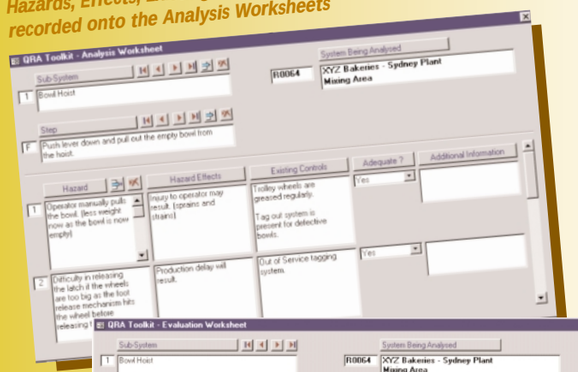
QRA *Implementation*

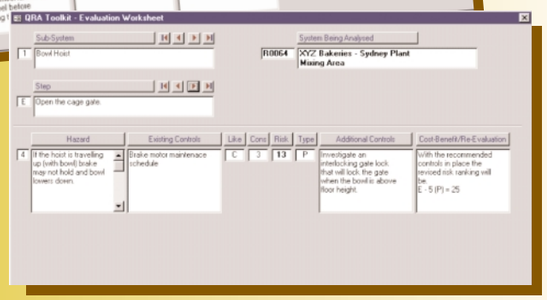
QRA is implemented by review teams made up of the people who know the process best...

...operators, maintainers, technicians, technical experts, suppliers, manufacturers and/or designers...

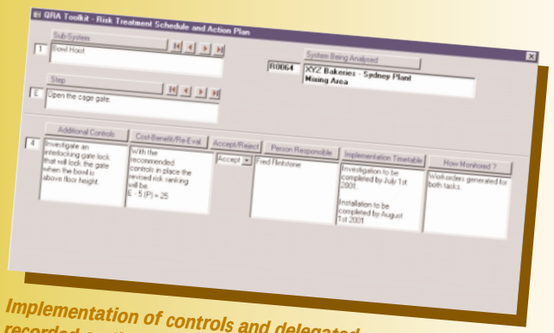
The review team is lead through the analysis by an expert facilitator, who ensures the risk analysis methodology is applied correctly and all the issues are fully understood..

Hazards, Effects, Existing Controls and their adequacy are recorded onto the Analysis Worksheets





Likelihood, Consequences, additional controls and cost benefit analyses are recorded on the Evaluation Worksheets



Implementation of controls and delegated responsibilities are recorded on the Risk Treatment Schedule and Action Plan

The Benefits of using QRA Toolkit

- *Consistent process*
- *Succinct analysis*
- *Clear audit trail… all data and decisions are documented*
- *Standard reporting… reports will be standard for each analysis*
- *Common database... analysis stored in one location*
- *Common database... greater data security*
- *Comprehensive reporting capability*
- *Automatically sorts in risk or consequence order*
- *Provides for auditors review notes and responses*

Qualitative Risk Analysis – *training and software...*

Risk is an inherent part of everything we do, whether we are driving a car, running a business, purchasing new equipment or dealing with customers.

Sometimes we manage risk subconsciously and other times consciously, but rarely do we manage risks in a structured systematic manner.

As organisations face risks from all directions, a formal approach to Risk Management is essential. An organisation that has learned how to manage risks effectively will be able to make informed decisions and operate safely and efficiently.

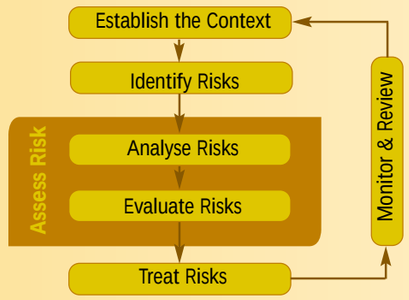
QRA Toolkit software and associated training allows your organisation to undertake Risk Assessments in accordance with AS/NZS 4360, 3931 (IEC 60300-3-9) and MDG 1010 and to formulate appropriate risk management actions.

Application

Qualitative Risk Analysis is used to identify hazards and to determine appropriate controls in new and existing processes.
The outcomes of the analysis are fully documented and provide a timetable for implementation of any controls required. The QRA process has been successfully implemented in manufacturing, food processing and mining and associated industries.

