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HUMAN FACTOR – Human Factors Analysis and Classification System (HFACS)

**FAKTOR MANUSIA DALAM K3 - PERTEMUAN 7
PUTRI HANDAYANI, SKM, MKKK
PRODI KESMAS / FIKES**

TUJUAN/CAPAIAN PEMBELAJARAN

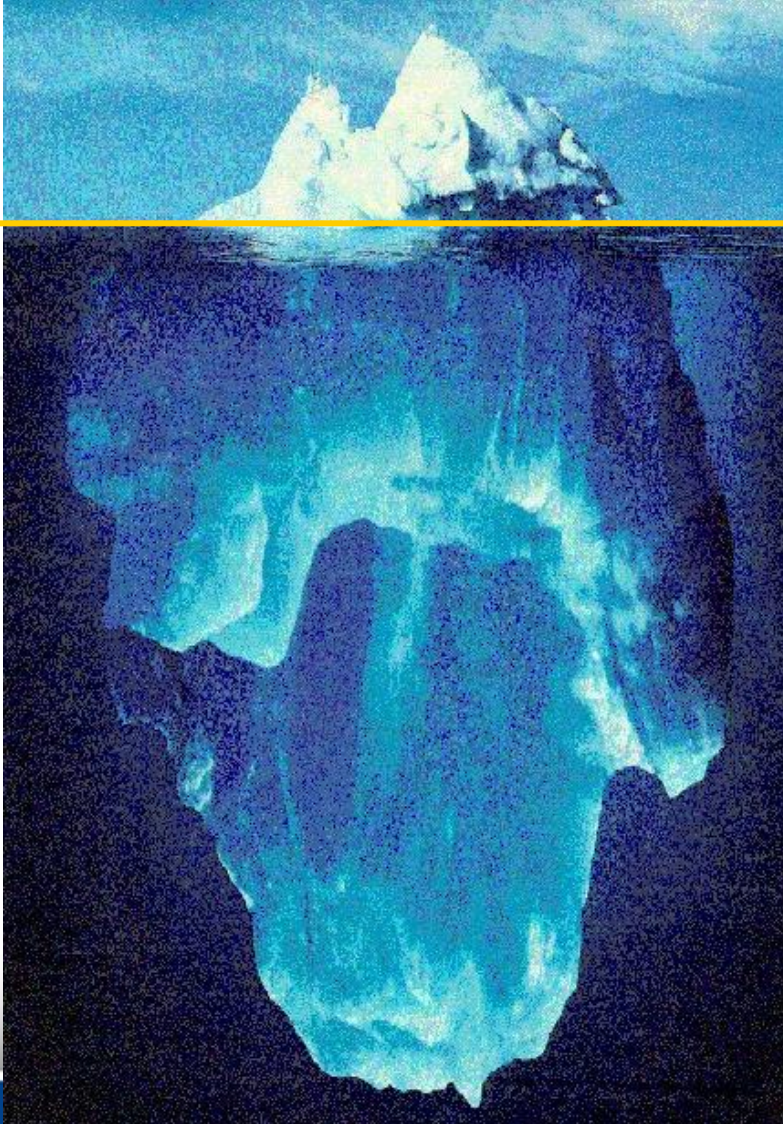
Menguraikan Konsep human factor theory The Human Factors Analysis and Classification System (HFACS), dan Lingkup pengamatan human factor theory The Human Factors Analysis and Classification System (HFACS)



MISTAKES

IT COULD BE THAT THE PURPOSE OF YOUR LIFE IS
ONLY TO SERVE AS A WARNING TO OTHERS.

