Pelican
Corporate risk analysis &
management software system

April 2018
The Second Law of Thermodynamics describes how everything in the universe moves from order to chaos unless effort is put in to create or maintain order. Drop a glass and it will turn into unusable pieces but drop the pieces and you won’t get the glass back. Disorder (called entropy in physics) is closely related to probability. A system has a small probability of coming together in an orderly fashion because there are so few orderly (helpful) arrangements and so many equally likely disorderly (unhelpful) ones. This law neatly describes the nature of risk.

It explains why plans rarely work out the way we hope. Left to chance, random events will almost always reduce rather than increase our accomplishments. Risk management is the means we have to tame the chaotic nature of the universe! Pelican helps us work out the best risk management strategy, and then operationalize and maintain that strategy.
Enterprise risk management (ERM) should be far more than a reporting tool or a list of top risks. Implemented well, it helps ensure that risk management is in line with the business’ strategic and operational goals. The key benefits that come with a consistent, enterprise-wide risk management approach are:

01

Compliance
Responding to, and demonstrating adherence to, externally imposed corporate governance guidelines regarding risk identification, disclosure, management, and monitoring.

02

Survival
Anticipating and devising methods to control exposure to risks that can threaten the company’s strategic objectives.

03

Harmonization and coordination
Bringing together and optimizing the management of risk by different internal silos, sharing knowledge about risk issues, eliminating risk-taking that is inconsistent with the entity’s risk appetite, improving communication and assigning responsibility for risk management activities.

04

Exploiting opportunities and creating value
Taking calculated risks for higher rewards, reducing risk management costs by cutting out redundant controls, flattening risk-reward profiles across investments and exploiting the shared benefits of risk management actions.
ERM KEY REQUIREMENTS

The implementation of an effective ERM system requires a number of key ingredients. They are all essential, but thankfully are also easy to achieve with the right support:

**Executive-level sponsorship** - a clear message that consistent risk management is a key goal of the business, that resources will be made available to achieve this goal, and that the executive team values the open of discussion of, and accepts the existence of, risk and uncertainty in the organization.

**Executive and senior management understanding of risk reports** – the most common complaint we hear from employees attempting to analyze and communicate risk to their management is that the managers don’t understand what they are being presented. Managers must have sufficient understanding of risk-based decision-making.

**Risk appetite** – there need to be clear and communicated definitions of the levels of risk that can be accepted by the enterprise, its subsidiaries and projects. This is achieved through a consistent set of risk appetite statements that will normally be

Customizable dashboards
constant through an enterprise for consequence types like environmental damage, reputation and health and safety, but scaled to the subsidiary or project for consequences like financial loss, cashflow shortage or delays. At the same time, these risk appetite descriptions need to be internally consistent, so every risk can be appropriately escalated to higher level entities.

**Analysts knowledge of risk assessment** – the most common complaint we hear from management is that the analysts produce reports that are too complex, based on analyses that take too long and are difficult to believe because they are overly complex or underpinned by tenuous assumptions or data. Analysts must have a reasonable knowledge of risk analysis techniques, and how to produce pragmatic, believable risk analyses that will provide managers with useful information in an efficient manner.

**Risk evaluation framework** – across a business, there will almost certainly be silos (like engineering, IT, operations, finance, sales, accounting) in which risks are already identified and evaluated, and the evaluation methods used will usually vary significantly between these silos, perhaps even be incompatible with each other or be based on incorrect or misunderstood methods. ERM requires maintaining some flexibility to allow these silos to evaluate risk in ways most suitable for them, whilst having a common framework to enable those risks to be compared, aggregated and managed efficiently as a whole.

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**Searchable, filterable list of top risk impacts**

<table>
<thead>
<tr>
<th>Consequences</th>
<th>Likelihood</th>
<th>Impact</th>
<th>Probability</th>
<th>Total</th>
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<td>B</td>
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<td>C</td>
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<td>D</td>
<td>Very Low</td>
<td>Very Low</td>
<td>0.05</td>
<td>0.05</td>
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Interconnected Bowtie diagram

With bowtie diagrams, you can move from simply describing a risk to building a logical strategy for managing it. Bowties describe the story of how a risk event can occur, and what the consequences might be. Then you add the controls that could stop that risk from occurring or reduce the chance or size of the consequences.

Pelican bowties go further, quantifying everything, connecting risks together, sharing controls between risks and helping you define the most effective risk management strategy.

