

OVERVIEW

Founded in 1989, Vose Consulting is a leading international firm specializing in quantitative risk analysis. Our primary goal is to help clients make better, more informed decisions in the face of uncertainty and risk. We accomplish this goal through a combination of risk analysis consulting, training, and software. A core focus of our organization is the provision of cutting-edge risk-based consulting services to customers from industries in the private and public sectors.

CONSULTING SOLUTIONS

- ◆ Risk Modeling
- ◆ Project Risk Analysis
- ◆ Portfolio Optimization
- ◆ Forecasting
- ◆ Inventory Optimization
- ◆ Health Risk Analysis
- ◆ Expert Witness
- ◆ Model Auditing
- ◆ Statistical Analysis
- ◆ Manufacturing Process Optimization
- ◆ Epidemiology/Food Safety
- ◆ And more

KEY BENEFITS

- ◆ **Risk analysis is our core focus and expertise.** We are world leading experts in quantitative risk analysis, not trainers or management consultants that do risk analysis as an extra service.
- ◆ **Vose Consulting believes that education is inseparable from consulting.** We teach our techniques to our clients so they will be able to use the techniques and models without re-engaging us.
- ◆ **Customers can rely on our leading-edge capabilities.** Advanced methods are not required in all cases but if needed we have the full capabilities.
- ◆ **Save time and resources.** Our extensive experience and deep knowledge of risk analysis completes projects on-time and within budget.
- ◆ **Independence and neutrality are key values for Vose Consulting.** You can be assured that our analysis and conclusions will not be influenced by any external factors.

"I have to tell you I have not seen this level of deep analysis from a third party so far. Congratulations!"

– Mr. Raul Melendez, Pfizer

CONSULTING AREAS

We provide consulting services in the following broad areas:

- ◆ **Risk Analysis and Probabilistic Modeling**
 - » Specialized, complex probabilistic modeling of risk and uncertainty.
 - » Train client in using and modifying the risk analysis and the model.
- ◆ **General Advice on Risk Analysis**
 - » Help clients establish or improve processes to conduct risk analyses.
 - » Develop risk policies and protocols.
- ◆ **Auditing**
 - » Independent audit of client's current risk models and practices.
 - » Critique and improve risk analysis reports before public release.
- ◆ **Expert Witness Services and Litigation Support**
 - » Credibility built on world-class reputation, years of experience and proven record of success.
 - » Testify, research, define strategy, organize teams of experts.

CONSULTING CAPABILITIES

- ◆ International experience in a wide range of fields and industries – customers in over 30 countries.
- ◆ Highly complex risk-based analysis and modeling customized to the client's needs and circumstances.
- ◆ Emphasis on teaching the client how to use and modify the work without re-engaging Vose Consulting – we don't provide a "black-box".
- ◆ Proven qualifications can be verified based on industry experience and published work:
 - » All consultants have advanced degrees – MS or PhD in risk analysis related fields.
 - » Published authors:
 - Risk analysis text books
 - Scientific papers
 - International Risk Guidelines
 - World Trade Organization
 - World Health Organization
 - UK Association for Project Management
 - US Food and Drug Administration
 - » Taught many problem-focused risk analysis courses.
 - » Produced commercial and customized high-end risk analysis software.
- ◆ Team approach to solving client problems.

"We were able to use the output of the model [created by Vose] to design an inventory stocking system which improves the customer experience at our dealerships."

– Jeff Tilden, John Deere Construction & Forestry

Vose Consulting has provided great value for many satisfied consulting clients. Enjoy the benefits of cutting-edge risk analysis. Please contact us to discuss your circumstances and how we might help your organization.

