

Commensurate with the risks encountered - new lamps for old?

Ian Hendra ponders...

DIS...

As our newscasts cover the aftermath of the Myanmar cyclone and that country's military junta struggles to get on board with their predicament, I ponder that 20 May was the deadline for public comment on ISO DIS 31000. This is the draft international standard (DIS) based on AS/NZS 4360 *Risk Management* first written and published down under in 1995.

I recall from my days at KPMG in Wellington throughout the '90s the hype that this apparently fledgling concept of risk management caused. Experts were anointed from the ranks of the administrators, consultancy prospects were swiftly transmogrified into clients and a whole new revenue stream was born.

Those of us with a 'coupla' decades of sharp-end incident investigation and QA systems experience and offering accredited certification services to more clients than these 'newbies' would ever dream of were completely overlooked in the scramble, and still are, I suspect. What on earth could we techno-types possibly know about risk management? It didn't matter or trigger one iota of recognition that nonconformity and hazard management had been at the core of the standards we earned our livings from. I have two major concerns.

Confusion...

First, the 4360 standard has used the word *risk* to refer to the concept of *hazard* and loses the plot because of it. For example, the 2004 version uses the word *hazard* only in its introduction and its definitions: *hazard* = a source of potential harm.

In its section on identifying risks, the *hazard* word doesn't appear, so just what are they talking about? You see, they've called a hazard a risk too; so many 'aficionados' of the standard remain confused about the difference. What's even more frustrating here is that if you search the pdf of the earlier IEC 60300:1995 *Risk Analysis of Technological Systems* (which became AS/NZS 3931:1998), you get about 100 hits for the word *hazard*. The confusion persists because there are only 3 hits in the ISO DIS 31000 version of 4360 – all them in the titles of other standards. So are hazards and risk different things, really? Of course they are!

Clarity...

Let's get this straight. A *hazard* is something that will interfere with the achievement of a target or a goal; a risk is the impact on objectives usually estimated in terms of consequences and probability of occurrence, and measured in financial terms.

So hazards give rise to risks; obvious isn't it? Hazards are technical or pseudo-technical in nature, risks are commercially orientated. For example, take the Myanmar



Flixborough (UK) 1 June 1974, 28 workers killed at a chemical plant. The first HAZOP textbook would be written by a member of the accident investigation team and published in 1977.

cyclone that posed an omnipresent risk of loss of life and economic damage, and still does of course. They could have another one next month. Let's say one of these happens once every 50 years or so and there's \$100m of damage; that's the risk. You can place a bet on the chances of the hazard occurring, and you can take preventive action 'commensurate with the risks encountered' to reduce or insure against the impact. A cyclone is not a risk by definition; neither is an earthquake, a puncture, a pan of boiling water, a lousy work instruction, a director with a conflict of interest, a debtor, a creditor or inadequate cash flow. A cyclone is a natural hazard, the rest are other kinds of hazards. The risk is the likelihood and quantum of the damage the hazard might cause.

Nothing new...

Second, the concept of hazard management has been fit and healthy since long before 4360 was a blank number in a pair of standards registers. There's *Reliability Engineering* in its own right of course. But there's been *Failure Modes Effects & Criticality Analysis* (FMECA) in the aerospace industry since the 1950s and *Failure Modes and Effects Analysis* (FMEA) there too and in the auto industry since the '60s. There's the *Hazard Analysis and Critical Control Point* (HACCP) system that NASA developed to ensure food safety for astronauts in the Apollo programme. HACCP has become de rigeur in food safety systems across the world since. There's *Fault Tree Analysis* (IEC 61025 is the standard) that's been around since the '60s in the chemical industry and Hazard and Operability Studies (HAZOPs) that have been around in the oil & gas and chemical industries since the Flixborough disaster in 1974 (IEC 61882 is the standard).

The most successful standard in the world...