- Quantification instead of scoring
- See your risk management strategy at a glance
- Understand how risks interact with each other
- Use the Bowtie editor for brainstorming
Oversight, reporting and monitoring - the existence, control and evaluation of risks must to be shared with the appropriate audience within the business in an automated manner, so that executives and managers are always aware of, and can track the evolution of, key risk issues. Risk reporting should start with an overview of risk-related issues in a dashboard, from which a manager can drill down and investigate specific risks, their current risk management strategy, and whether that strategy is being followed up with the appropriate actions in a timely and cost-effective manner.

Accountability – it is inevitable that there will be gaps in the risk management plan and lapses in its execution unless specific individuals have responsibility for executing and tracking risk issues. An effective ERM system has to assign ownership and track how well the duties of the responsible parties are being carried out.

Auditability – an ERM system must be able to demonstrate clearly to regulators and stakeholders the history of risk exposure of an enterprise, its methods for monitoring and treating risk, and provide automated logs of actions taken or lapsed.

Quantitative and qualitative mix – the ideal ERM system will allow the enterprise to make the best use of quantitative information. Vague terms like possible, low and likely cannot provide meaningful comparisons between risks to determine the most efficient risk management strategies. Nonetheless, some types of impact are not amenable to quantification – like reputational or environmental damage, employee morale and loss of life. The ERM system needs to cover all important types of consequences and presenting them together without placing a monetary value on such outcomes.

Review the top relevant risks and the effect of risk reduction actions.
Vose Software has been developing risk analysis software since 2008 based on nearly thirty years of risk consulting experience. We focus on creating powerful, easy-to-use software underpinned by state-of-the-art mathematics that help solve real-world risk-related problems.

Since the beginning, our vision has been to develop an integrated risk management software system that did not compromise on the ability to describe and quantify risk. We believe that real risk management insight can only come with a robust analytical engine.

We are proud to have achieved that vision at last with Pelican. No other product can make a similar claim.
Pelican is a rich, integrated ERM system that can be used at any level within the enterprise and offers:

**Risk Management overview**

- A live, user-friendly and customizable risk reporting and monitoring platform, accessible by PC, tablet or smartphone
- Reports tracking the top risks, their evolution and the execution of critical risk management tasks
- Customizable key performance indicators for each entity
- Customizable key risk indicators to track emerging trends in risk exposure
- Comparison of risk profiles and metrics across different entities, projects and regions
- Rich and customizable ability to describe, integrate and compare any types of possible risk consequences – from financial loss to H&S, from availability to project delay
- A hierarchal structure for the enterprise, down to any required level

**Detailed risk strategy information**

- Assignment of specific risk treatment tasks and responsibilities to individuals
- Tools for identifying the weak points in the overall risk treatment
- Methods for visually mapping out the strategy around each risk, with automated quantitative risk evaluation and mapping to the risk appetite
- A harmonized risk appetite tool that can be tailored to each business entity or project
- Automated analysis to show your business’ dependence on third parties for the management of your risk exposure
- Tools for evaluating the cost-effectiveness of individual risk management controls, accounting for the different types of impacts that can be faced, and any cascading risks

*Integrated project cost and schedule risk analysis*
Powerful risk analysis tools

• Tools for evaluating the capital that should be allocated to cover potential financial losses at a required level of confidence

• Tools to reflect the interactions between risks at any level of complexity, and to show the resultant influence, importance and cost-effectiveness of any specific risk treatment

• The most powerful risk modelling tools available that can be applied to key corporate spreadsheet models and project schedules, taking information from Pelican’s risk register and feeding back results into Pelican, eliminating the need to track whether risk analysis results are using the most up-to-date information

• A library to store key risk-based information, like uncertain sales forecasts or exchange rates, estimated risk impacts and times, and the only ERM software with a control system that ensures all risk modeling within the system are consistent and can be aggregated and compared correctly

• A software solution that is completely scalable to the size of your enterprise

Implementation and monitoring of risk management strategy

• Individual profile pages displaying risk management tasks that need to be completed

• Overview of owners of risks, their management components and consequences showing how much reliance is placed on key individuals

• Smartphone app to download a risk treatment task schedule, report completion of those tasks, report the occurrence of a risk event, or to flag a potential new risk issue

Auditing and reporting features

• A complete log and recorded history

• Customizable online and published reporting

• Ability to drill down and search for any risk, review the status of any risk treatment action, review the performance of any actor

• Risk management tools to achieve compliance with all current regulatory standards including ISO 31000, COSO ERM framework, BS 31100, OCEG Red Book, and FERMA

Integration with risk modeling in Excel

Training and Consulting Support

We support our software with a full range of consulting and training services, as well as customization of Pelican to meet each enterprise’s needs. Our consulting and training team is led by David Vose, one of the most recognized and influential risk analysts in the world.
To discuss your specific ERM requirements, please contact us as follows:

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