CUSTOMERS INCLUDE

- ◆ ABN AMRO
- ◆ Admiral Management Services Ltd, UK
- ◆ Agilent, USA bioStrategies Group, USA
- ◆ Arup & Environment Agency, UK
- ◆ Arup UK
- ◆ Austrian Laser Lab
- ◆ Bank of Colombia
- ◆ Bayerische Landesbank, Munich, Germany
- ◆ Biotechnological Institute, Holbergsvej, Norway
- ◆ BNFL Sellafield, UK
- ◆ British Nuclear Fuels Ltd, UK
- ◆ Cairn Energy Ltd
- ◆ Canadian Animal Health Coalition, Canada
- ◆ Canadian Cattleman's Association, Canada
- ◆ Carl Walker, USA
- ◆ Center for Veterinary Medicine, USFDA
- ◆ Chesterton plc/Bovis Construction Ltd., UK
- ◆ Citibank, UK
- ◆ Corning Incorporated, USA
- ◆ Conoco Phillips, USA
- ◆ CS Project Consultants, UK
- ◆ Danish Food and Health Ministry
- ◆ Danish Veterinary Institute
- ◆ de Beers Mining Company, J'burg, SA
- ◆ de Beers Research, UK
- ◆ Decisioneering, Inc, USA
- ◆ DRA Fort Halstead, UK
- ◆ Dublin Light Railway, Ireland
- ◆ Duke Energy, USA
- ◆ Dutch Animal Health Service
- ◆ DVL, Copenhagen, Denmark
- ◆ Eli Lilly
- ◆ El Paso Corporation, USA
- ◆ Esco, UK
- ◆ Fisheries & Oceans Science Directorate, Canada
- ◆ Health Canada
- ◆ HVR CSL, UK
- ◆ Ignite IP
- ◆ John Deere, USA
- ◆ Kier Build, UK
- ◆ MAF Regulatory Authority, New Zealand
- ◆ Massey University, New Zealand
- ◆ Might River Power Co, New Zealand
- ◆ Ministry of Agriculture, Alberta, Canada
- ◆ Ministry of Agriculture, Portugal
- ◆ Minter Ellison, Attorneys at Law
- ◆ National Institute of Infectious Diseases, Tokyo, Japan
- ◆ Netherlands Institute of Applied Geoscience
- ◆ Network Rail, UK
- ◆ Newmont Mining Corporation, USA
- ◆ Norsvin, Norway
- ◆ Odyssey Pharmaceuticals
- ◆ OIE, Paris, France
- ◆ Operations Research Group Pty Ltd, Australia
- ◆ Palamon Capital Partners, UK
- ◆ Pallsade Corporation, USA
- ◆ Pfizer Inc
- ◆ Princeton University, USA
- ◆ Procter & Gamble Eurocor, Belgium
- ◆ RIVM (Natl. Health Dept), Netherlands
- ◆ Roche
- ◆ Scottish Agricultural College, Scotland
- ◆ Sedgewall Communications Group Ltd, UK
- ◆ Seracon, Canada
- ◆ Southern Energy, Netherlands
- ◆ Spectra Energy, USA
- ◆ Teck Cominco, Canada
- ◆ Telfort BV, Netherlands
- ◆ The Boots Company, UK
- ◆ 21st Century Insurance, USA
- ◆ US Department of Agriculture, USA
- ◆ US Food and Drug Administration, USA
- ◆ Wellington City Council, New Zealand
- ◆ Western Rock Lobster Development Association, Australia
- ◆ World Health Organization/UN Food and Agriculture Organization
- ◆ World Health Organization, Geneva, Switzerland
- ◆ XEROX Corporation, USA
- ◆ Zurich Financial Services, Switzerland

INDUSTRIES

- ◆ Banking
- ◆ Securities
- ◆ Insurance
- ◆ Agriculture
- ◆ Electric Power and Natural Gas Utilities
- ◆ Food and Beverages
- ◆ Pharmaceuticals
- ◆ Mining
- ◆ Oil and Gas exploration, transportation and processing
- ◆ Manufacturing
- ◆ Venture Capital
- ◆ Hedge Funds
- ◆ Medical Products
- ◆ Engineering
- ◆ Government
- ◆ Academia
- ◆ Rail
- ◆ Shipping
- ◆ Heavy Equipment
- ◆ Electronics

EXAMPLE PROJECTS

Exchange Rate Model

◆ **Problem:** To evaluate hedging and other potential risk mitigation decisions, the third largest bank in South America needed to forecast the exchange rate between its local currency and the US dollar.

◆ **Solution:** Using Bayesian Markov Chain Monte Carlo (MCMC) techniques, Vose Consulting performed an advanced statistical analysis and evaluated the performance of numerous state-of-the-art exchange rate models, including Jump Diffusion and various ARCH-type models. This analysis was used to create a risk analysis model that accurately reflects exchange rates patterns.

◆ **Result:** In addition to the forecasting tool, documentation and training on how to use and modify the model were provided to the bank. The client is now self sufficient in their use of the tool and able to modify the model under shifting business conditions without re-engaging Vose Consulting. As a result, the client has recognized a competitive advantage in hedging its exchange rate risks.

Risk-Based Portfolio Allocation

◆ **Problem:** A new venture capital firm was in the process of structuring its US\$30 million fund. It wanted to determine an optimal distribution of the different future cash flows to the stakeholders in the fund, including entrepreneurs, investors, and fund managers.

◆ **Solution:** Vose Consulting worked together with the managing director of the fund and several outside experts to determine the risks of the individual investments and developed a comprehensive Monte Carlo simulation model.

◆ **Result:** The model helped the firm understand the risks to each of the stakeholders involved under different scenarios. Hence, the decision on how to exactly structure the fund was greatly influenced by the results of the model. Currently, the fund is investing in a variety of attractive opportunities.

CONTACT INFORMATION

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