DISASTER MANAGEMENT ASSOCIATION OF SOUTHERN AFRICA

Risk Management
A Critical Component of Sustainable Development

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Introduction

Business has been defined as the undertaking of risk for reward and it is the duty of every company to manage the risks too which they are exposed in a manner that enables them to maximise their rewards.

During the 1970's and 1980's a series of catastrophic incidents took place at industrial installations throughout the world. The Seveso, Chernobyl and Bhopal incidents resulted in the public being made aware of the dangers associated with industrial operations. Apart from the loss of life, it became increasingly evident after the Exxon Valdez incident in Alaska, and the Piper Alpha disaster in the North Sea, that these types of incidents could cause serious damage to the reputation of major international companies.

The effects could be so severe that they are liable to severe penalties to such a level that their continued existence could be threatened. Once your companies image has been tarnished due to an incident, it is impossible to regain the market share your company had before the incident occurred. Ask the people who make Perrier Water after they experienced a scare involving benzene in their bottled water.

For your companies to maintain their current position in their chosen field, and to ensure sustainable development, it is essential that the principles of risk management should run like a thread through the very core of your company. This does not mean only at boardroom level, or only at the workface, it must be part of the very fabric of your company's culture from top to bottom. Risk management has may definitions among them "Risk management is a management function which has the objective of protecting people, assets and earnings by eliminating or minimising the potential for loss from pure risk, and the provision of funds to recover from losses that do occur."

The key to any risk management programme is the desire to optimise profits, but more importantly, to minimise loss. It seems common sense to state that the best way to save money is not to lose it or spend it in the first place. If however money must be spent on risk management it should be spent wisely. In the current financial climate no company, be it large or small, can afford to spend money on risk management in a wasteful manner.

Investigations in the United States of America have shown that approximately two thirds of all companies that are struck by a catastrophic event do not survive. Three quarters of the companies in the United States that suffer a major fire loss never reopen. Many companies do not seriously consider having to cope with a major disaster. Your mere attendance of this conference would indicate that the company that you represent has a different outlook.

Some of the typical reasons given for the apparent lack of concern with respect to catastrophic disasters are:

Our company has never experienced such an event (it can't happen to us)

If anything happens we are well insured (we can take the punch)

It is our job, as executives, to be prepared to take risks (cowboys don't cry, at least in front of their horses!)

The nature of our business and competitive pricing means we cant afford additional safety costs

Unfortunately hindsight is 20:20 vision. Question the same people just after a major event on their site and the answers may be slightly different. If we look at some case studies from the major catastrophic incidents which have occurred in the past such as Bhopal, Chernobyl, Piper Alpha and Mexico City, the message is loud and clear. It is a relatively simple conclusion if you investigate the circumstances leading up to the events, that a catastrophic incident at these installations was inevitable. These were typical examples of the "accident waiting to happen".

Risk

In industry, as in everyday life, we are all subjected to "risks" of varying magnitudes and complexities. If you come across a position for a Risk Manager in the situations vacant section of the newspaper, and the applicant is required to "eliminate all risks that the company faces" beware. It is a safe assumption that the person who is unfortunate enough to get the job will not be receiving an "above normal" merit rating at the end of the financial year. There is no such concept as "zero risk". There are varying degrees of risk in each and everything we do.

The term I prefer to use, is that of **"tolerable risk"** as outlined by the UK's Health and Safety Executive.

> **"Tolerability does not mean acceptability. It refers to the willingness to live with risk to secure certain benefits, and in the confidence that it is being properly controlled. To tolerate a risk means that we do not regard it as negligible or something we might ignore, but rather something we need to keep under review and reduce still further if and as we can."**

We must therefore manage our risks to a level of tolerability. Unfortunately there is no "golden rule" with respect to the level which is universally regarded as tolerable. The Department of Labour is not willing to supply industry with guidelines as to what it considers "acceptable" for compliance with the Major Hazard Installation Regulations, which must be complied with before the end of this year.

Everyone seems to be using the term "self regulating" but unfortunately the distinction between self-regulation and total abdication seems to have become somewhat hazy.

Risk Assessment

Unfortunately there are no "Ten Commandments" of risk assessment carved in stone to which we can refer in times of difficulty. There are however several published guidelines to the process. The generally accepted international approach to risk assessment usually involves the following: -

- Using experiences from the past both within the company being assessed, as well as worldwide. There are various publications and data bases which can assist with this type of information on incidents which have occurred;

- The assessment must be systematic in nature. The techniques employed must be capable of identifying potential loss/harm causing events or hazards;

- The risk assessment process should involve the participation of a wide breadth of relevant experience. This will help to build a sense of ownership not only for the hazards identified but also for the proposed solutions;

- The assessment should develop an implementation plan with the elements prioritised according to a relative risk ranking;

- The ultimate goal should be the creation of a risk management system which will include all the essential elements to allow the establishment of a self sustaining, continuously vigilant management system.