COSTS OF NAVAL ACCIDENTS



Direct Cost (FY 98 – 08)

- **\$5.14 Billion and 1113 Lives**

Indirect Cost

- Loss of Manpower
- Delay in Doing Business
- Corporate Reputation
- Investigation Costs
- Litigation

What : Hazards, Losses, Defences

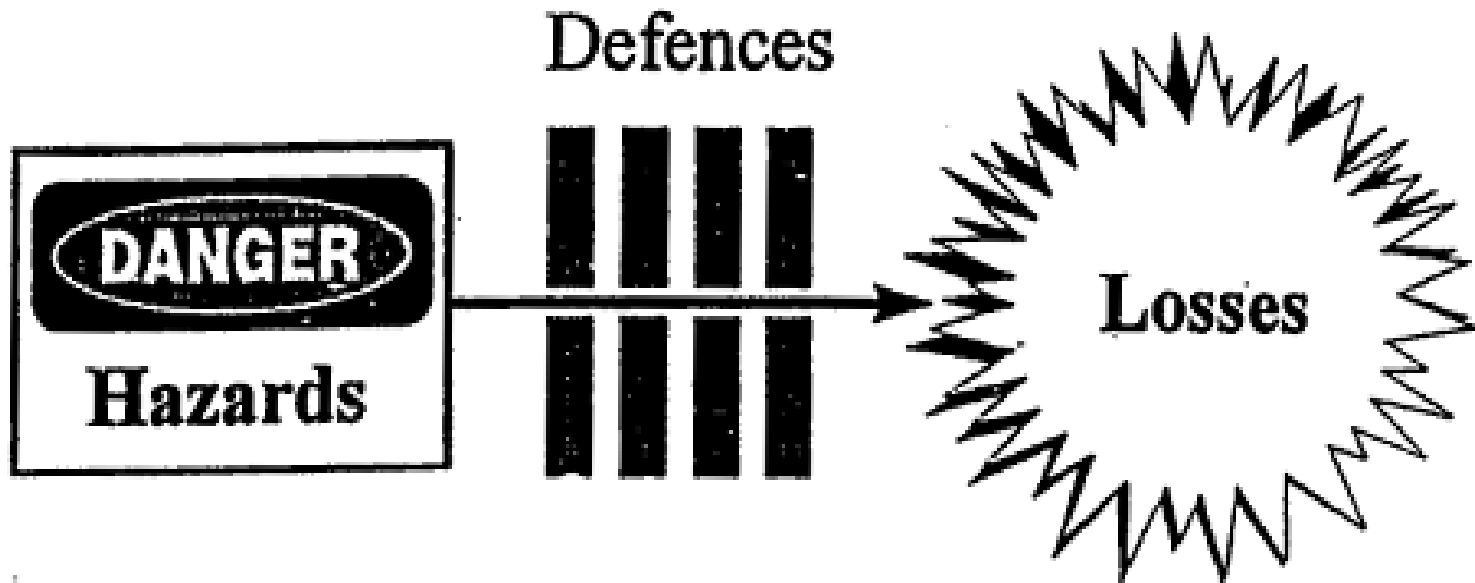


Figure 1.1 The relationship between hazards, defences and losses

How : **The Ideal** versus **The Reality**

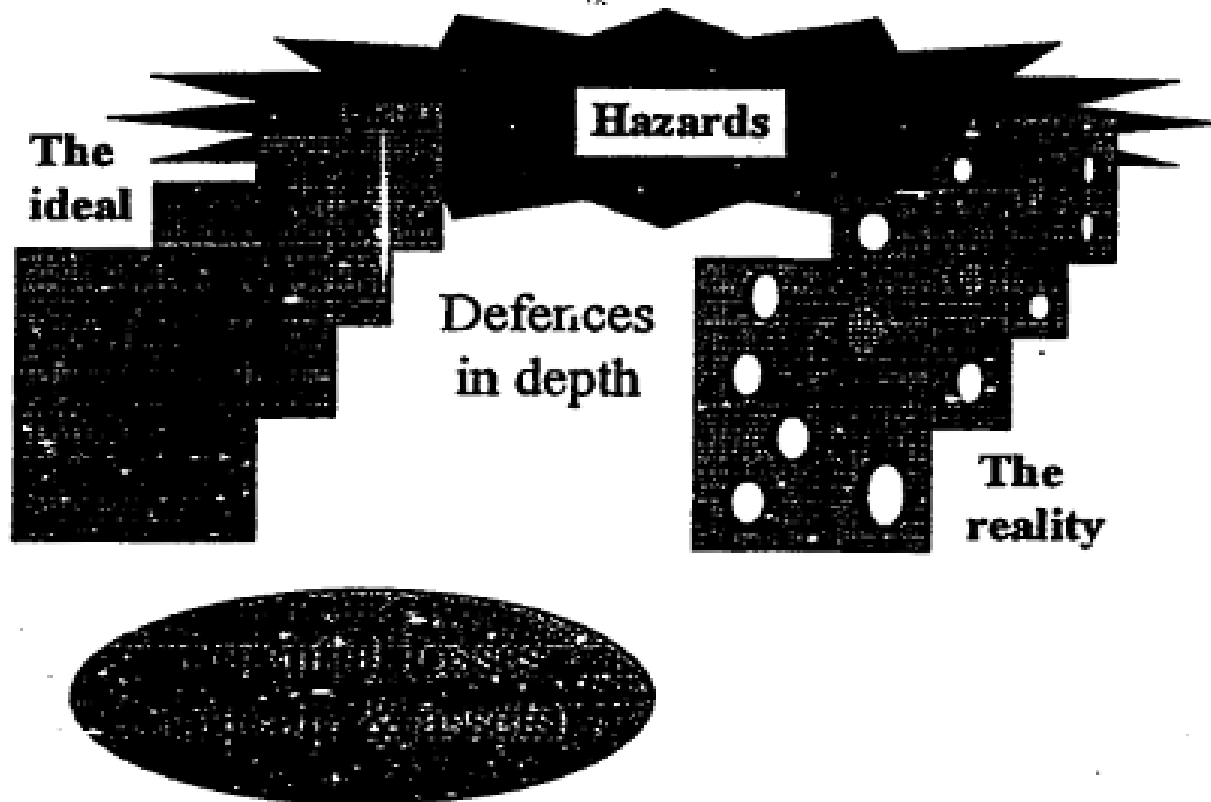
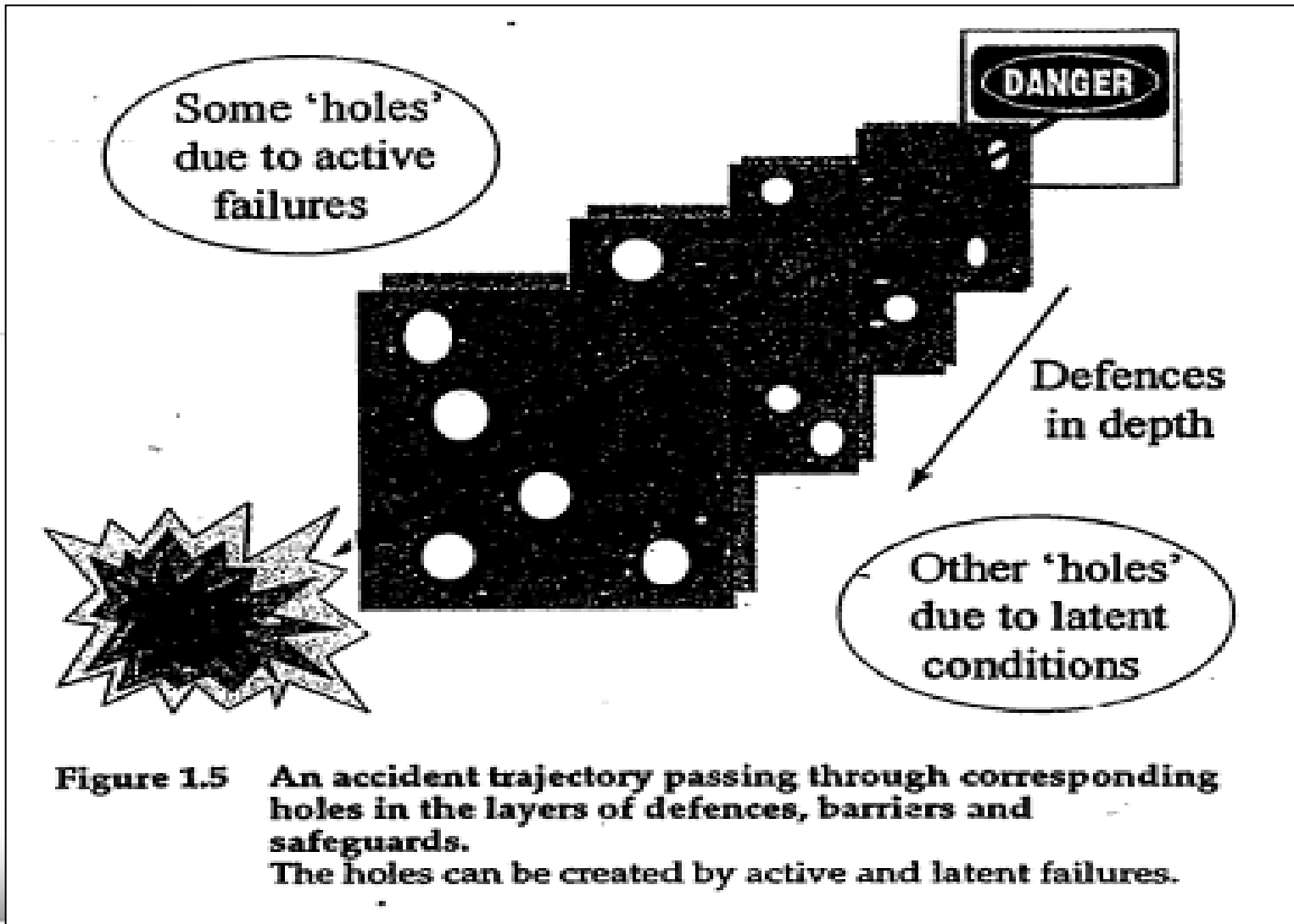


