

# risk management



achieve outstanding client success

SINCLAIR KNIGHT MERZ  
**SKM**

Our Risk Management team is focussed on continually advancing their knowledge and practices and providing services at an internationally recognised level that are specifically tailored for individual clients.

#### ■ RISK MANAGEMENT

The identification of risks and the selection of preventative and mitigating measures to address these, is a vital part of ensuring the validity and ultimately the approval of any study.

SKM's Risk Management professionals work collaboratively with the study team to apply structured approaches and methodologies to analyse projects as they develop from concept through to implementation stage.

The SKM Risk Management team has been involved in project risk, engineering risks, environment, health and safety and general risk management projects across a diverse range of industry and commercial businesses, and for a cross-section of government organisations.

#### ■ OUR EXPERTISE

SKM has an experienced team of professionals who have broad and specialised skills in risk management, ranging from business risk to dangerous goods, and quantified risk assessment.

Our studies often require innovation and a mix of analysis and people skills to provide tailored solutions to suit client needs.

From across the globe, SKM's Risk Managers can provide the appropriate skills for any client's needs.

Our advantage is being able to provide a multi-disciplinary team of trained and experienced risk management professionals. This differentiates us from our competitors, and enables us to provide real strategic value to complement our technical advice.



#### ■ PROJECT DELIVERY

We have undertaken extensive research with our clients to ensure we understand their business-critical project delivery needs and have formed a team to best meet these requirements. With our in-depth understanding of our clients' businesses and operating environments we then systematically apply our best people, excellent local knowledge and leading expertise to tailor solutions that meet their needs.

Our project delivery team offers professional expertise in project management, construction management, estimating, project controls, contracts and procurement, project management software systems, industrial relations and human resources, and safety and risk management.

#### ■ COLLABORATIVE APPROACH

SKM is committed to the provision of quality risk services that deliver exceptional value.

Core to our commitment is the collaborative approach we apply to projects and the relationships we build with our clients.

We listen carefully to our clients and project stakeholders to ensure we are responsive to their operating environments. We meet their needs by applying our specialised people to the appropriate projects.

## ■ SAFETY IN DESIGN

SKM implements processes to identify and eliminate or minimise design-related adverse risk outcomes over the life-cycle of the assets which we design.

SKM has a suite of techniques that are used for different projects and studies to identify improvements in the safety of our designs.

Facilitation and on-going support is provided on design projects to achieve an outstanding hazard identification and control philosophy.

## ■ INDUSTRIAL AND DANGEROUS GOODS

The use of hazardous and dangerous substances in many facilities requires compliance with various codes, standards and regulations. These are often detailed and difficult to understand, hence, specialists are required to interpret the application of these documents to ensure compliance with the requirements of the local regulator. Studies include concept compliance designs, code compliance assessments, exposure risk analysis and dangerous goods licensing in accordance with the local regulations.



## ■ OPERATIONAL RISKS

SKM's Risk Management team provides existing facilities with a full range of techniques to suit client needs, ranging from operational risk assessments and training, through to dangerous goods needs and quantitative risk assessment.

Our risk management capability identifies plant and equipment risks so they can be minimised, mitigated or eliminated. These risks may have impacts not only upon safety, but in many cases they can affect an operation's profitability, efficiency, legal compliance and reputation. SKM's facilitated operational risk assessments provide a means of independent review, assessment and audit of these risks.

SKM provides greater certainty of outcomes by understanding public exposure to hazardous substance risks. In this critical area SKM's highly-skilled specialists can define risks through dispersion analysis and related techniques. The results can provide the justification for decisions on land use planning and operating permits from government authorities.

## ■ RISK ASSESSMENT

The use of risk assessments is a valuable tool to identify issues of priority and provides for charting techniques that can be used to clearly highlight the areas of most concern.

SKM have risk assessment facilitators who can provide significant insight into the process, procedures and outcomes, as well as specialists trained in risk mitigation processes. These people bring a wealth of experience in the use and application of these processes.

The outcomes from formal risk assessments provide excellent visual and factual data to communicate the mitigation and control strategies of importance.

The use of dedicated risk management software for semi-quantified and quantified risk analysis enables SKM to perform and report risk assessments in a timely manner and in a format that suits the client. Graphics and tables are used to aid in the interpretation of the data collected, enhancing the overall reporting process.