Then, of course, there's dear old ISO 9001 and its derivatives back to AQAPs that said in 1969 that 'any corrective or preventive action taken to eliminate the causes of actual or potential causes of nonconformity shall be to a degree appropriate to the magnitude of the problems and

... continued on page 11

NZOQ Conference Scholarship 2009

Applications close on 30 September, 2008.

Applications are now being called for the NZOQ Conference Scholarship. The scholarship is open to quality professionals in New Zealand who are members of NZOQ, either as a company or individual member.

The aim of this scholarship is to provide an opportunity each year for a person(s) employed in quality management to attend a selected Australasian quality conference, to improve their knowledge of contemporary quality management practices and associated topics, to meet other quality professionals and working networks and become familiar with other centre approaches in Australia and New Zealand.

The scholarship has a value of up to \$NZ1,500 towards the cost of the conference attendance (to include registration, travel, accommodation and subsistence costs, etc).

The scholarship criteria are:

- Only one nomination per individual and/or company member is permitted each year.
- Scholarships will normally be granted to an individual only once.
- Candidates must be an individual member of NZOQ and/or an employee of a company member of NZOQ. If the candidate is not already an individual member of NZOQ, then the host company member is to arrange for the candidate to become an individual member of NZOQ.
- Candidates must be operating at a junior or middle level of quality management or supervision and have a minimum of three (3) years' experience within a quality management environment.
- Candidates will be required to nominate their specific area of interest that they wish to concentrate on at the conference of their choice, in their application

for this Scholarship.

- Candidates must agree to provide a written report on their conference experience. The report is to be not fewer than 300 words and suitable for publication in QNewZ. It is expected that the report will be submitted to NZOQ within four (4) weeks of completing their Scholarship / attendance at the conference.
- Scholarship applicants may be required to undertake an interview.

The applications will be appraised by the Review Panel who will make recommendations to the Board for scholarship(s). More than one Scholarship can be awarded in any calendar year.

The successful applicant(s) will be required to produce a written report within four (4) weeks of attending the conference, giving an outline of the conference programme, highlights, information obtained and how the new knowledge will be applied to the applicant's work. The report shall be not fewer than 300 words and will be published in the NZOQ newsletter (QNewZ).

Successful applicant(s) are expected to make their own conference attendance arrangements. The successful applicant or their employer should pay for all travel costs and those other costs associated with the conference attendance. The successful applicant(s), or their employer, forwards a copy of the claim/appropriate invoices to the NZOQ General Manager for reimbursement of the NZOQ (Scholarship) contribution.

In the normal course of events, NZOQ will pay 80% of the scholarship amount upon receipt of copies of conference related invoices, with the balance of 20% paid upon receipt of the written report.

For further information contact helen.baines@nzoq.org.nz

...continued from page 11

commensurate with the risks encountered'. Since this is a quality management system standard, and commercial survival is the only real measure of quality systems effectiveness, it's not pulling too long a bow to claim that these 35 words say it all, so far as the management of hazards and risks is concerned.

Keep it simple...

So what's my advice? Keep it simple, just set up your quality system to look after all your stakeholders. Take account of 4360/31000 if you must, but note it does not stand alone, it's not a magic bullet and it does confuse concepts. Understand clearly that your operational specialists and techno people need to identify the hazards but your business management people need to be involved in evaluating and managing the risks. Most of all make sure you get the references and use an ISO 9001 closed loop system to embed your hazard & risk management systems. In dealing with continual improvement, identify all the

'actual & potential' nonconformities (= hazards) that get in the way, assess the risks they expose in terms of likelihood of occurrence and their consequences, and deal with them. And write it all down so you can defend yourselves if you have to.

Don't spend more on managing any hazard than its risk is worth and take note that all you're doing really is working on your overall quality plan. There's very little that's new under the sun.

All the best.

References

Picture from www.hazop.com

ISO DIS 31000 Risk Management – Principles and guidelines on implementation

AS IEC 61882 – 2003 Hazard & operability studies – Application guide

AS/NZS 4360:2004 Risk Management

AS/NZS 4369:1999 Risk Management

AS/NZS 3931:1998 Risk Analysis of technological systems – Application guide