

Decremental and incremental safety: An introductory overview

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Is incremental safety a new type of safety. It is not, of course, for there can be only one (as the Highlander wisely said). The only possible definition of safety is “a state where there are as few unexpected and unacceptable outcomes as possible”. The word safety is unsurprisingly derived from Latin where the word *salvus* means, uninjured, unharmed and in good health (Raheemy, Sherratt & Hallowell, 2025), to be safe therefore means to be free from or protected against harm and injury, either actual (occurring here and now), or potential (possibly occurring at some time in the foreseeable future) Every sentient organism either tries to avoid getting into situations where they can suffer injury or be harmed, e.g., by making the threat disappear (which is why dogs bark at strangers), or else try to get away from such situations if they happen nevertheless, typically by hiding, by seeking cover, by crawling or by fleeing (as all birds and winged insects do when we approach them). The “fight or flight” response (Cannon, 1915) is universal. Humans, as animals with cognitive abilities, especially the use of symbolic representation and memories of the past (history), as well as the ability to select some memories rather than all (corresponding to consciousness and also the ability to imagine what may happen in the future are naturally motivated to ensure a state of safety for whatever they do, individually and collectively. This explains the importance both of feeling safe and of being safe (which, although often confused are quite different, we sometimes feel safe even though we are not, and *vice versa*).

In hindsight, the terms Safety-I and Safety-II regrettably nourished the confusion about whether there is more than one type of safety. **There is not, as there can be only one!** The confusion even tempted some (Leveson, 2020), (Aven, 2022), and (Cooper, 2022) wrongly to infer that there could also be a Safety-III. As a psychologist I had anticipated that this false inference might be made, and therefore explicitly warned against it in my 2014 book:

“Since Safety-II represents a logical extension of Safety-I, it may well be asked whether there will not some day be a Safety-III? In order to answer that, it is necessary to keep in mind that Safety-I and Safety-II differ in their focus and therefore ultimately in their **ontology**. The focus of Safety-I is on work that goes wrong or fails, and the corresponding efforts are to reduce their number. The focus of Safety-II is on work that goes well, and the corresponding efforts are to make sure that more work goes well.” (Hollnagel, 2014, p. 178).

A more detailed argument why Safety-II is impossible can be found here.

In hindsight, my mistake was a failure clearly to point out that Safety-I and Safety-II represent different ways to achieve a state of safety, rather than different definitions of safety. (But this was not well understood at the time). It is akin to safety differently (Dekker, 2015), where the adverbial form of different makes clear that it does not refer to a different type of safety, as there, indeed, can be only one, but to a different way of achieving and/or managing safety - understood as the state of being safe.

According to Safety-I and the safety legacy, achieving safety can best be done by reducing the number of acts and/or events that result in unacceptable outcomes -- or in other words by decrements, hence a decremental approach (Hollnagel, 2026), with the completely unattainable ideal being that nothing goes wrong, the popular, but completely unrealistic *Zero Accident Vision* (ZAV). (Zwetsloot et al., 2013; Sharman 2016; Björnberg, et al., 2019). According to Safety-II, achieving safety can best be done by increasing the number of acts and events that result in acceptable outcomes - or in other words by increments, hence an incremental approach, corresponding to an incremental safety culture. Incremental safety implies the equally unattainable ideal that everything goes well (*Visio centum*).

The terms incremental and decremental safety hopefully make clear that they refer to how a state of safety can be achieved rather than to two different types of safety. The new terms also (I hope) exclude the possibility that someone may infer that there is a third way to achieve a state of safety. If you neither try to reduce or decrement the number of cases where work goes wrong, Or try to increase or increment the number of cases where work goes well, the only option is *laissez-faire* or to do nothing - which for few companies is an attractive safety management strategy since it practically ensures that nothing will

change, with regard to safety few companies dare publicly declare they are satisfied with the status quo. While decremental and incremental safety are the names for the different approaches to achieve a state of safety “where there are as few unexpected and unacceptable outcomes as possible”, decremental and incremental safety cultures are the names for the corresponding set of artefacts, assumptions, and espoused values which according to Schein (1992) constitute an organisational culture. Each of the two cultures can be characterised as follows:

- Maintain a steady focus on unacceptable outcomes, count the number of failures and unsuccessful outcomes and publish them widely.
- Be concerned with what could go wrong in the future. Investigate events in the simplest possible manner, always trade-off thoroughness for efficiency, and do not try to communicate or confirm the lessons learned.
- When something goes wrong, blame the people involved, always those at the sharp end and, if possible, also those at the blunt end (designers, regulators, procedure writers, and responsible politicians).

Conversely, an incremental safety culture can be characterised as follows:

- Ensure and support a visio centum (or a 100%) mindset -- meaning the attitude that with diligence every act can in principle lead to acceptable outcomes
- When work goes well, it should be repeated: People should try to remember what they did, and share it with colleagues. Learning is about **what should be done**, rather than about what should **not be done**.
- Management emphasises clear messages and a common can-do spirit.
- do not be afraid of trying new solutions, but remember to tell others about them so they know what to expect. Be thorough and always act according to the conditions, and try to make the best use of resources and opportunities.

and further

- Encourage interpersonal discussions and feedback, for instance by using the Resilient Performance Enhancement (RPET), (Wahl, Stenmarker & Ros, 2022) (Martins et al. (2022) (Khattabi, et al., 2026).

Figure 1 illustrates the difference between the two approaches

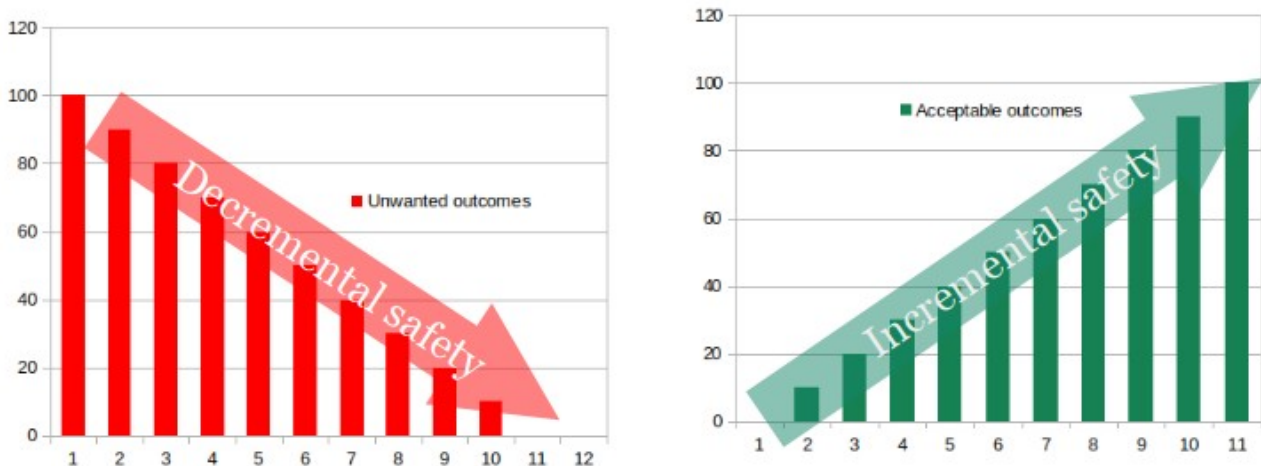


Figure 1: The essential difference between decremental and incremental safety

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