The risk assessment must seek to answer the following questions as these cover the key aspects and may be considered the foundation of the process on which we erect the risk management process:

- Where do the risks to the business come from?
- How big are these risks?
- What are the major contributors?
- What are these risks sensitive to, and therefore how can they be changed?
- What level of risk does the company consider intolerable, and what level is considered negligible or trivial?
- From these, what is worth doing to reduce risk?

Any risk assessment, be it a business risk assessment or a full blown quantified risk assessment for a complex petrochemical installation has, as its starting point, the systematic identification of the hazards which the company faces.

Operational Sequence

The operational sequence of any risk management approach can be descried as

Step 1: **Risk Identification**
As outlined above this is the identification of the pure risks which the organisation is, or could be exposed to.

Step 2: **Risk Evaluation**
This is the combination of the frequency analysis and the consequence analysis for the identified risk.

Step 3: **Risk Assessment**
The assessment of the risk against predetermined tolerable risk levels which the company has established.

Step 4: **Risk Management**
It is at this point that the company has sufficient information on which to base decisions as to how to deal with the risks. These decisions are usually based on the traditional 4 T's of Terminate, Treat, Tolerate or Transfer. It is in this area that the risk control and risk financing disciplines come to the fore.

Risk Identification

The assessment asks the following questions for each identified hazard:

Question 1 : What can go wrong?

Question 2 : If it were to go wrong, what would be the consequences?

Question 3 : Are we willing to live with these consequences?

Question 4 : How likely is it to occur?

Question 5 : Are we willing to live with this level of risk?

Question 6 : Can we reduce the level of risk?

Question 7 : Is the risk reduction worth the money we must spend?

The days of companies throwing money at a random selection of hazards because "the insurers" or some other nebulous entity says so, in an attempt to carry out so-called risk reduction measures are long past. No Company, large or small can afford to waste money on risk reduction measures if they have not carried out a proper risk assessment of their business.

Risk Evaluation

The risk evaluation stage is that point in the process where the frequency of the identified incident taking place is combined with the consequences of the incident should it occur. The consequences may be financial, effect on employees, effect on members of the public or, of increasing importance, the effect on the environment.

The main problem with this activity is the fact that we are trying to compare apples with oranges and trying to establish an equitable measure of the scale of the risks posed by each relative to one another. This is all very well in the fruit and vegetable trade with apples and oranges but becomes exceedingly complex in industries such as large-scale petrochemical plants.

Risk Assessment

The risk assessment is the stage where the identified risks are compared to a predetermined set of risk levels which the company has established as being intolerable, tolerable or trivial. The identified risks are therefore measured against a set yardstick which will remain constant for the company. This is essential as the saying "if you aim at nothing, you will hit it every time" holds true for risk assessments. From my experience very few companies have actually established the levels of risk that they are willing to tolerate. They normally ask me, the consultant to tell them what levels they should consider tolerable. I normally refer them to those levels recommended by the UK's HSE, but only the CEO and his directors are in a position to decide for their specific company.

Risk Management

The management of the risk can be split into two distinct legs:

- Risk Control; and
- Risk Financing.

These can be dealt with using the 4 T's as described earlier.

Risk Control	:	Terminate (eliminate the potential of loss) Tolerate (live with the risk) Treat (implement risk reduction measures)
Risk Financing	:	Transfer (self-funding or insurance)

It should be kept in mind that insurance and other forms of risk transfer only act to reduce the impact of the loss after it has occurred. In no way will they act to prevent the occurrence of the loss-making event. Rather like bolting the stable door after the horse has bolted. In the hierarchy of risk control strategies this transfer technique should come towards the bottom of the league in terms of effectiveness. Avoidance and the control of the risk at source are usually much more cost effective.

Risk Control Hierarchy

Elimination, Avoidance or Substitution
Control at Source
Minimisation (Frequency)
Minimisation (Consequences)
Mitigation

Cost Effectiveness

At this stage decisions have to be taken with regard to the methods which will be implemented in order to ensure that the identified risks are brought to a level which the company is willing to tolerate.

Conclusion

To cover the topic of Risk Management in such a short space of time is beyond my, rather limited, capabilities. I only hope that this paper has in some way made the attendees more aware of the importance of the topic with respect to the continuing success of their companies.

With all of the current and ever changing legislation in the country, my motto to my clients is as follows:

“Don’t do anything to comply with legislation, do it because it is the right thing to do for your company, and as an added bonus you will also comply with the legislation.”

If you implement a risk management programme in your company it should pay for itself due to lower number of injuries, less production upsets, and if it is implemented properly, a more motivated work force.

Disaster management, although a critical component of risk management, if you have to implement it fully, is telling you that all of your other risk management components have failed.

PREVENTION IS BETTER THAN CURE

