Ten Steps To Incorporating Risk Analysis Into Your Business

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Every authoritative guideline on risk management advocates the quantitative (that is, probabilistic) evaluation of risk using Monte Carlo simulation – from ISO\(^1\), COSO\(^2\), NASA\(^3\), RAND Corporation\(^4\), AACE International\(^5\) and APM\(^6\), to Solvency II\(^7\) and Basel II/III\(^8\). There is some variation in terminology, but a general agreement on the basic process of risk management is shown in the following diagram. Key weak spots in the process are typically: risks are evaluated poorly (either qualitatively or quantitatively); and the low quality of the data collection process that helps identify and evaluate risks and their mitigation. In addition, the key failures in applying this process are: establishing the context; actually implementing the risk mitigation strategies that have been agreed; and checking the mitigations stay in place (highlighted).

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Quantitative risk analysis (QRA) forms only a part of the whole risk management process (in the ‘Evaluate the Risks’ section), but it is agreed by all the authorities listed above to be an extremely valuable part. QRA is recommended because it allows one to move beyond describing risks in vague terms like “possible” and “likely” that offer no significant decision-making information, to talking in terms of numbers like “a 10% chance of losing more than $50 million”.

Despite this, only about one quarter of corporate strategic planning departments truly use simulation analysis (the most useful means of evaluating risks), and only a third quantify their risks at all\(^9\). In our experience, the primary reasons for this gap in take-up are:

- The perception that probabilistic modeling is too difficult to implement;
- The models are ‘black boxes’ that few people understand and can explain;
- Management are unclear about how much they can trust the analyses, what they can learn from them, or how to use the results; and
- The perception that risk analysis is a lot of guesswork somehow turned into hard numbers that can be wildly inaccurate.

The purpose of probabilistic risk analysis in business is to help decision-makers get a better feel for what the realistic range of possibilities, what drives that uncertainty and therefore where one can focus efforts to manage the uncertainty. Done right, risk analysis can provide an organization with a competitive advantage because they have a better framework for more efficiently avoiding activities that are too risky, selecting between options that offer different risk profiles, controlling the risks they assume, and producing more realistic plans.

This document offers a method that, in our experience, will gradually introduce risk analysis into your organization in a manner that builds on current risk management efforts, provides continuous benefits that reinforce the value of performing risk analysis, and establishes a sustainable and practical internal expertise and methodology.

“If you’re not a risk taker, you should get the hell out of business.”

- Ray Kroc -
STEP 1  Get Senior Management On Board

Risk analysis has been widely taught in business administration courses for only about ten years, so the current generation of senior management is largely unfamiliar with risk analysis concepts. In our experience, unless there is broad support for risk analysis from the leaders of an organization it will not become an important part of its strategic toolset. We find that the best approach to get senior management support is to:

- Discuss the risks that the organization faces, how these risks are currently analyzed, and how decisions are made to manage the identified risks. There is often a fragmented and inconsistent treatment of risks within large companies, a failure to communicate potential risks, and a reporting structure that does not allow management to have a good, up-to-date overview of the risks being faced;
- Provide training from and discussion with a highly experienced risk analysis consultant. The training introduces the concepts of risk modeling, and shows the types of results that come out of a risk analysis – like the histogram, cumulative and tornado sensitivity plots\(^1\), and how to interpret them. Key concerns that management have are typically: What will quantitative risk analysis (QRA) give us that we don’t have now?; What type of issues should it be used for, and not used for?; How can we trust the models and their results?; What specialist skills do we need, and how do we get them?; and How much extra effort will be needed to implement risk analysis?
- Provide a step-by-step plan that maps out how risk analysis can be gradually introduced into the organization and the value it will add. The plan must make allowances for the culture of the business – for example, where there has been no previous history of explicitly describing risks or uncertainty, there will often be groups who are reluctant even to admit that risks and uncertainty apply to their part of the business (though they will probably acknowledge that risks occur in other parts of the business). The plan should also provide ‘quick wins’ so that the benefits of risk analysis become visible to a wide audience within the company. The plan should avoid introducing large changes in the methods of analysis currently in place, unless absolutely necessary, and focus on keeping risk analysis creative, dynamic and focused on effective communication. Organized well, the infrastructure needed to analyze and communicate risk from senior management to project and department level is modest and, once thoroughly imbedded in the corporate philosophy, it requires minimal extra work.
STEP 2  Perform Short Review

A short review looks at what data a company typically has available, any risk assessments it has performed in the past, reports that are produced, risk registers, etc. Particular focus should be placed on gaps in the risks being evaluated, any inconsistencies, where estimates are unrealistic, where risk is poorly understood, where risk assessment is not considered a valuable tool and why, and the gap between what managers would like to know and what information they are currently being provided with.

