

Enhancing project and company results with Integrated Risk Management

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Excellent opportunities great challenges

The global dredging market provides excellent commercial opportunities. Changing climate conditions heighten the risk of flooding, and the ever-growing global population will require innovative offshore infrastructures. Fast-developing technical advances in land reclamation, the application of dredging technology and equipment in offshore mining, and increasing attention for water management and security at international level all drive the demand for integrated dredging solutions. As a result, project size, complexity and contract fees are expected to increase significantly. Integral project management is set to become the business standard.

In order to gain maximum benefit from growing market opportunities, European dredging companies will need to deal effectively with a number of challenges, such as:

- global competition from large, highly capitalised competitors;
- funding difficulties due to the economic downturn;
- political influences and uncertainty;
- complex contract delivery owing to the increasing number of specialists, subcontractors and interdependencies;
- cultural diversity, different business conduct standards;
- increasing contractual liabilities;
- lack of technical capabilities;
- potential damage to the environment.

In many cases it is highly uncertain whether and to what extent these challenges will affect a project's profitability and success. However, if these uncertainties and their potential repercussions are not considered in the tendering, negotiating and contracting stages, significant harm could be done to your company performance, or the company's continuity may even come under threat.



Added value of risk management

If conducted well, risk management supports best practice companies to effectively select, contract and deliver highly complex but profitable projects.

These challenges and uncertainties and the increasing demand for social responsibility and transparency call for integrated risk management (IRM) to be applied in the dredging sector. Companies tend to place risk management on the Board agenda. Initial project risk assessments are conducted and management systems for Health, Safety & Environment and Quality Management are implemented. However, there is generally no risk management process or integrated and comprehensive overview of company-wide or project-related exposures in place. In many cases, managers and directors consider risk management not to be sufficiently pragmatic or dynamic to support their decision making effectively.

In order to add value, information produced by risk management activities needs to be relevant to decision making, reliable and well-timed. The Board of Directors, Business Unit Managers and Project Managers have to define their risk information needs, and the risk reports need to be adjusted accordingly.

Additionally, when setting objectives and planning, acceptable deviations from the expected outcomes should be explicitly defined, and subsequently applied in the evaluation of project performance. These risk tolerances must be clearly derived from the company's risk appetite.

In this way, risk management becomes the standard organisational language for dealing with uncertainty and for addressing, in good time, any unfavourable developments. It enables decision-makers to anticipate negative outcomes and to implement alternative options i.e. postpone, terminate, accelerate, share. As a result, project losses can be limited and opportunities maximised. However, for this to be effective, a corporate culture of open communication and trust is absolutely essential.



Pitfalls of Project Risk Management

Dredging companies are project driven, which means that the main operational risks lie in contracting and project delivery. This is why risk management should be an integral part of project management and decision making.

Project risks are defined as issues or events that threaten the successful realisation of project objectives, mostly defined in terms of:

- time – complying with the project planning schedule,
- budget – not exceeding the project budget, and
- quality – in accordance with contracted output and specifications.

Although this might seem logical, in practice we come across project risk management that is handled as a standalone and a compliance-focused activity, and not aligned to or integrated with enterprise-wide risk management. In many cases, the project manager conducts a project risk assessment based on previous and personal experience, and makes no use of consistent methodologies and tools for identifying, assessing, analysing, evaluating, mitigating and reporting risks. Consequently, the resulting risk information often fails to meet the information needs of corporate and business unit management. For example, it is common for a project's risk appetite not to be explicitly derived from a corporate risk appetite nor consistently applied in decision making. In other words, the company and project management do not explicitly discuss the extent to which deviations from planned project results are acceptable and can be upheld by the company. This is particularly the case with large and complex projects, where the company could be exposed to severe financial and liability risks that require timely mitigation. Recent incidents have shown how inadequate project risk management can result in excessive project write-offs, reputational damage, and, in the end, massive D&O claims.

The main challenges project-driven companies face, are to:

1. align risk management at corporate and project levels, and
2. integrate risk management in decision-making processes.



Integrated Risk Management

Integrated Risk Management (IRM)⁽¹⁾ is a comprehensive risk management approach that supports companies in an attempt to meet these challenges. This whitepaper describes a proven approach to integrated risk management that is pragmatic, adheres to the basic principles of risk management best practices, and promotes the use of risk information in decision making at corporate and project levels. The main purpose of this whitepaper is to demonstrate a hands-on approach that adds value to existing risk management capabilities and enhances control over project and company-wide risks. IRM is an effective approach to managing risks and opportunities in the challenging world of dredging.