Figure 1.4 The ideal and the reality for defences-in-depth

How are the 'holes' created ?



Stages in the development & investigation

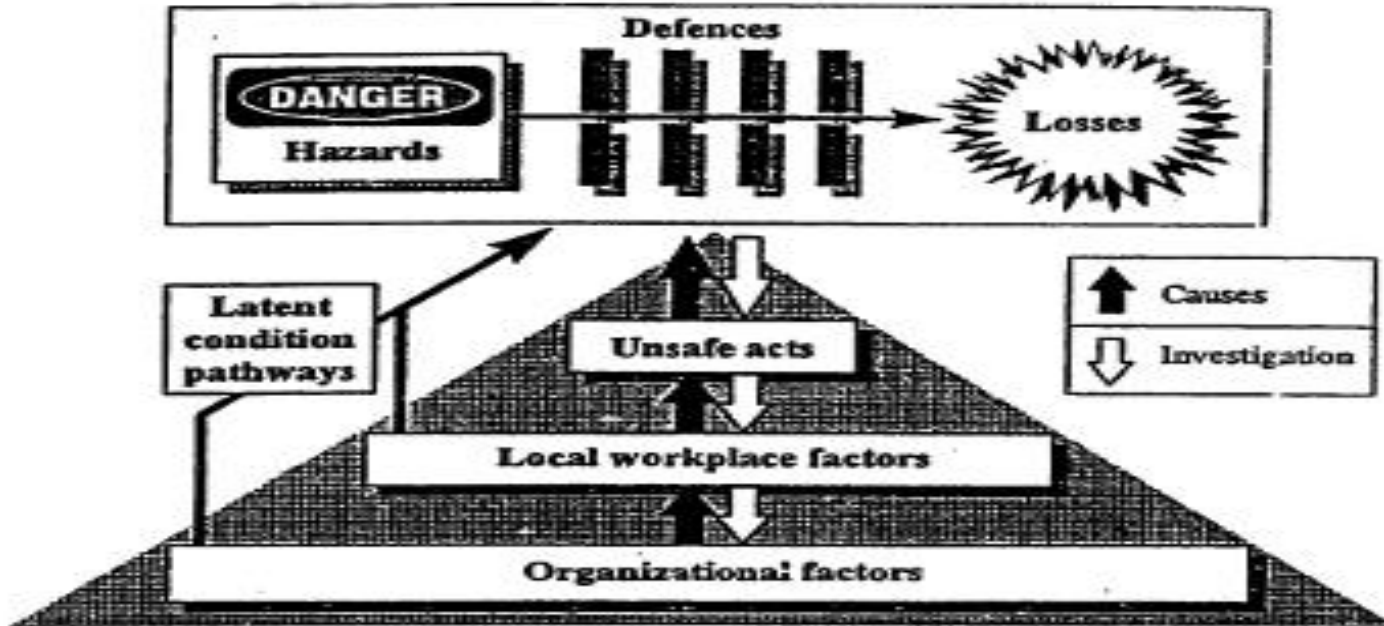
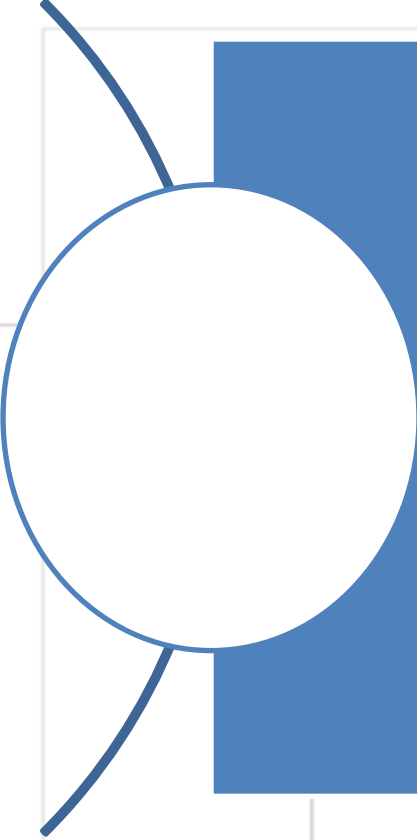