STEP 3  Train The Analyst

A critical component of bringing risk analysis to an organization is to train the analysts in risk modeling. In most business applications, the techniques needed for good quality risk modeling can be taught in about a week of full-time training. This gives sufficient time for the trainees to practice what they are learning with exercises and problems that are designed to reflect the types of problems the business faces. It is important to tailor the course to each business: whilst the same basic techniques and mathematics apply from one business area to another, participants are far more engaged if they see examples with a direct connection to their business. For example, an exercise in forecasting a variable over several years will work better for an oil and gas company if the variable is energy demand, and better for a telecoms company if the variable is 3G mobile subscriptions – even if the mathematical concepts are the same.

### Histogram
- Value on the horizontal axis, 'likelihood' on the vertical axis
- Shows the range of possible outcomes, and the most likely result

### Cumulative
- Value on the horizontal axis, probability of falling below on the vertical axis
- Easier to read off probabilities than histogram, and can overlay options for comparison

### Tornado
- Value on the horizontal axis, probability of falling below on the vertical axis
- Easier to read off probabilities than histogram, and can overlay options for comparison
Proper risk analysis training involves much more than learning some probability basics and how to use risk analysis software. They also need to learn: how to talk to senior management to understand the decision problem and what form of analysis will provide the most useful information; how to check the mathematics of their model; how to elicit subjective uncertainty estimates from relevant subject matter experts (SMEs) to avoid “garbage in, garbage out”, how to design their analyses within the constraints of time, available information and acceptable assumptions; how to analyze and select the data that are available; how to keep the model as simple and auditable as possible; and how to present the assumptions and results with the greatest clarity. For example, when producing a forecast of sales volume over several years, showing the assumption in the form of a trend plot (see an example below), rather than a mathematical equation, allows decision-makers a greater opportunity to assess whether the risk analysis is realistic and to ask focused questions. Risk analysis training should be given by a risk analyst with many years of practical experience coupled with excellent teaching ability.

**STEP 4  Perform A Simple Risk Analysis**

The idea behind performing a trial risk analysis is to apply all the techniques that were taught in the risk analysis training course, for everyone from management, analyst and SMEs, to gain experience of their respective roles, and to learn some lessons on how risk analysis can be structured to work within that particular organization. Typically, this will be a financial risk analysis of a potential investment, but may also be a project cost and schedule risk analysis, a cashflow forecast, etc. The steps are:
1. Work out the risk-based questions with senior management
2. Figure out what relevant data you have
3. Develop and get agreement on a plan of how to respond to the questions
4. Build a QRA model and populate with uncertain estimates
5. Run simulations (preferably with different possible options) and produce the risk analysis results
6. Present results to senior management, get feedback
7. Collate comments, recommendations and lessons learned

**STEP 5 Set Up A Corporate Risk Register**

The corporate risk register is an active shared database containing identified risks as assessed at the corporate level. It contains summary quantitative and qualitative information of each risk together with assessments of the risks before and after mitigations.

The corporate risk register contains risks that have a major impact on the strategic objectives of the organization. Not all risks are amenable to quantification: for example, the risk of a major product recall, or an accident causing environmental pollution or loss of life are usually assigned both a financial impact that might be quantifiable and a reputational impact that is described in qualitative terms.

One has to be careful in creating a risk register that evaluates mitigated risks. There needs to be clear evidence that the mitigation strategies are in place and are effective, otherwise important risks can be demoted to acceptable levels without anything actually being done. It is therefore useful to include an extra check box in the risk register that specifies whether the risk mitigation has been put in place and verified by the risk owner. Left unchecked, the risk remains at the unmitigated level with the potential to be reduced.

