

CURRICULUM VITAE

Dr. Robert Carbone
President and CEO
Futurion Inc.
1310 Greene Avenue, Suite 230
Montreal, Quebec
H3Z 2B2

Tel: 514-935-5125 Ext. 611

Fax: 514-935-5660

Mobile: 514-945-2854

PERSONAL

Born: Montreal, Canada

Status: Married

HIGHER EDUCATION

Ph.D. Carnegie-Mellon University
School Urban and Public Affairs

M.A. Université d'Ottawa
Economics Department

B.A. Université de Montréal
Faculty of Arts

HONORS AND AWARDS

Ontario Graduate Fellowship

School of Urban and Public Affairs Fellowship
Carnegie-Mellon University

Community Citation of Merit awarded by the Allegheny County (Pittsburgh, Pennsylvania) Commissioners for public service in a study to improve the administration of the County Board of Property Assessment.

ACADEMIC EXPERIENCES

Professor	Department of Decision Systems, Faculty of Administrative Sciences, Université Laval (1983 – 1986)
Visiting Professor	Faculty of Management McGill University (1984 – 1985)
Associate Professor And Director	Department of Decision Systems Faculty of Administrative Sciences, Université Laval (1979 – 1983)
Associate Professor (Tenured)	College of Administrative Science The Ohio State University (1979)
Visiting Professor	Faculty of Administrative Sciences, Université Laval (1978 -1979)
Assistant Professor	College of Administrative Science The Ohio State University (1975 -1979)

RELATED ACADEMIC EXPERIENCES

Editor with S. Makridakis, (INSEAD, France), J. S. Armstrong (Wharton School, USA) and R. Fildes (Manchester Business School, UK) of the *Journal of Forecasting*, published by John Wiley and Sons Ltd., under the Wiley Interscience imprint.

Co-founder and Director of the International Institute of Forecasters.

General Chairperson of the first International Symposium on Forecasting, Quebec City, Canada, 1981. Administrative Chairperson of the Third International Symposium on Forecasting, Philadelphia, USA, 1983. General Chairperson of the Fifth International Symposium on Forecasting, Montreal, Quebec, Canada, 1985.

PUBLICATIONS

Books:

Makridakis, S., A. Andersen, R. Carbone, R. Fildes, M. Hibon, Lewandowski, R., E. Parzen and R. Winkler, *The Forecasting Accuracy of Major Time Series Methods*, John Wiley and Sons Ltd., Chichester, 1983.

Articles:

Gold, E.R. and R. Carbone “(MIS) Reliance on Social Science Evidence in Intellectual Property Litigation: A Case Study”, Canadian Intellectual Property Review, Vol. 28, no. 2, 2012.

Carbone, R. and S. Makridakis “Forecasting when Pattern Changes Occur Beyond the Historical Data” Management Science, Vol. 32, no. 3, 1986.

Bilongo, R. and R. Carbone “Adaptive Forecasting and Seasonal Adjustment with AEP Filtering”, Journal of Forecasting, Vol. 4, no. 1, 1985.

Carbone, R., A. Andersen, Y. Corriveau, and P.P. Corson, “Comparing for Different Time Series Methods the Value of Technical Expertise, Individualized Analysis, and Judgmental Adjustment”, Management Science, Vol. 29, no. 5, May 1983.

Bretschneider, S., R. Carbone and R. L. Longini, “An Adaptive Approach to Multivariate Time Series Forecasting”, Decision Sciences, Vol. 13, no. 4, 1982.

Makridakis, S., A. Andersen, R. Carbone, et al., “The Accuracy of Time Series (Extrapolations) Methods: the Outcome of a Forecasting Competition”, Journal of Forecasting, Vol. 1, no. 2, 1982.

Carbone, R., and J.S. Armstrong, “Evaluation of Extrapolative Forecasting Methods: the Viewpoint of Academicians and Practitioners” Journal of Forecasting, Vol. 1, no. 2, 1982.

Carbone, R., and P. Lefrancois, “Setting Confidence Limits on Forecasts via the Carbone-Longini AEP Approach” Time Series Analysis: Theory and Practice 1, ed. By O.D. Anderson, North Holland Publishing Co., 1982.

