

Safety Management

IN PRODUCTION PLANNING & CONTROL

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8th Week: Hazard & Risk

Serious
Events

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graph TD; A[Serious Events] --- B[Accidents]; A --- C[Incidents]; A --- D[Occurrences];
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Accidents

Incidents

Occurrences

Serious Events

Accident:

which any person suffers death or serious injury, or in which the equipment receives substantial and unrecoverable damage.

Incident:

which any person suffers injury and/or in which the equipment receives recoverable damage.

Occurrence:

an occurrence other than an accident (or serious incident) that affects or could affect the safety of operations.



What is hazard?

Harm - physical injury or damage to health/asset.

Hazard - a **potential** source of harm to a person/asset (Accident / Incident / Occurrence).

WHAT ARE OUR ASSETS?

***Asset:** Something or someone of any value; any portion of one's property or effects so considered...*

Personnel Injury

- Table with sharp edges
- Low ceiling
- Slippery slopes
- Oven

Harm to Equipments / Structures

- Unstable voltage
- Open window
- High humidity
- Loose projector

Loss of Materials or Capabilities

- Leakage in gas and water pipes
- Computer virus
- Electromagnetic Interference

Hazard



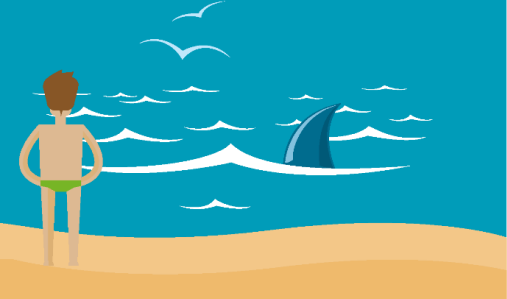
Find 5
hazards
currently
threatens
us.

Let's think about risk...

WHAT IS RISK?



SHARK



A shark in the sea
is a hazard



Swimming with a shark
is a risk

LIGHTNING



Lightning is a hazard



Standing under a tree during a
thunderstorm is a risk

Risk

Any possible consequence of the hazard, the probability, high or low, that any **hazard** will actually cause somebody or something harm.

RISK is derived from **potential consequences** of the hazard.

- Eaten by Shark
- Killed by Shark
- Being not aware of Shark
- Killed by lightening
- Heart crisis after lightening attack

Moon

Is it a hazard?

Is «Collision with Earth» a risk?

Why don't we do something?

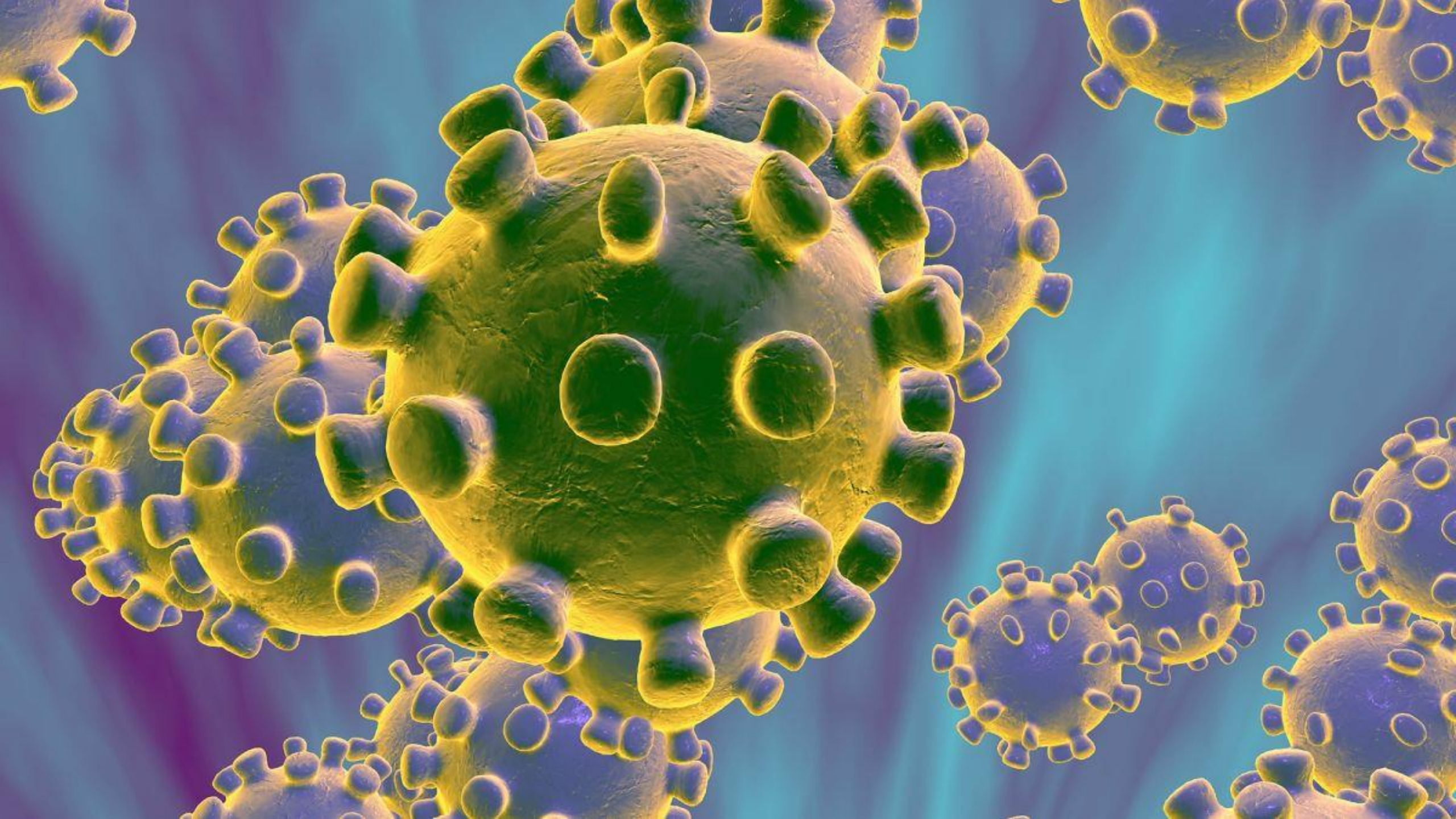


How safe is
safe?

$$\text{RISK} = P \times S$$

P: Probability

S: Severity



Thank you