The objectives of IRM are twofold:

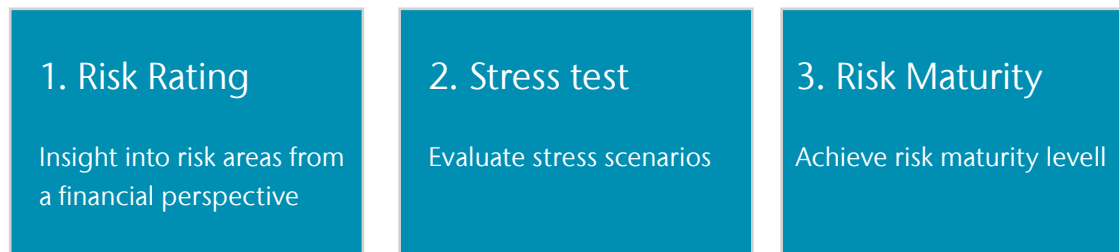
Increase resilience by protecting the company from the negative impact of risks. Negative incidents may lead to deterioration of the company's financial position. Consider, for example, the collapse of a newly constructed building due to soil instability on land created by a dredging company. The consequences for the company could be huge: claims for material damage, casualties, environmental damage, breach of contract, additional costs for reconstruction, loss of licence to operate and, last but not least, serious damage to the company's reputation. Some of the financial consequences can be transferred to others through, for example, proper insurance cover. If not, the equity ratio is negatively affected and, in the worst case, bank covenants breached. As a result, the cost of capital could rise significantly and even threaten the company's continuity.

Enable performance by enriching decision making with relevant risk information so your company is better placed to anticipate opportunities. With a full understanding of the risks related to new technologies, contracts, regions, clients and partnerships, decision makers can anticipate future opportunities and threats by preparing for various scenarios and settling upon pragmatic options. Performing projects in a competitive environment demands 'first time right' engineering, continuity plans, alternative sources, fallback scenarios, flexible contracts, limited liability clauses, exit strategies, and partnerships. Research has shown the financial performance of companies that employ advanced risk management to be much more robust.

(1) IRM – Integrated Risk Management is an approach to risk management developed by Aon Global Risk Consulting.

IRM in practice

IRM explicitly relates risks, their impact and mitigation to the company's financial objectives. This pragmatic, modular approach combines qualitative and quantitative assessments. The following three modules form the basis for IRM implementation and monitoring:



- The first module, **Risk Rating**, identifies the most important risk areas and qualitatively evaluates the adequacy of the related risk management and risk financing processes within the company.
- The second module, **Stress Test**, evaluates the envisaged key risk scenarios against your financial objectives.
- Finally, the **Risk Maturity** module identifies the potential gaps between your existing risk management capabilities and industry standards. This award-winning approach gives an insight into the potential for improvement, and provides support with monitoring progress.

Taken together, these three modules will help you identify priorities for improving your risk management and guide your subsequent actions. These can be numerous, and include: further in-depth analysis of specific risks and scenarios; additional implementation of risk mitigation programmes, or defining necessary action for risk management implementation. The following section describes the three modules in more detail, and explains their added value.

Module 1 - Risk Rating

The Risk Rating module is a qualitative assessment of the effectiveness of existing risk management activities. It involves an assessment of the extent to which the company is aware of its main risk areas, risk management measures, and risk financing measures. The assessment focuses on risks that threaten the material items in the company's financial statements (balance sheet, profit and loss account, and cash flow statement). The results of the risk rating provide the company with a dashboard of the main risk areas (in red). These risk areas are prioritised and require further risk management action.

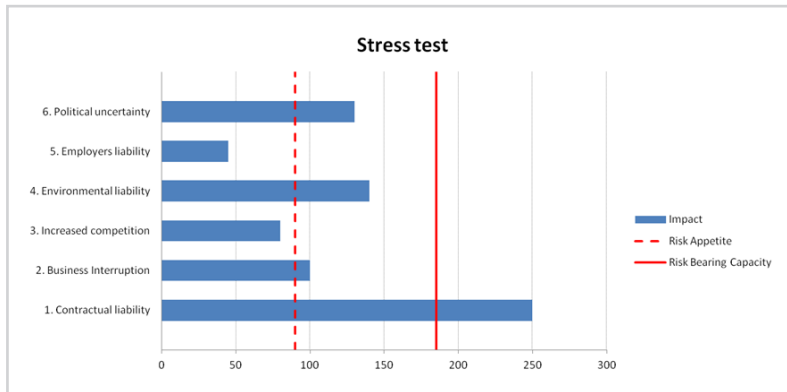
	Risk Rating	Risk Financing	Risk Management	Risk Identification		Risk Rating	Risk Management	Risk Financing	Risk Rating	
Balance Sheet (x1000)										
Intangible fixed assets	7,421				Equity	13,813				
Key intangible fixed assets	4,519				Equity components					
Buildings	2,311				Share capital	1,500				
Plant & Machinery	2,311				Retained earnings	2,313				
Other operating equipment	561				Minority interests	10				
Intangible fixed assets	2,101				Non-current liabilities	6,271				
Key intangible fixed assets	2,000				Key non-current liabilities					
Goodwill	561				Borrowings	1,440				
Other intangible fixed asset	8				Pension obligations	1,440				
Intangible fixed assets	561				Deferred tax credits	11				
Key financial fixed assets	289				Provisions	213				
Derivatives	289				Other non-current liabilities	253				
Selected non-current assets	89				Current liabilities	4,601				
Other financial fixed assets	79				Key current liabilities					
Current assets	7,101				Derivatives	289				
Key current assets	561				Current part of borrowings	2,154				
Trade receivables	2,101				Trade payables	1,895				
Assets held for sale	56				Payables to subcontractors	10				
Cash & cash equivalents	289				Other current liabilities	5				
Other current assets	289				Current liabilities	1,440				
Total Assets	14,004				Current liabilities	1,440				
					Employers liabilities	1,440				
					Professional liabilities					
					Environmental liabilities					
					Employment practices liabilities					
					Other non-current liabilities					
					Total Equity & Liabilities	14,004				