Carbone, R., E. Ivory and R. Longini, “Competition Used to Select Computer Assisted Mass Appraisal System” Assessors Journal, Vol. 15, no. 3, 1980.

Carbone, R., “AEP, a New Conceptual Approach to Time Series Analysis and Forecasting” Analysing Time Series, ed. By O.D. Anderson, North Holland Publishing Co., 1980.

Carbone, R., and A. Mehrez, “The Single Facility Minimax Distance Problem Under Stochastic Location of Demand”, Management Science, Vol. 26, no. 1, 1980.

Bretschneider, S. R. Carbone and R.L. Longini, "An Adaptive Approach to Time Series Forecasting", Decision Sciences, Vol. 10, no. 2, 1979.

Carbone, R., W.L. Gorr, S. A. Gustafson, K.O. Kortanek and J.R. Sweigart, "A Bargaining Resolution of the Efficiency Versus Equity Conflict in Energy and Air Pollution Regulation", *Energy Policy*, ed. By J.S. Arnofsky, A. G. Rao, M.F. Shakum, Special issue of Management Science, 1979.

Carbone, R. and W. L. Gorr, "An Adaptive Diagnostic Model for Air Quality Management", Atmospheric Environment, Vol. 12, 1979.

Carbone, R. and R. L. Longini, "A Feedback Model for Automated Real Estate Assessment", Management Science, Vol. 24, no. 3, 1977.

Carbone, R. and J.R. Sweigart, "Equity and Selective Pollution Abatement Procedures", Management Science, Vol. 23, no. 3, 1976.

Carbone, R. and W. L. Gorr, "Adaptive Forecasting of Background Concentrations Using Feedback Control and Pattern Recognition Techniques", Environmental Modeling and Simulation, ed. By W. R. Ott, USEPA 600-9-76-016, 1976.

Carbone, R. and R.L. Longini, "The Reform of the Property Tax Administration for Achieving Intra-jurisdictional Equity", *Assesors Journal*, Vol.11, no.3, 1976.

Carbone, R. "Public Facilities Location Under Stochastic Demand", Canadian Journal of Operational Research and Information Processing, Vol. 12, no. 3, 1974.

Carbone, R. and R. Lai, "The Assessments of Urban Residential Properties: An Empirical Study for Pittsburgh", Journal of Environment Systems, Vol. 4, no. 3, 1974.

Proceedings:

Carbone, R. and S. Makridakis, "The Outcome of a Forecasting Method Competition and its Implications on Forecasting for Production and Inventory Control" 1982 Fall Industrial Engineering Conference Proceedings, November 1982.

Carbone, R. "Implementation of the Feedback System in Allegheny County" in Proceedings of Progress in Modern Mass Valuation Methodologies: Focus on Feedback, ed. By C. Cook, Lincoln Institute of Land Policy, 1982.

Bretschneider, S. I., R. Carbone and W. L. Gorr, "Multivariate Adaptive Estimation and Forecasting of Aggregate Indices of Air Quality: Case Study of Ohio" in Proceedings of the 73rd Air Pollution Control Association Annual Meeting, Montreal, 1980.

Longini, R. L., R. Carbone and E. L. Ivory, “*Cost-Effectiveness of Feedback and MRA as Applied to Large Urban Centers Mass-Appraisal a Contest*” in Proceedings of Large Urban Centers Mass Appraisal Symposium, ed. by C. Cook, Lincoln Institute of Land Policy, 1980.

Carbone, R. “*The Measurement of Vertical Inequities in Assessment Practice: A Comment*”, Analysing Assessment Equity, International Association of Assessing Officers, 1976.

Bretschneider, S. and R. Carbone, “*Application of Adaptive Parameter Estimation to Time Series Forecasting: A Comparative Study*”, Proceedings of the 9th Annual Mid-West AIDS Conference, Cincinnati, 1978.

Carbone, R. and R. Lai, “*Computerized Property Assessment: A Case Study of Pittsburgh*”, Proceedings of the 8th Annual ACM Urban Symposium, New York, 1973.

