

Blog 4: Why are we surprised by catastrophes ?

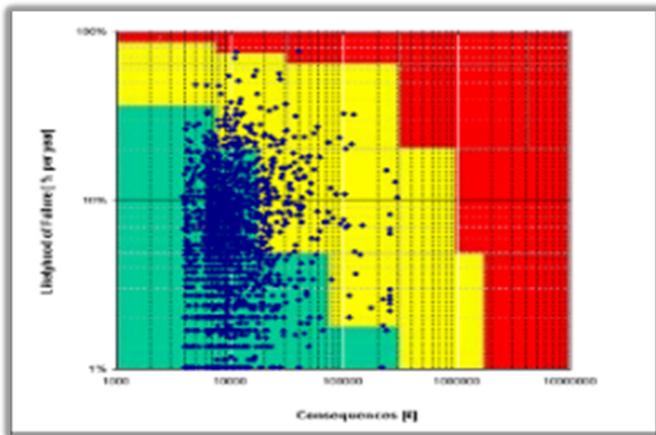
(Getting Ready for ISO 55000 – Part 4 of 10)

Insights from the "Asset Management for the 21st Century - Getting Ready for ISO 55000" Seminar, May 2013, Calgary: *This blog is based on a series of interviews with John Woodhouse from The Woodhouse Partnership (TWPL), who delivered this well-received seminar. John Woodhouse is CEO and Managing Director of asset management consulting firm TWPL, is a founder member of the Institute of Asset Management. He chaired the development of the PAS 55 standard and is UK Principal Expert in the development team for the ISO 55000 standard.*

Chernobyl, Three Mile Island, Bhopal, Texas City, Piper Alpha, Macondo. After traumatic and tragic events, people often exclaim “How could this have happened?” and “It must never be allowed to happen again!”

Tragedies and catastrophes like these come with direct, indirect and societal consequences that cannot be accounted in any conventional system. Nothing can prepare us for them in a human sense, and no amount of preparation can help us recover from them easily. Nonetheless, we must do the best we can to preconsider and prepare for such events, in the rigor of our preventive efforts and in contingency plans or emergence response. It is part of responsible asset management to think about the ‘unthinkable’.

As much as we would like to, we can’t eliminate risk: there’s no such thing as ‘zero risk’ in operating and managing complex systems. And, unpleasant as it is to consider and discuss such possibilities, we have to include low probability, catastrophic consequence events in our risk management strategies. Risk management is a core part of asset management, and a professional, disciplined consideration of rare, catastrophic events is part of this responsibility.



But remote probability events are hard to envisage, and even harder to quantify. Similarly, the scale of consequences of major incidents is difficult to consider, and many people simply choose not to think about it. But there is a way of dealing with the subject: of considering the scales of risk and the appropriate asset management implications.

In the UK, the Control of Major Accidents and Hazards (COMAH) legislation includes a requirement for “disproportionality” in risk management. This forces the extra degree of conservatism needed when assessing and managing rare event risks.

Let me explain what I mean.

If we estimate an incident as having a 1 in 10 chance of occurring, and the event consequences as \$100,000, then the level of risk is $1/10 \times 100,000 = \$10,000$ and a preventive action (or insurance policy) costing less than this would be justifiable.

If, however, the event were rarer, say a 1 in 10,000 chance, with consequences that could be as high as \$10 million in impact, a “proportionate” risk assessment would say the risk was the same ($1/100000 \times 10$ million also equals \$10,000). However, the rarity of the very rare event means that the quality of our knowledge or estimate is much poorer, and so is our ability to predict potentially massive consequences. To reflect this weaker information, we have to inflate the fear in case we are wrong. This is “disproportionality” and it requires a deliberate non-linearity in probability scales and in consequence scales. Rare, catastrophic events must be assessed as if they were less rare, and have even greater catastrophic consequence, than we would directly estimate. Asset managers must show that this conservatism is built into their risk management processes in determining how to control such risks, and to what degree.

We will never eliminate all risk but we can manage it to the best of our ability. And a head-in-the-sand reliance on simply complying with rules and procedures is not an adequate or acceptable practice.