

# From Three Mile Island to Basle

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Some sections of the financial community seem to assume that quantifying operational risk, in line with the Basle Committee's proposals, is essentially impossible – or at best, extremely difficult and of minimal value. However, in other industries, such risk is not only quantifiable but serves as the foundation of regulatory oversight and has been critical to operational success. Of these, the nuclear power industry immediately comes to mind.

Ever since the accident at Three Mile Island, the nuclear power industry has taken probabilistic risk assessment (PRA) very seriously. In 1975, the prescient Reactor Safety Study, better known as WASH-1400, predicted that a catastrophic nuclear accident was likely to originate in the non-safety related side of a nuclear power plant. At the time this finding was generally counter-intuitive, yet nine years later a non-safety related pump failed, setting off a chain reaction at Three Mile Island, which culminated in the worst nuclear accident in US history.

Today, PRAs are used routinely to assess the risks of nuclear operations and to select areas for inspection by the US Nuclear Regulatory Commission (NRC). PRAs don't just utilise the failure rates of equipment but also incorporate the failure rates of humans at the controls, and an industry has grown around quantifying the likelihood of human error and its impact.

Once human error failure rates are calculated, it is a natural progression to determine why the failures occur in the first place. Once this is known, action can be taken to reduce the failure rate, thereby reducing the company's potential liability. It has further been determined that the causes of human error can be applied generically to any organisation, even banks.

It should not be surprising that inadequate management systems and policies give rise to the five key sources of poor

human performance: poorly understood mission and goals; weak lateral integration; complex work practices; non-existent self-improvement programmes; and under-trained workers.

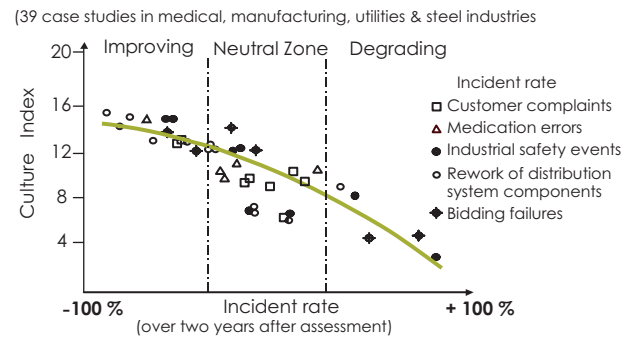
What might be surprising, however, is that there is a way to quantify such elements of a corporate culture. (My company, Performance Improvement International (PII), has been doing it for years).

PII has amassed a large database of cultural indicators, which includes the means of benchmarking organisations against the top performers. These indicators have also been proven to forecast organisational performance accurately. Nuclear utilities have used the associated analyses to assure themselves that they have the right elements in place to minimise mistakes and maximise power plant availability. PII's technology merely quantifies the common managerial attributes that make any organisation continually successful.

For instance, the Culture Index score is used to quantify an organisation's standing with respect to the five key characteristics mentioned above. The higher the score is (on a scale of 0–20), the better future performance is expected to be, based on a reduction in operational 'events' and overall strength in performance. The Culture Index score is best used to assess the longer-term potential of the organisation (18–24 months out) and was derived from a review of the key characteristics of strong operational safety performance.

Another indicator used to assess near-term (6–18 months) corporate performance is the Competitiveness Index, which assesses management's capability in six key areas of responsibility, including market awareness and management control sys-

## 1. Culture Index – leading indicator in many aspects



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tems. There are several other, more narrowly focused indicators including a manager quality index and an indicator that is used to quantify the impact of corporate 'rightsizing'.

All of these indicators were developed for application in any industry needing to evaluate future performance and minimise organisational and operational risk factors. Banks have gone through, and continue to experience, downsizing, which is part of the evolution of any industry. And there are managers in any corporate setting who require the same skill sets in banking as they do in the power industry.

They must have the right 'technical' skills, and they must have good management skills: the higher the manager in the organisational hierarchy, the more comprehensive the skill set required to be successful. And finally, they must have the natural ability or aptitude to manage, as evidenced by their integrity, initiative and involvement.

While no organisation can prevent premeditated malicious acts with 100 per cent certainty, they can establish an environment that can minimise the mistakes that turn into tremendous losses. By employing a technology that quantifies the presence or absence of well-known management techniques, banks can start building the models necessary to make the most of the Basle Committee's proposals. ■