

## Safety Corner

What is the evidence of an effective risk management regime?

While an audit can tell us whether your risk management system is implemented according to procedures, we could develop a scoring scheme to register the effectiveness of a risk management regime for an industry or certain types of operations. As a starting point, the list below gives evidence of an effective risk management regime for a complex engineering system.

- Having a safety risk management policy that is endorsed and practiced by senior management, and is given appropriate visibility in all levels of the organisation.
- Adopting an organisation-wide approach to proactively managing risks such that the most important risks are managed first, and formally integrating risk management into business processes and budget control.
- Using a hazard registration system as a preliminary screening tool (but never the only tool) and employing quantitative modelling techniques for complex issues and safety critical events.
- Employing leading risk performance indices (e.g., risk indicators) and using calibrated probabilities to explicitly addressing uncertainties in the risk assessment and management process.
- Having an active system in place to capture site-specific reliability data, accident data, near-misses, common mode failure, and key risk parameters. These data are used to update the likelihood estimation in risk assessments and hazard registration system.
- Having crisis management and business continuity plans in place to address risk retention.
- Providing direct evidence where the risk management techniques actually find problems that would not have been found otherwise.
- Constantly checking for completeness to ensure that the risk management methods cover the entire spectrum of risks and all parts of the organisation and stakeholders
- Regularly reviewing worst case scenarios, rare scenarios with multiple failures, and accidents at similar systems elsewhere.
- Regularly reviewing, and updating as necessary, key risk management indices (including the risk matrices, risk acceptance criteria, value of risk benefit, etc.) and assure their adequacy and applicability.
- Having system in place to capture and share knowledge.

The above list is by no means exhaustive; readers are welcome to expand the list through their own management review and feedback.

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The Safety Corner is contributed by Ir Dr. Vincent Ho, who can be contacted at [vsho.hkarms@gmail.com](mailto:vsho.hkarms@gmail.com)