

## Resume of Philip F. O'Neill, PhD

President and CEO

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**Quantitative Decision Support, Inc.**

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### Professional Skills

- **Expertise:** Risk Analysis, Operational Research, Decision Analysis, Mathematical Modelling, Algorithms, Statistical Analysis and Numerical Analysis
- **Credentials:** professional mathematician with 23 years experience, including 12 years of international collaborative activity with NATO, NORAD and TTCP

### Work Experience

- **President and CEO of Quantitative Decision Support Inc.**, 2001 – present, designed and managed the software development of RiskOutLook®, an analytical tool for risk analysis that identifies and quantifies risks induced by complex dependency relationships, currently bundling RiskOutLook® into decision support and planning systems for the Canadian Department of National Defence and the Emergency Management Organization of the Province of Ontario. Areas of particular interest are:
  - Campaign Planning
  - Infrastructure Dependency Relationships
  - Effects-Based Operations
  - Readiness Assessment
- **Senior Scientist**, 1997-2001, Operational Research Division, Department of National Defence, 101 Colonel By Drive, Ottawa, Ontario, Canada, K1A 0K2:
  - Army POLARIS System
  - Risk Analysis
  - Readiness Evaluation
  - Business Planning
  - Human Resource and Structure Studies of Headquarters
  - Performance Measurement
  - Courses of Action Analysis for UN Operations
  - Information Management and Decision Support Tools
- **Intermediate Level Scientist**, 1992-97, Operational Research Division, Department of National Defence, Ottawa, Canada
  - Chairman of NATO Panel 7 Specialist Team on Readiness Evaluation from 1994-97
  - Flashpoints Analysis
  - Courses of Action Analysis for UN Operations
  - Spreadsheet for planning and implementing Army road movement
- **Director of Operational Research**, 1990-92, Fighter Group/Canadian NORAD Region Headquarters, North Bay, Ontario, Canada
  - Risk Analysis of the air defence system in the Canadian NORAD Region.
- **Working Level Scientist**, 1988-90, Fighter Group/Canadian NORAD Region Headquarters
  - Fighter Aircraft Tactics
  - Ground-based and Airborne Radar Coverage
- **Entry Level Scientist**, 1985- 88, Operational Research Division, Department of National Defence, Ottawa, Canada
  - Airlift planning
  - Optimal location of search and rescue bases in Canada
- **Post Doctoral Fellow**, 1983-85, Department of Mathematics, Statistics and Computing Science, Dalhousie University, Halifax, Nova Scotia, Canada
  - Optimization algorithms

### Education

- Doctor of Philosophy (Combinatorics & Optimization), 1983, University of Waterloo
- Master of Mathematics (Combinatorics & Optimization), 1977, University of Waterloo
- Bachelor of Science (First Class Honours), Mathematics, 1976, St Francis Xavier University

### Major Publications

- Robert Grossman-Vermaas (principal author), Paul Comeau, Doug Hales, Philip O'Neill, **Modelling Entity Relationships for Effects Based Operations, A Case Study of Multinational Experiment 3 Using RiskOutLook®**, Defence R&D Canada, Centre for Operational Research and Analysis, February 2006.
- Dr. PF O'Neill (principal author) and Mr. IW Taylor, **Costs, Risk and Timing of Decisions for Peacekeeping Operations**, in "Cornwallis II: Analysis of and for the Resolution of Conflict", Pearson Peacekeeping Centre, Cornwallis, Nova Scotia, Canada, 1998
- Dr. PF O'Neill (principal author), Dr. T. Christensen, Mr. G. Seguin, Mr. JD Sharpe, Mr. C. Tieleman, and Mr. J.J. de Nijs, **NATO Defence Research Group PANEL 7 ST 3 Final Report, Evaluation of Readiness and Sustainment Policy**, NATO AC/243(Panel 7)TR/6, February, 1997
- Dr. PF O'Neill, **Flashpoints Analysis**, NATO Defence Research Group Panel 7 Proceedings of the Exploratory Group on "Identifying Joint Force Packages for Peace Support Operations", (held in Ottawa, December, 1995)
- Dr. PF O'Neill, **Coping with Uncertainty with Risk Analysis**, NATO Defence Research Group Panel 7 Proceedings of the Symposium on Coping with Uncertainty in Defence Decision Making, Technical Proceedings AC/243 (Panel 7) TP/9 Volume 2, November 1995