21% (0.21)

Probability of **total** failure = $0.21 \times 0.21 \times 0.21 = 0.01$ (1%)

1. Stop fires starting
2. Stop fires from growing bigger
3. Control the products of fire
4. Warn people about fire
5. Protect people from fire (and smoke)
6. Help people escape from fire
7. Protect property

STAY PUT POLICY IN FLATS

- In offices shops etc, a common fire alarm can be used to initiate a simultaneous evacuation. But…………..

- In flats if there was a common fire alarm:
  - False alarms would cause big problems of unwanted evacuation
  - Servicing the system inside flats would be very difficult

- So alternative solution is:
  - Make sure that fire can't spread round the outside of the building
  - Make sure that fire can can't affect corridors and stairs
  - Make sure that fire can't spread through walls from flat to flat
  - TELL PEOPLE THAT (UNLESS THERE IS A FIRE IN THEIR OWN FLAT) THEY CAN SAFELY **STAY PUT**