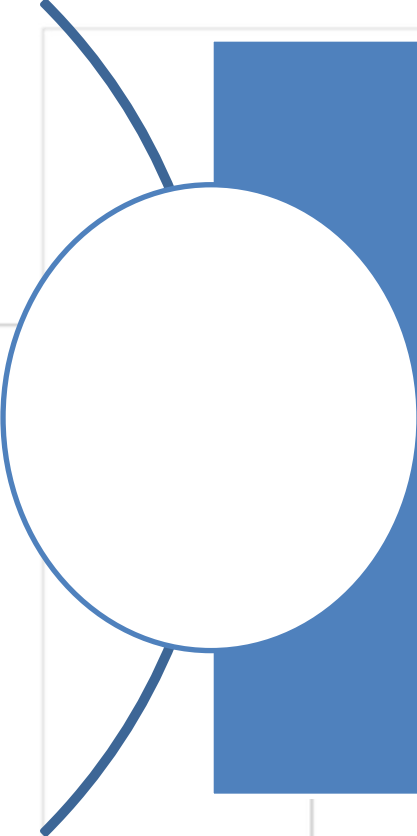
Figure 1.6 Stages in the development and investigation of an organizational accident
The rectangular block at the top represents the main elements of an event while the triangular shape below represents the system producing it. This has three levels: the person (unsafe acts), the workplace (error-provoking conditions), and the organization. The black upward arrows indicate the direction of causality and the white downward arrows indicate the investigative steps.

