

Risk acceptability

Risk itself is often viewed as subjective; many people have a gut feel about risk, maybe feel unsure about something or feel 'unsafe' in a particular location/situation. Surrounded by language such as predictive, tolerable, likelihood and severity it can certainly seem like a guessing game. Definitions that refer to risk reduction to an *acceptable* level¹ can be open to further interpretation whilst established safety risk principles such as ALARP or SFaiRP² just add a whole other layer to the debate around what is actually meant.

The determination of acceptability often sparks intense debate; with minimal understanding it can be wildly subjective and with ever more pressure on finite resources such understanding may result in poor decisions being taken. Each time we undertake an activity, we are exposed to the chance of harm; we have to recognise that safety risk cannot necessarily be reduced to zero, or it would actually be undesirable to do so. Therefore, some form of trade-off between the benefits to the enterprise and the potential harm is required whilst acknowledging this is not limited to 'single risks'.

The principle of 'reasonably practicable' is a trade-off test to determine risk acceptability that sits at the core of both ALARP and SFaiRP; there exists some debate around the differences between the two with the UK Health and Safety Executive³ [HSE] upholding the view that they essentially mean the same and interestingly, the HSE's description of ALARP is what some promote SFaiRP to be. In the absence of clarity elsewhere, this acts as a good yard stick for anyone charged with managing aviation safety risk. Some risk acceptability decisions focus heavily on the classification of risk using likelihood and severity as a method to do so along with calculations of probability such as a 1 in 100,000 chance of occurrence. Such an approach can be an arduous exercise in its own right, highly subjective and more significantly may result in the omission of further key decisions being made.

If we look at the issue through the eyes of a court however, any calculations and predictions made are, at that moment, of little relevance; often the court will reside in the aftermath of an event and will rightly focus on how the event manifested itself. Of course, deliberating over such in hindsight is much easier than trying to do so prior to the event, however knowing the approach taken by the legal system provides us with a more valuable insight that it may at first seem.

In general terms, evidence is sought that any argument or decision made was objective, having been developed through a robust process with a thorough understanding of the situation in question; decision makers are expected to have been explicitly authorised and competent to do so. It is the *expectation* that existing good practice for the activity being undertaken was in place and scrutiny will focus on its effectiveness. Therefore, determining risk acceptability through a focus on the practical measures required is a much more useful and objective approach than spending time and effort calculating and administering risk. This precautionary approach is synonymous with the decision making based on the concept of reasonably practicable.

The higher level principle of reasonably practicable is that of continually deploying safety protection measures until it becomes grossly disproportionate to do so i.e. little in the way of further risk reduction value versus the effort to implement and manage the measure. In a *majority* of cases, through reference to regulations, established codes of practice, and applicable standards the obligations can be met and it is the *expectation* that such codes of practice are indeed adopted prior to undertaking the activity. This also means that following regulation alone may fail to satisfy 'reasonably practicable'; established practice may be referred to in supportive materials such as guidance or there may be comparable situations in other industries that can be drawn upon.

Alternative practices are permissible as long it is *demonstrated* that the measures are *at least as effective* in controlling the safety risk.

Some situations are more complex or may reveal limited good practice. In such cases, available good practice is still expected to be followed yet further risk reductions should still be considered based on the principle of grossly disproportionate. This may involve drawing upon experience, professional judgements or more detailed analysis. The advantage is that it offers senior decision makers agility through innovative thinking yet it does take judgement to determine whether ALARP has indeed been satisfied.

Either way the onus is on the *senior leaders to demonstrate* that all appropriate measures have been considered and *only those* that are *grossly disproportionate* are ruled out. This trade-off is at the heart of reasonably practicable and is based on the inherent safety risk within the particular operation, *not* the desire or ability to pay. It therefore provides parity across similar operations and the issue of affordability is a key aspect that should be understood by those with accountabilities for safe operations. The focus of any debate should be around what practice exists, its relevance and how to best implement the practice in the context of the operation.

Most significantly however, is that the level of protection becomes acceptable not due to the assessment or any calculations but because we have *appropriate* safety measures in place for the nature of the operation, they are being *utilised as intended* and are proven to be effective⁴. From the design and *the support* of the management system, decision making, budget setting, marketing, to oversight, data analysis, investigations etc; the objectives of 'reasonably practicable' should be an intrinsic and robust element of conducting business which itself is an ethical, leadership and cultural matter.

What we must be alert to is the potential for resource limitations, broader enterprise issues and social dynamics to negatively influence decision making. Failure to adopt measures or designating information that alerts the organisation to a gap between what should be happening and the reality in the organisation as 'acceptable risk' is a common pitfall; easily normalised, and therefore not seen as an issue, the potential for future decision making to unconsciously redefine risk acceptability criteria increases. Confuse deviations from those key pillars of regulations, standards and good practice as 'acceptable risk' and the Safety Management System is inherently flawed. The real sting in the tail is that it can be quite insidious in nature and mask the drift taking place in the organisation⁵. Being certain those 'acceptable risks' spoken of are indeed not something more sinister would be great start.

A *performing* Safety Management System should provide senior leaders with the confidence that safety is indeed under control; should any vulnerabilities exist, they know where, why and what is being done. This article only highlights key principles as there is much to discuss yet I am sure we all agree that for safety risk to be effectively managed then we must do so against a clear and unequivocal understanding of safety risk acceptability, after all, it would be reasonable to do so.

References

1. ICAO definition of safety; The state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level.
2. ALARP [As Low as Reasonably Practicable] and SFaiRP [So Far as is Reasonably Practicable]; A trade off test that helps determine safety risk acceptability. It obligates the organisation to take all reasonable measures unless disproportionate to do so *prior* to undertaking operations and to maintain their effectiveness irrespective of the financial health of the organisation, resource limitations or the broader economic climate.
3. <https://www.hse.gov.uk/risk/theory/alarplance.htm>
4. Inspired by Drew Rae; a number of excellent videos on risk acceptability are available on you tube. Grab a cup of tea, search Risk Acceptance and look for the series of videos by DiopreDrew.
5. Safety Risk Management; missing the biggest risk of all? <https://www.linkedin.com/pulse/safety-risk-management-missing-biggest-all-neil-richardson>