## EXTENSIVE SKILLS

### ■ QUALITATIVE RISK

- HAZID
- HAZAN
- Decision Support (Multi Criteria Utility Analysis)
- Auditing
- Facilitation
- Risk Reviews and Validation
- Safety Plan Design and Review

### ■ SEMI-QUANTITATIVE RISK

- Risk Assessment Configuration
- Value Engineering Studies
- Operational Risk Assessment
- Construction Risk (Constructability)
- CHAIR
- Risk Management

### ■ SAFETY IN DESIGN

- Hazardous Area Classification
- SIL Study
- HAZOP
- CHAZOP
- Facility Layout Review
- CHAIR
- Hazardous Substances
- Dangerous Goods
- FMECA

### ■ BUSINESS RISK

- Cost Contingency Analysis
- Risk Committee Facilitation
- Capital Options Analysis
- Pre-Feasibility Study Risk
- Feasibility Study Risk
- Risk Management Plans
- Business Continuity

### ■ QUANTITATIVE RISK

- @Risk
- Fault Tree
- Event Tree
- Consequence Analysis
- Frequency Analysis
- Risk Contours
- Probit Analysis
- SIL Determination
- SIL Availability and Reliability Analysis
- Dispersion Modelling (Toxicology)

### ■ MANAGEMENT SYSTEMS

- Management Systems Audit
- Tri Safe Audit (Accreditation)
- EWRM
- Emergency Response Plans
- Safety Management System Development
- Environmental Management System Development
- Crisis Management Plan

### ■ TRAINING

- Incident Investigation Course
- Risk Management Course
- Hazard Auditing Course
- Quantitative Risk Assessment Course
- HAZOP Training
- PHA Pro Risk Software Training

### ■ PEOPLE

- Lessons Learned
- Training Package Design and Delivery
- Behavioural Change Process
- SiD Training
- Incident Investigation
- Safety Management Mentoring
- Human Resource Risks
- Human Factors (HEART and THERP)
- Human Error Analysis

### ■ SAFETY CASE

- Site Description
- Failure Mode Effects Analysis
- Fault Tree Analysis
- Fire Safety Studies
- Escape Muster Evacuation and Rescue Analysis
- Emergency Systems Survivability Analysis
- Emergency Response Plans

### ■ MINE CLOSURE

- Option Analysis
- Cost Risk Analysis
- Closure Plan Assessment
- Closure Plan Reviews
- Social Risk Assessment
- Social Plan Reviews

Ensuring  
our clients  
achieve  
outstanding  
success comes  
from the drive we  
have to make it all  
come together.

■ SKM USE A PROVEN CONSISTENT APPROACH TO RISK MANAGEMENT WHICH IS CHARACTERISED BY:

- Client liaison
- Consultation
- Team work
- Adaptability
- Understanding of the scope and client context
- Process facilitation
- Challenge unsupported assumptions
- Clarity of presentation
- Communication of analysis
- Report reviews
- Delivery on time and on budget
- Global resources
- Global knowledge base of capability
- Broad skills capability
- Individual technical excellence
- National and international experience



■ PROJECT FEASIBILITY

Our specialists apply structured and systematic techniques to manage risk and opportunity during design studies.

OPTION ANALYSIS

- Assessing multiple opportunities to maximise benefits. SKM's multi-criteria risk assessments provide clients with a tailor-made solution that incorporates all stakeholder views and presents the outcomes in a structured, easy to follow format that provides clear reasoning to support each decision.

CONTINGENCY ANALYSIS

- Understanding the true impacts of risks and opportunities to facilitate funding. SKM provides analysis using the latest techniques and presents project management with both the answer and the justification to the problem of identifying an appropriate risk contingency.

■ LEARNING FOR CONTINUAL IMPROVEMENT

An important part of the risk management process is enabling organisations to learn from experience. Learning for continuous improvement focuses on the principle of practice and reflection. The use and sharing of lessons learned improves operations, planning and strategic decision making.



## Where to find us:

With offices across Australia, Europe, the Middle East, New Zealand, the Pacific Islands, South America and South East Asia, our aim is to deliver our leading skills across the globe.

Sinclair Knight Merz employs several thousand staff and our professionals enjoy excellent relationships with business and government contacts in regions where we operate.

We have extensive experience working with leading financial institutions, aid agencies and other non-government organisations.

## Contact:

For further information regarding Risk Management services contact:  
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For further information on our range of services and office locations visit our website or contact:

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