

## Risk management on a Stretcher

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The London Ambulance Service (LAS) emergency call service had to resort to pens and paper for a day in early June when a systems upgrade went wrong. A board meeting at the end of May had noted that there was a high risk of such a failure and within a couple of weeks this assessment was proved right.

So this seems a good opportunity to look at how an organisation like the LAS manages risk, and fortunately for us the risk management policy and strategy document is publicly available. The first thing I noted was that only three of the document's 52 pages actually discuss the practicalities of making risk decisions. The other 49 pages deal entirely with administration, committee structures, roles and reporting channels. And nowhere in the document is any guidance provided on the mental processes or evidential requirements for making consistent, reliable risk judgements. So far so normal. I thought there might be some more practical guidance in the risk assessment and reporting procedure. Well yes, a little bit more. It mentions the need to assess both likelihood and impact, although it doesn't say how in any detail. It merely advises: "Describe the factors that would lead to, or have led to, the risk occurring (e.g. event, incident, audit, etc). Consideration should be given to the people, place, plant/equipment and policy/procedures that are linked to the risk that is being reported." All valid, if rather vague and basic, advice - although we're still not told how to do the considering, which is always the real challenge.

But then I came to the definition of risk: "A risk is defined as the probability (combination of likelihood and consequence) that a specific adverse event will occur in a specific time period or as a result of a specific situation". That's truly weird. Probability is not a "combination of likelihood and consequence" - it's a measure of likelihood. Risk itself is the combination of the two.

Passing on to the risk assessment method itself, I found the usual kind of matrix tool, although it's possibly one of the less awful ones I've seen. For a start, the impact matrix seems well-specified for the nature of LAS's operations, and the escalations over the 1-5 impact scale appear quite reasonable. The likelihood scale also has five increments, and for each increment there are three alternative descriptors. The first is in terms of frequency - "once a year" and so on. The second is described as a "probability" expressed as a percentage, and the third is a subjective classification, e.g. "reasonable chance of occurring".

The instructions are to use frequency wherever possible, revert to "probability" if frequency can't be gauged, and resort to the subjective classification only if nothing else can be done. This seems fine at first sight - indeed even quite robust. Then I spotted a nasty little fly in the ointment. Ignoring for now the third, entirely subjective, classification, the other two can be correlated numerically. And when we do, we find they're not equivalent by a long chalk. Nor are they even consistently non-equivalent. The five increments in the LAS likelihood table are: less than once a year or less than 1%; at least annually or 1-5%; at least every 6 months or 6-25%; at least monthly or 25-60%; at least weekly or more than 60%. Real probabilities of occasional events depend absolutely on the time frame used as a reference, but no time frame is specified. The best fit of the verbal likelihoods to the LAS "probability" figures I could find resulted from using a weekly basis. Once a year would then roughly equate to 1.9%, twice a year to 3.8%, once a month to 25%, and once a week to 100%. But all except the annual and monthly figures are very inaccurate.

Depending on the time frame used, the numbers would come out quite differently. But even on this "best fit" basis, the LAS "probability" descriptors deviate sufficiently from their associated verbal frequency descriptors that the two - supposedly interchangeable - descriptors could yield radically different likelihood rankings for the same event. Which means that the derived risk level could well be different, depending which descriptor was used to estimate likelihood. Furthermore, the two descriptors are not even consistently out of kilter. The ratio of the verbal frequency-equivalent likelihood to the quoted "probability" varies significantly across the range of increments. So the use of different descriptors to assess events with different perceived likelihoods could be another source of error.

The LAS risk criteria are far from ideal, but they do mostly seem to err on the side of caution. Which is why it's surprising that an event assessed as "likely" (level 4) and "catastrophic" (level 5) occurred within a couple of weeks of it being documented in advance as such. The relevant minutes state "there

is a risk that the working processes in the dispatch or call taking functions of the Emergency Operations Centre (EOC) do not align with those required by Command Point..." - i.e. the new software could force operators to use procedures inappropriate to their job. I can't quite understand how that came about, or how it was still an unresolved issue a fortnight before deployment. Or indeed why deployment was allowed to proceed with it recognised as a high risk that remained unresolved. But then there's more to risk management than just coming up with the numbers.

Originally appeared on the Infosecurity Network, June 2011