



CLIENTS | PEOPLE | PERFORMANCE

RISK MANAGEMENT



GHD IS AN INTERNATIONAL PROFESSIONAL SERVICES COMPANY. OUR PEOPLE DELIVER INNOVATIVE SOLUTIONS BY COMBINING TECHNICAL SKILL AND EXPERIENCE WITH AN UNDERSTANDING OF OUR CLIENTS' OBJECTIVES AND ASPIRATIONS.

RISK MANAGEMENT

At a time when the international focus on risk continues to escalate, GHD holds a dominant position as a leading provider of multidisciplinary risk management consulting services.

Underpinning our success is a unique market offering – the powerful combination of technical, operational and business know-how coupled with risk management skill and experience.

Our solutions are characterised by innovation and rigour, a passion to help clients identify and implement improvements, and an understanding of stakeholder interests.

We are uniquely supported by GHD, which has an enormous variety of skills to provide robust solutions to the management of risks.

OUR CLIENTS

GHD has a proven track record of delivering services from board level to operations for major players in industries including oil and gas, chemicals, mining, refining, rail, aviation, manufacturing, energy, infrastructure, major events, government and regulators.

ENTERPRISE-WIDE RISK MANAGEMENT

GHD is arguably the leading player in the provision of risk management consulting services to organisations in the management of enterprise-wide risk. We support clients in a variety of areas to enhance their business from the boardroom to operations and projects.

We bring our experience and knowledge to work in a collaborative manner with clients in the management of risk. In addition to applying our leading approaches in risk management we also provide independence and integrity in the use of client originated risk management systems.

Quantification of risk is increasingly being applied by organisations to the management of corporate and business risks in numerous areas ranging from strategy execution to assurance of core business processes. We are leading the way in applying our techniques in this area.

- ▶ Board and executive level risk assessments
- ▶ Business continuity
- ▶ Business risk
- ▶ Crisis management
- ▶ Due diligence
- ▶ Integrated risk management systems
- ▶ Project risk management
- ▶ Risk-based decision analysis





MANAGING SAFETY

GHD recognise that safety and business performance is influenced not only by assets, materials and operations, but also by people, culture, systems and reputation, and we help clients to understand and better manage all of these.

Systems to manage safety must reflect how your organisation works, and GHD customises these tools and approaches to meet your needs and then support your team from planning to completion.

- ▶ Audits and inspections
- ▶ Emergency management
- ▶ HAZOP and HAZOP Leader training
- ▶ HSE integration systems
- ▶ HSE coordinator and safety officer roles
- ▶ Human factors
- ▶ Incident reporting and analysis
- ▶ OH&S regulatory requirements
- ▶ Oil spill contingency planning
- ▶ Organisational behaviour
- ▶ Safety management systems
- ▶ Safety training programs
- ▶ Safety cases and safety reports
- ▶ Task analysis
- ▶ Technical integrity reviews
- ▶ Dangerous goods licensing and auditing

RISK ASSESSMENT

Major industrial activity is intended to provide a benefit to society by converting natural resources and manufacturing useful products, providing employment and generating profits for its owners and wealth for society. However, these activities often have the potential to cause harm or disruption. Risk assessment is an excellent means of systematically ranking hazards, prioritising issues and identifying controls that prevent their manifestation. The process enhances the understanding of the control hierarchy within complex systems and assists judgements about the adequacy of the overall management regime.

GHD undertakes a range of risk assessment processes ranging from simple matrix or guideword based qualitative risk assessments to detailed quantitative modelling (e.g.: using software packages like @Risk, Plato and DNV's Safeti). In addition, the GHD SQRA™ process is in use worldwide as a risk assessment tool and was designed to match the rigour and repeatability of quantitative approaches, whilst still enabling workforce ownership and a focus on reducing risk as well as just assessing risk.

- ▶ HAZOP and HAZID studies
- ▶ Failure Modes, Effects and Criticality Analysis (FMECA)
- ▶ Qualitative risk assessment
- ▶ Quantitative risk assessment (QRA)
- ▶ Layer of protection analysis (LOPA)
- ▶ Probabilistic risk modelling (Monte Carlo)
- ▶ Reliability and availability studies
- ▶ Safety Integrity Level (SIL) studies
- ▶ Semi quantitative risk assessment (GHD SQRA™)

CLIENTS

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|-------------------------------------|--------------------|--------------------------|
| ▶ Airservices Australia | ▶ ConocoPhillips | ▶ Santos |
| ▶ Alcoa | ▶ EDL | ▶ State Rail Authorities |
| ▶ Alinta | ▶ ExxonMobil | ▶ State Water Utilities |
| ▶ Australian Grand Prix Corporation | ▶ Newmont | ▶ Wesfarmers / CSBP |
| ▶ BHP Billiton | ▶ Newcrest | ▶ Woodside |
| ▶ BP | ▶ Orica | ▶ Xstrata |
| ▶ Caltex | ▶ Port Authorities | ▶ Zinifex |
| ▶ ChevronTexaco | ▶ Rio Tinto | |

ENVIRONMENTAL COMMITMENT

Our clients seek to work with professional advisors who operate in an environmentally responsible manner. GHD's Environment Management System (EMS) aims to protect the environment from the potential impacts that may result from our office activities and from the projects we deliver.

The EMS was accredited in June 2005 to international standard ISO 14001 by NATA Certification Services International (NCSI).

QUALITY

Embedded in the heart of our strategy and management approach is a legitimate desire to uphold the quality of the services we deliver. We are proud that all offices operate under a Quality Assurance (QA) System that complies with international quality standards and is certified to AS/NZS ISO 9001.

SAFETY

Inherent in our values is our commitment to safety. It is our priority to provide a healthy and safe working environment for our people and contractors.



ABOUT GHD

GHD is an international professional services company. Our people deliver innovative solutions by combining technical skill and experience with an understanding of our clients' objectives and aspirations.

With more than 6000 people in a network of 100-plus offices throughout Australia, New Zealand, Asia, the Middle East, the Americas and Europe, we serve clients in the global market sectors of infrastructure, mining and industry, defence, property and buildings and the environment.

Central to our clients' prosperity and GHD's success are forward-thinking engineers, architects, planners, scientists, drafters, project managers, economists and supporting staff. Our people embrace the core values that have sustained the company since inception – **Teamwork, Respect and Integrity.**

Established in 1928, GHD is ranked as one of the world's leading engineering, architecture and consultancy firms. We are dedicated to our clients and their stakeholders, to being a responsible corporate citizen and to improving the quality of life around the world.

We contribute to the goals of sustainable development and are committed to managing the social, economic and environmental impacts of our operations and assisting our clients to manage theirs in the provision of our technical consulting services. We recognise innovation as the key to realising this objective.

As a member of the World Business Council for Sustainable Development (WBCSD), GHD actively participates in the public debate on the role business has to play in managing climate change, energy, development and ecosystems.

GHD operates under a Practice Quality Management System that is certified to AS/NZS ISO 9001:2000 and our Environmental Management System (EMS) is accredited to international standard ISO 14001 by NATA Certification Services International (NCSI).

For more information, visit www.ghd.com.au



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