A natural set of reports for a risk register are frequency-impact grids like those shown below, which one sees everywhere. However, there is another dimension that is missing – ‘comfort’ or ‘manageability’. In this example, the size of the dot represents the level of comfort one has in managing the risk. The larger the dot, the less comfortable one is that the mitigations and controls will work. For example, one should be less confident if the organization has no previous experience in managing a similar type of risk. Risk management effectiveness depends upon both the agility to react in time to risks as they occur and the resilience to survive any impact. An organization will be less comfortable about managing a risk if the time between the initiating causal event(s) and the loss of control is very short (relative to the time it takes for the preventative controls to take effect, or if the time between loss of control and full impact is insufficient to mobilize strategies to implement the planned damage control measures:
A common mistake in building a risk register is to assume that risks may only occur once, for example the cancellation of a contract. Many, perhaps most, types of risk can occur several times (accidents, wars, market shocks, natural disasters, security breaches). As a general rule, it is better to use ‘Expected Frequency’ instead of ‘Probability’, where Expected Frequency represents on average how many times one might expect the event to occur over a certain period (like a year or five years). The advantages from a quantitative viewpoint are that:

- Various types of frequency distributions can be incorporated into the same analysis to reflect how often the risk might occur. This prevents people from having to try to shoehorn their assessments into the fields available within the register template.
- More meaningful quantitative comparisons can be made (mean values, the probabilities of exceeding different comfort thresholds, etc).
- The cost of mitigation strategies can be more correctly compared with the potential costs of the risks that they mitigate. For example, an electricity transmission company might be worried about loss of service due to the failure of an old sub-station. Replacing that sub-station to mitigate this risk would be costly, but would diminish the risk of failure for many years, not just one).

**Use of P-I tables and severity scores**

Probability-impact (P-I) tables are frequently criticized and debated amongst risk practitioners, but are nonetheless in common use because of their perceived simplicity. They provide a good overall illustration of the current risk state when used with quantitative information, but can be inconsistent.

A common approach to qualitatively assessing the severity of risks is to apply the formula:

\[
\text{Severity Index} = \text{Probability Index} \times \text{Impact Index}
\]

This can be misleading. It produces an inconsistency that comes about because the formula gives the severity index as some measure of the mean value of the risk, which implicitly assumes that both the Probability and Impact indices follow a linear scale (meaning, for example, that a risk with an impact index of value 2 represents a potential financial loss roughly twice that of a risk with an impact of 1). However, the Impact Index (and sometimes the Probability Index too) usually has a non-linear scale similar to the one shown below:

<table>
<thead>
<tr>
<th>Probability</th>
<th>$\text{k per unit severity index}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Than 80%</td>
<td>0.56 0.32 0.13 0.06 ?</td>
</tr>
<tr>
<td>&lt;= To 100%</td>
<td>0.57 0.33 0.14 0.07 ?</td>
</tr>
<tr>
<td>80% &gt; Than 60%</td>
<td>0.60 0.34 0.14 0.07 ?</td>
</tr>
<tr>
<td>60% &gt; Than 40%</td>
<td>0.67 0.38 0.16 0.08 ?</td>
</tr>
<tr>
<td>40% &gt; Than 20%</td>
<td>1.00 0.57 0.24 0.11 ?</td>
</tr>
<tr>
<td>20% &gt; Than 0%</td>
<td>0.67 0.38 0.16 0.08 ?</td>
</tr>
<tr>
<td>Nil &lt;= To 0%</td>
<td>1.00 0.57 0.24 0.11 ?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financial impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index</td>
</tr>
<tr>
<td>&gt; Than Nil</td>
</tr>
<tr>
<td>&lt;= To Nil</td>
</tr>
</tbody>
</table>
To illustrate the problem, imagine that we have two risks:

<table>
<thead>
<tr>
<th>Risk name</th>
<th>Probability</th>
<th>Impact</th>
<th>Mean cost</th>
<th>Probability score</th>
<th>Impact score</th>
<th>Severity score</th>
<th>Value of a severity score unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0-20%</td>
<td>200-500k</td>
<td>35k</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>0.11k</td>
</tr>
<tr>
<td>B</td>
<td>60-80%</td>
<td>0-20k</td>
<td>7k</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>0.56k</td>
</tr>
</tbody>
</table>

