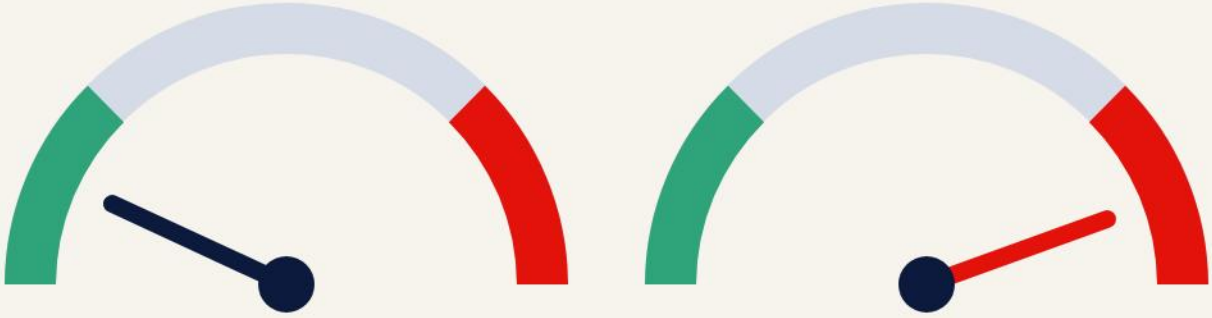


INJURY RATE
looks fine

BARRIERS
near the red

Is your safety report measuring the wrong thing?

A low injury rate can sit next to a plant that is close to a major accident.

WHAT THIS IS ABOUT

What should a plant measure to stay safe?

In 2009, the Australian sociologist Andrew Hopkins wrote a short paper with a big question: what should a company measure if it wants to prevent a major accident?

Many sites still answer with injury rates. Hopkins showed why that answer is not enough, and what a better answer looks like.

This carousel explains the difference, and asks you to look at your own safety report.

THE IDEA

Two kinds of safety, two kinds of numbers

Personal safety is about slips, trips, falls and cuts. Injury rates are useful for tracking personal-injury outcomes, but they say little by themselves about process-safety performance.

Process safety concerns hazards arising from the processing activity, including loss of containment of toxic or flammable material and the fires or explosions that may follow. These events are rare, and they depend on controls such as relief valves, trips, alarms, inspection and permits.

Hopkins pointed to cases such as BP Texas City (2005), where good injury numbers sat next to failing process controls. His starting point is to measure process-safety hazards and the condition of the controls that manage them, not to use injury rates as a proxy.

THINK ABOUT IT

Three questions worth asking

1. Which numbers could give earlier warning that a major-accident control is degrading, rather than only recording harm after an event?

2. If every indicator on your dashboard is green today, which barrier could still be failing without anyone seeing it?

3. When a process safety indicator gets worse, who has to act, and how quickly?

YOUR MONDAY ACTION

Sort your safety numbers

1. Print the KPI list from your last monthly safety report.
2. Mark each one: P for personal safety, or B for barrier health.
3. Name your top three major-accident scenarios, and the main barrier for each.
4. For each barrier, record one or more evidence-backed measures, its owner and threshold, and the last inspection, test or verification date.

READ IT YOURSELF

Thinking about process safety indicators

Hopkins, A. (2009). Thinking about process safety indicators. *Safety Science*, 47(4), 460–465. doi:10.1016/j.ssci.2007.12.006

A short paper of six pages, with replies in the same journal issue. The examples here are prompts for site-specific review, not a universal KPI set or a prediction of accident likelihood.

TELL US

How many of your safety KPIs measure barrier health? Share your count.