Managing Risk

The process for managing risks to the above Standards, and modelled within the QRA software, is shown below:



The QRA process and software guides the analysis Group through each of these steps in a systematic, organised manner.

Establish the Context

It is essential that Risk Management decisions are in line with the organisation's internal and external environments. Each analyses must therefore begin by defining the operating context of the system or process under assessment.

Identify the Risks

All of the steps in the system or process to be assessed are identified through structured analysis, including the inherent risks in each process step.

Assess Risks

Performing a Risk Analysis involves considering all the sources of Risk, as well as their likelihood and the consequences if the event occurs.

Numerical data is not required when using the Qualitative approach, and so allows for assessment of systems where little or no numerical data is available. The Qualitative approach does not require group members to be skilled in mathematics.

The Qualitative Risk Analysis group is greatly enhanced when the people participating are from varied organisational backgrounds, thereby enabling their wide experience and knowledge to be captured within the process.

The assessment process uses a structured and documented approach and uses agreed likelihood and consequence evaluation tables.

The following questions are asked:

- **What are the discrete steps in the process?**
- **What hazards exist (if any) for each step in the process?**
- **Are there any existing controls?**
- **Are the existing controls adequate to reduce or eliminate the hazard and the effects?**
- **What is the likelihood of the hazard occurring?**
- **What are the consequences if the hazard does occur?**

The resulting level of risk for each hazard is then determined from the likelihood and the consequence data provided by the group and additional controls are determined as required.

The group is led through the entire analysis by a trained facilitator with all data and decisions being documented into a final report . All identified risks are presented in the report in a prioritised list for further action.

Risk Treatment

Those risks not considered to be tolerable will be treated in some way so as to eliminate or reduce the risk to a level that is 'as low as reasonably practical'.

Monitor and Review

The entire risk assessment process including all data and decisions are documented for review using the standard Reports contained within the QRA Toolkit software.

How We Can Help

The Asset Partnership's highly experienced Risk Assessment Practitioners offer Qualitative Risk Analysis Training, technical support, consulting and project planning and management.

Training in Qualitative Risk Analysis

Our Qualitative Risk Analysis training programmes include:

- *One Day Introductory Course, for review team members.*
- *Two Day Facilitator Programme, for review team facilitators.*

Risk Management:

"the culture, processes and structure which come together to optimise the management of potential opportunities and adverse effects"

AS/NZS4360:1999

- **Providing Training for participants and facilitators**
- **QRA Toolkit - Software to assist the Risk Analysis process**
- **QRA Toolkit**
  - **AS/NZS 4360, 3931 (IEC 60300-3-9) compliant**
  - **NSW Department of Mineral Resources Guideline MDG1010 compliant**
- **Verification version available for Risk Assessment verifiers, compliant with NSW Department of Mineral Resources Guideline MDG1014**
- **Contract facilitation**
- **Assessment verification and review**

AXYS ENGINEERING

**** Software developed by AXYS Engineering in association with The Asset Partnership***

Qualitative Risk Analysis

The Asset Partnership is proud to be a member of the **ALADON** world wide network of licensees, the recognised leaders in Reliability-centred Maintenance training and application.

We offer advice and training in an integrated suite of practical solutions designed to minimise operational, safety and environmental risk, maximise profit, and minimise asset management and maintenance costs.

The Asset Partnership is the Australian distributor for **sparesFinder**, the one stop service on the world wide web for locating engineering spare parts - in your organisation or someone else's.

Services offered by The Asset Partnership include:

- A comprehensive suite of world class Reliability-centred Maintenance II and advanced asset management training courses
- RCM Toolkit - the specialist RCM II software to facilitate rapid and accurate RCM II analysis
- Reliability Centred Spares (RCS) - software for determining optimum spares holdings
- QRA Toolkit - Qualitative Risk Analysis Software and training
- Operational Reliability - enabling organisations to operate in reliably, safely and consistently
- General asset management consulting, including strategy, culture, structures, systems and performance.

For further information about us
and our services, visit our web site at
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QRA

Qualitative Risk Analysis

...the ultimate risk management tool...

The Asset Partnership