Risk A has high impact and low probability, Risk B has the reverse. They have the same severity index of 4, though the mean cost of Risk A is five times that of Risk B. The last column shows the financial value of a unit of severity, and these are also plotted in red in the previous table. Problems with this non-linear scaling are:

- It is very difficult to compare the value of different mitigation strategies – if we want to find a set of strategies that minimizes the aggregate severity (sum of all severity scores) for the least cost, a scoring system like the one above would result in an inappropriate allocation of resources to high probability, low impact events;
- In order to complete the table, we should assign a maximum value to the highest financial impact category (index = 5), but this could really be anything so the usual approach is to set the value very high which both hides the truly alarming risks and exaggerates the importance of others lying within the same category;
- It is difficult to place a risk into a financial category when it may have a wide range of possible impacts. People often place the risk in the largest conceivable category as a result (to be safe), thereby systematically exaggerating the portfolio of risks;
- The severity index is usually split into three bands: for example, red for dangerous (10-25), green for acceptable (0-4) and orange for everything else in between, to produce a matrix like that shown below. Replace the severity index values with expected loss (for the scales used in this example) and we see some inconsistencies – for example, a mean of $35k is acceptable (green, bottom right) but a mean of $31.5k is dangerous (red, top left).

<table>
<thead>
<tr>
<th>Severity index</th>
<th>Mean value $k</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 5 10 15 20 25</td>
<td>9 31.5 112.5 315 ?</td>
</tr>
<tr>
<td>0 4 8 12 16 20</td>
<td>7 24.5 87.5 245 ?</td>
</tr>
<tr>
<td>0 3 6 9 12 15</td>
<td>5 17.5 62.5 175 ?</td>
</tr>
<tr>
<td>0 2 4 6 8 10</td>
<td>3 10.5 37.5 105 ?</td>
</tr>
<tr>
<td>0 1 2 3 4 5</td>
<td>1 3.5 12.5 35 ?</td>
</tr>
</tbody>
</table>

Green 1-4, amber 5-9, red 10-25

It is, of course, possible to choose other cut-off points for severity index values but none can guarantee that there will be no inconsistency as long as one scale is non-linear:
It is possible, however, to construct different equations for the Severity Index that correct for this problem.

Quantitative evaluation of risks for ranking and selecting top 10

It is common practice to produce a senior management report that highlights the top 10 (or so) most important risks. The ranking of all live risks is usually performed by selecting the risks with the largest mean (probability * expected impact). Evaluating risks based on their mean can be misleading. For example, a risk with a 30% probability of losing $10 million has a mean of $3 million, which is the same as another risk with a 1% probability of losing $300 million. A company may be able to absorb the impact of the former risk, whereas the latter risk may be devastating.

A more informative approach involves getting the senior management to define up to three financial impact thresholds:

1. The largest financial loss that would produce no observable effect on the company (Level 1);
2. The largest financial loss that company could absorb without altering its integrity, or, if the risk is applicable to a single business entity within the company, without changing the integrity of that entity (Level 2);
3. The smallest financial loss that would cause the collapse of the company as a whole or, if the risk is applicable to a single business entity, cause the collapse of that entity (Level 3)

These three thresholds would need to be reviewed periodically to reflect the prevailing financial position of the company and its business units.

The senior management risk summary report can then show the probabilities of exceeding each threshold, along with the mean impact. This offers a much clearer representation of the level of threat that the risk poses. For example, a list of top risks might look more like this:

<table>
<thead>
<tr>
<th>Risk</th>
<th>Description</th>
<th>Mean loss $M</th>
<th>P(&gt; Level 1) $2.5 M</th>
<th>P(&gt; Level 2) $15 M</th>
<th>P(&gt; Level 3) $45 M</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lorem ipsum dolor sit amet...</td>
<td>1.75</td>
<td>18%</td>
<td>2.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>2</td>
<td>Ut enim ad minim veniam...</td>
<td>1.58</td>
<td>23%</td>
<td>0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>3</td>
<td>Duis aute irure...</td>
<td>2.00</td>
<td>33%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Ideally, those risks for which only a semi-quantitative assessment is available should fit into the same framework. That requires changing the impact categories in P-I tables from estimates of costs to estimates of probability of exceeding each target level. Note, this is just a rough guide – we cannot expect people to really estimate very low probabilities with any meaningful precision.
**STEP 6** Identify And Set Up Corporate Forecasts Of Key Variables Using SIDs