HFACS Theory



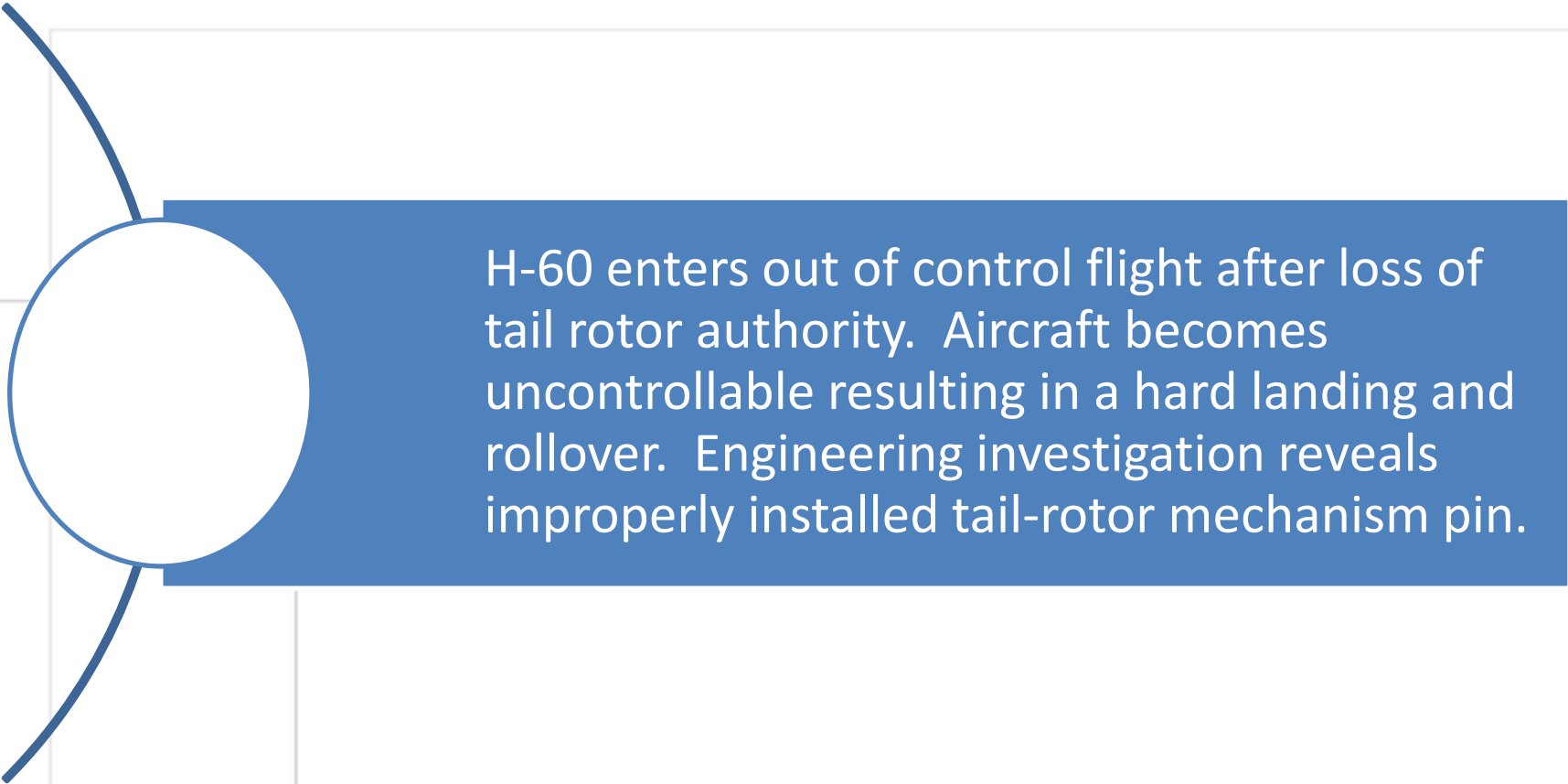
HFACS menjelaskan kegagalan manusia dalam dua kategori (lihat gambar), yaitu: kesalahan (*error*) dan pelanggaran (*violation*). Kesalahan biasanya terjadi karena ketidakmampuan atau ketidaksengajaan karena kelalaian atau kealpaan seseorang yang berakibat pada kegagalan. Sedangkan pelanggaran adalah adanya faktor kesengajaan untuk mengabaikan peraturan sehingga terjadi kegagalan atau kecelakaan.

HFACS Theory



Sebuah metode analisis HFACS idealnya akan menyebabkan perubahan dalam pengaruh organisasi dengan menganalisis rantai peristiwa mulai dari tindakan yang tidak aman awal.

HFACS Example



H-60 enters out of control flight after loss of tail rotor authority. Aircraft becomes uncontrollable resulting in a hard landing and rollover. Engineering investigation reveals improperly installed tail-rotor mechanism pin.

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- George A. Peters, Barbara J. Peters. Human Error Causes and Control. 2006. Taylor & Francis Group