Risks can be assessed both at corporate and at project level. Instead of the company's financial statements, in this particular case the project budget has been used as a starting point for the assessment. The risk rating explicitly evaluates awareness of company risks, which risk management and financing measures are in place, and the need for further action.

Module 2 - Stress Test

The Stress Test module is designed to understand the impact of extreme scenarios on the company's financial objectives. These scenarios are either organisation or project related. The stress test comprises four steps:

1. Determine the company's Risk Bearing Capacity i.e. the maximum amount of risk a company can retain before the financial objectives are jeopardised.

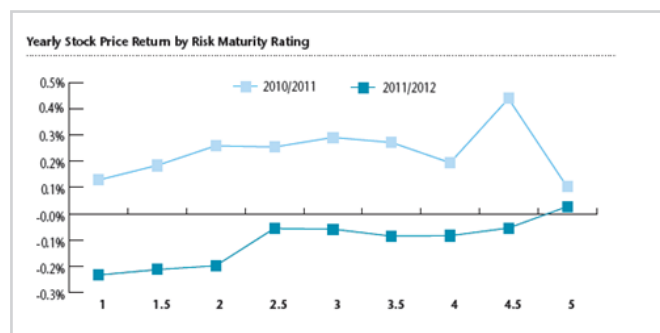


2. Identify worst-case scenarios. Besides a description of the scenarios, the potential impact for all relevant impact categories is quantified. For instance, damage to the ecosystem through dredging might possibly lead to liability claims, clean-up costs, reputational damage, and project delay.
3. Evaluate the impact of scenarios against risk-bearing capacity and risk appetite.
4. Select and implement adequate risk-treatment strategies i.e. increase insurance limits, outsource or sell activities, include unlimited liability clauses in contracts.

In addition to the results of the risk rating, the stress test results give an insight into the most serious stress scenarios and the need for more in-depth scenario analysis.

Module 3 - Risk Maturity

Research has shown that a higher risk maturity is associated with higher relative stock price returns, even in periods of uncertainty and volatile markets.² Together with Wharton Business School, Aon has developed the Risk Maturity Index (RMI) which systematically assesses risk maturity. The RMI is an innovative diagnostic tool that allows risk and finance leaders to efficiently self-assess their organisations' risk management frameworks, receiving immediate feedback and suggestions for advancing their capabilities. The RMI comprises 125 questions about your company's risk management capabilities, categorised by 40 components and 10 hallmarks of effective risk management.



(2) See also 2013 Risk Maturity Index Report – Building a Robust Framework and Realizing Value from Risk Management (January 2013).



Companies with an above-average risk maturity display the following characteristics:

1. Awareness of the Complexity of Risk

Awareness of the complexity of risk is key to understanding the range of potential scenarios and outcomes related to strategic goals and project objectives and is thus vital for defining realistic performance expectations. Organisations with higher risk maturity achieve a comprehensive understanding of the risks to their performance and strategic objectives as they set goals, ensuring that they are well positioned to respond to those risks and therefore more likely to achieve objectives and enjoy more stable performance over time.