A separate, but related, database can be constructed of estimates of key uncertain variables, called Simulation Imported Data Files or SIDs. SIDs contain a stream of simulated values for uncertain variables that are available to be used in individual Monte Carlo simulation models throughout the company. They contain simulated data for variables like key corporate risk events, or major uncertain drivers like GDP growth, exchange and interest rates or energy price. The key benefits of SIDs are that they provide a means for all risk analyses to share the same common set of assumptions and also make it possible to roll up exposures from individual investments into a single corporate overview correctly.

**STEP 7** Identify And Setup Project Level Risk Registers Reflecting The Varying Scales of Projects

This is a simple matter of:

1. Making risk registers that are connected to any drivers within the corporate risk register and key variable forecasts.
2. Promoting any risks within a project risk register up to the corporate risk register if the particular risk event is recognized to have an impact of one or more other projects.
3. Making the scale of financial, reputation and other measures of risk impact neatly fall within the scales set for the corporate risk register.

**STEP 8** Create Senior Management Dashboards

The purpose of the dashboards is to allow the senior management to focus on the key risk issues. These include:

- Lists of key risk events, their descriptions and analysis
- Review of large projects and their probability of meeting cost and schedule targets
- Estimates of cashflow uncertainties per project and aggregated over the organization
- Sensitivity analysis to show key risk drivers and how effective any risk mitigations are
- Other information of interest

The senior management dashboards can provide a consistent and comprehensive review of those risks and uncertainties that are quantified throughout the company’s activities. This aggregate review of risks relies on the use of SIDs and a basic risk modeling protocol to be able to bring together individual analyses correctly.
For the dashboards to be effective, they should present the information visually as much as possible. Since the primary purpose of risk analysis is to communicate and help devise ways to manage risks effectively, any representation of a risk should map out the logic of how a risk may occur and the plan for its management – a bow tie diagram is very effective in achieving this:

The bow tie map is read from left to right and describes the preventive controls that are in place (green) or can be put in place (blue) to control the probability/frequency of the risk event occurring. It also describes the mitigation strategies that are, or could be, in place to reduce the impact(s) of that risk event. The map is not designed to present quantitative information, which could be quite involved, but simply to represent the current strategy for managing an important risk and the options that have been thought of and are available.

**STEP 9** Set Up Records Of Estimates For Improvement In Accuracy

SME estimates of uncertainty about the value of variables of interest (for example cost estimates, sales forecasts, production rates) are subject to several types of bias (representativeness, over-confidence, fixed-value bias, optimism/pessimism, etc). Well-trained risk analysts can help reduce the effect of these biases during the elicitation process. However, some bias will inevitably remain, which should be assessed and used in a feedback process to ensure that estimates from SMEs become progressively more robust.

This can be achieved by recording each SME estimate (which is a probability distribution) in a database and then, after the fact, calculating at which cumulative percentile the output value fell within the distribution. For example, the following plot show the SME’s distribution in cumulative form (in blue). The variable value (e.g. a cost) turned out to be 8.77, equating to 31.1% on the cumulative probability axis.
These cumulative probability values are collected. Once one has ten or more such value it is possible to begin performing an analysis in the following manner. If SMEs are well calibrated, the calculated cumulative probabilities should be roughly uniformly distributed between zero and one. The degree to which the values depart from a uniform distribution, when organized into histogram form, tells us what biases are at play as shown in the following plot:

The blue bars show where the outturn value fell as a cumulative probability for the estimated distribution. The red bars show when the outturn value fell completely outside the estimate range. The data can be organized by, for example, category of project/investment, by the stage from feasibility to approval, or by type of activity. Allowing SMEs to see the performance history of their estimates provides a continuous feedback loop.
Iterate

Risk analysis should be a continuous process and amenable to improvements. Certainly once you have a system in place you will find some things work well, others less so, and your requirements will change over time. The computing systems employed to store data, create and run models, and generate reports and dashboards must therefore be flexible and reprogrammable to make it easy to adapt to your changing requirements.