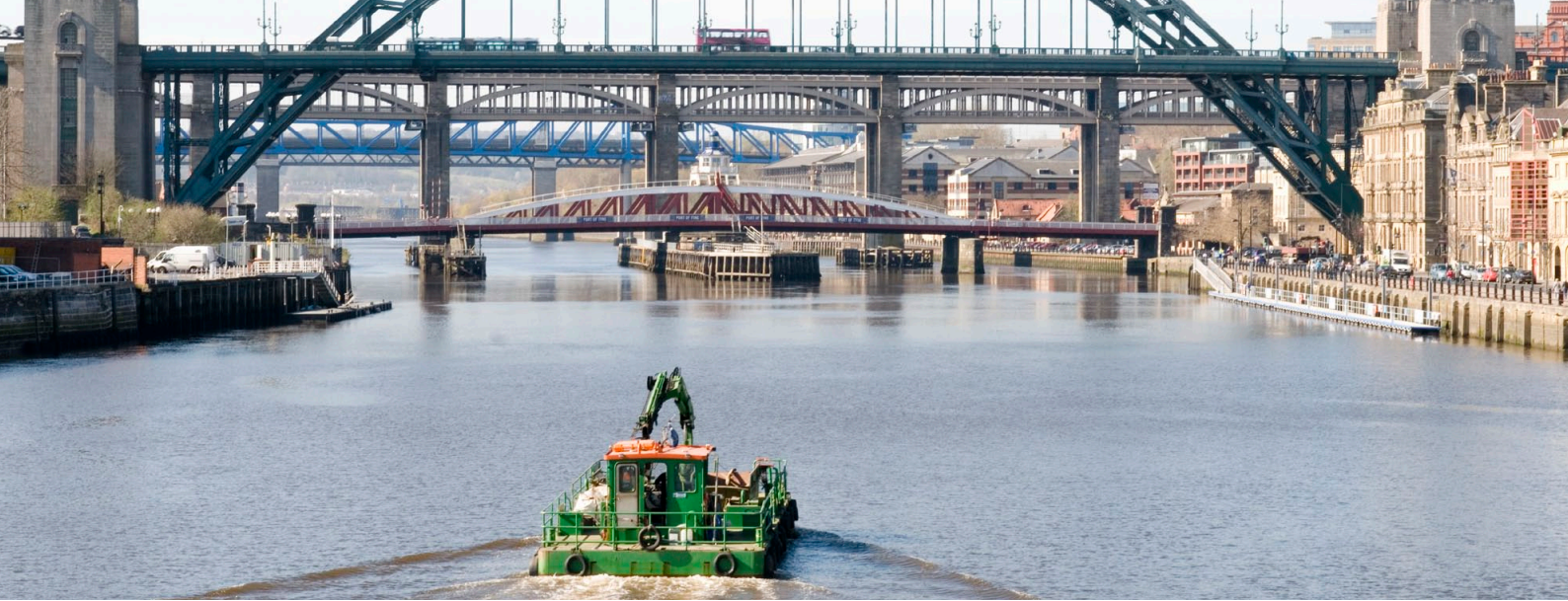
2. Agreement on Strategy and Action

Having developed and communicated performance goals and objectives, organisations must achieve consensus on their risk management strategy, appetite and tolerance and communicate this in order to get support for the achievement of those goals. Those companies that differentiate themselves at a higher level of risk maturity not only achieve consensus but are also able to ensure that they are dynamic and reflect changing assumptions and conditions, rather than remaining static once the initial agreement has been reached.

3. Alignment to Execute

Those organisations that derive the most benefit from their risk management frameworks are able to extend awareness of risk and consensus on strategy to support internal and external alignment of information and action. Unsurprisingly, over 80% of organisations with a score above the global average of 3.0 (Defined) share negative predictions upward with the appropriate parties on a proactive basis in order to drive action and learning. Finally, and most essentially, organisations with more advanced risk management practices have attuned their views of risk management as a discipline to drive value.

The RMI score indicates current risk management capabilities. By explicitly defining the company's ambition level, potential improvements can be derived from a gap analysis, improvement actions planned and progress measured by assessing the RMI on an annual basis. The RMI helps corporate and project management to systematically enhance risk management capabilities in line with business needs.



Integration with project risk management

Conclusions

Companies in dredging and related sectors operate in an international, complex, and competitive environment. It is an environment with numerous opportunities, but also with considerable risks. Successful entrepreneurship and business require a continuous balancing of risks and rewards from a corporate perspective.

However, there are numerous examples where project risks are not integrated in enterprise-wide risk management. As a result, decision making at project level is not always aligned with corporate objectives. Conversely, corporate management is unfamiliar with project exposure.

Integrated Risk Management helps companies create a clear and comprehensive enterprise-wide view on risk by:

1. identifying the main risk areas;
2. evaluating the financial impact of critical risk scenarios;
3. determining the necessary actions for risk management optimisation.

The IRM approach can be applied on both enterprise and project level and facilitates a fully integrated approach to managing risk. The result is that risk management is integrated with regular project management information and reporting lines. By doing so, risk management adds value by providing risk information to support decision making.

Contacts

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About Aon Global Risk Consulting

Aon Global Risk Consulting (AGRC) is the world's leading risk consultancy. Our global network gives us unparalleled knowledge of the challenges and opportunities you face. AGRC provides comprehensive and tailored solutions through a consistent approach applied by a panel of industry experts, specialising in a wide range of disciplines.