SUMMARY

Quantitative risk analysis (QRA) is acknowledged by all competent authorities on risk management as a valuable tool for any types of business, if it is well-organized and adopted throughout your organization. It is not complex, and can be incorporated into a business’ current methods with little difficulty. It requires only moderate investment in time and money, yet it will provide substantial value to your organization through effective communication and efficient management of risk. An organization that hasn’t embraced QRA will never be able to manage risk as effectively as the competition that has mastered QRA.

NEXT STEPS

I invite you to have an informal, obligation-free chat with me on how you can introduce QRA to your organization. We can discuss how you currently assess risks, the difficulties you face in adopting a more systematic quantitative approach and what practical steps can be taken for QRA to add real value to your business.

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About The Author

David Vose is an internationally recognized expert in risk analysis. He has been a specialist consultant in risk analysis since 1989, working in a wide range of industries including energy, mining, electricity generation and supply, shipping, project management and economics, banking, insurance, engineering, economics, forestry, reliability modeling, and human health.

David Vose has consulted to companies and government agencies in over thirty countries around the world. He helps organizations bring risk analysis to their decision-making process, and provides training seminars in risk analysis for decision-makers and analysts, as well as leading complex risk assessments. He has also appeared as an expert witness in a number of successful international legal disputes.

David divides his time between consultancy, and designing the technical aspects and usability aspects of the risk analysis software produced by his company, Vose Software, including the highly acclaimed ModelRisk product that allows one to perform risk analysis with Microsoft Excel models.

He is the author the Risk Analysis, published by John Wiley and Sons, now in its third edition, and has authored or co-authored several international guidelines and academic papers on risk analysis.
About Vose Software

Based in Belgium, Vose Software specializes in quantitative risk analysis software tools. Our primary focus is providing commercial and custom built risk analysis tools that help clients make better, more informed decisions in the face of uncertainty and risk.

Vose Software also offer comprehensive risk analysis consulting and training services in the field of risk analysis.

Risk Analysis Software

ModelRisk

ModelRisk provides the capability to perform high speed Monte Carlo simulations within your Microsoft Excel models to help you better understand the risks and uncertainty in your work. ModelRisk offers more tools and features than any other product in its class.

Key ModelRisk features include: largest range of distributions, copulas (correlation structures) and time series available; fitting to data; stochastic optimization; modeling extreme events; conversion tools for competing products; a free viewer application so you can share your results; and much more.

ModelTree

ModelTree offers a simple way to understand and interpret your decision options under uncertainty by adding the capabilities of decision trees to Microsoft Excel. A decision tree is a flowchart-like graph that uses branches to clarify every possible result of a decision. Probabilities and expected outcomes are assigned to the different possible outcomes of a decision, and ModelRisk then determines the optimal set of decisions to make. ModelTree can be used to simplify complex challenges, visualize all possible outcomes and categorize risk topics.
Risk Analysis Training

We provide training in all aspects of risk analysis thinking and modeling, from basic awareness and communication of the results of a risk assessment to complex mathematical modeling. We particularly specialize in the quantitative modeling of risk. Our trainers have excellent communication skills and at least ten years experience as risk analysts across a wide range of industries. The courses are very hands-on and designed to focus on the types of risk that your organization faces, the data you have available and the decisions you need to make.

Risk Analysis Consulting

Our consultancy services cover a wide range of industries and broadly fall into four areas:

- Auditing
- Expert Witness Services
- Risk analysis and probabilistic modeling
- Methodologies

We have consulted to government and business organizations around the world in fields as diverse as climate change, banking, insurance, capital investment, shipping, steel, aerospace, electricity generation, railway infrastructure, and animal and human health. We take a very individualistic approach to each consulting engagement, and have a reputation for providing innovative solutions to complex risk issues.

For more information please visit [www.voserisk.com](http://www.voserisk.com).

Visit Our Head Office

Our head office is conveniently based in the historic city of Ghent, Belgium – just 35 minutes from Brussels by train. Our modern training facilities can accommodate up to 30 people. We also welcome casual visitors - why not pop in for a chat the next time you’re in the area?