SOFTWARE DEVELOPMENT

- Main Designer and developer of the UNIAEP (univariate AEP) and MULTIAEP (multivariate AEP) forecasting programs which owe their origin to the filtering method developed by Robert Carbone and Richard Longini.
- Main designer and co-developer with Richard Longini of the Feedback Mass Appraisal System for real estate market valuation.

PROFESSIONAL BUSINESS EXPERIENCE (1986 to Current)

Founders, President and CEO of the FUTURION Group: a software system group of companies offering to its clients software products (FUTURCAST™ and Haruspex™) developed through its own research and development efforts. The group consists of three privately held companies that specialize in the area of business forecasting for operational and strategic planning decisions.

- Futurion Inc., a Canadian corporation incorporated in 1983 under the name Fortelmetrica Inc. with offices in Montreal, Quebec.
- Futurion Associates Inc., a Pennsylvania Corporation founded in 1985 with offices corporate address in Export Pennsylvania.
- Futurion International AG., a Swiss corporation established in 2002 with corporate address in Zug.

The Futurion group since 2003 is primarily focused on the global pharmaceutical industry. It has assisted in Canada, the USA and other countries companies such as AstraZeneca, Amgen, Hoechst Roussel, Janssen, E.R. Squibb, Marion Merrell Dow, Novopharm, Bayer, SmithKline and French, Burroughs Wellcome, Glaxo, GSK, Syntex, Sterling Drugs, Sanofi-Aventis, Ciba Geigy, Sandoz, Merck & co., Boehringer Ingelheim, Ortho McNeil, Roche, Wyeth, Novartis in providing effective forecasting technology and solutions. In the last decade, several presentations were given at international industry conferences on the evolving activities of the group in the pharmaceutical industry.

PRESENTATIONS

Carbone, R. *“Integrating Sales Forecasting and Assumption Planning in Global Pharmaceutical Companies”* LogiPharma, May 12-14, 2003, Geneva, SWZ.

Carbone, R. and Willcock, C. *“Assumption-Based Forecasting for RCCP Decisions”* LogiPharma, Global Inventory Management Summit, November 19-20, 2003, Boston, MA.

Carbone, R. *“Building an Assumption Database for Driving Your Technical Operations”* LogiPharma, 2004 May 12-14, Geneva, Switzerland.

Carbone, R. *“Building an Assumption Database for Driving Your Technical Operations”* Pharmaceutical Manufacturing 2004, September 29-30, 2004, Frankfurt, Germany.

Carbone, R. *“One Number Total Market Forecasting”* Total Market Forecasting Conference, February 23-25, 2004, Berlin, Germany.

Carbone, R. *“Harmonizing Pipeline and In-Line Product Forecasting for Supply Chain Planning”*, LogiPharma, June 28-30, 2005, Dusseldorf, Germany.

Carbone, R. *“Enterprise Forecasting: Examining the Advantages for SCM of Integrating Pipeline Product Forecasting within a Unique Global Database and Tool”*, LogiPharma, May 16-18, 2006, Geneva, Switzerland.

Carbone, R. *“Enterprise Forecasting”*, Total Market Forecasting, November 15-16, 2006, Philadelphia, USA.

Carbone, R. *“Integrating Long Term Forecasting for SCM in an Enterprise Solution”*, LogiPharma 2007, Geneva, Switzerland.

Carbone, R. *“Integrating Strategic and Operational Forecasting in an Enterprise system”* Total Market Forecasting, March 20-21, 2007, Lisbon, Portugal.

Carbone, R. *“Why Consider a Forecasting System Along Side SAP APO?”* EyeforPharma Business Forecasting Summit, September 8-10, 2008, Las Vegas, USA.

Carbone, R. and Zaliwciw, E., "*The Principles of Total Market Forecasting at Boehringer Ingelheim*", Total Market Forecasting, November 18-19, 2008, Berlin, Germany.

Carbone, R. and Joseph, V. "*Total Market Forecasting at Solvay Pharmaceuticals*", Pharma Forecasting Excellence USA 2009, October 8-9, 2009, Boston, MA.

Carbone, R. "*Enterprise New Pharmaceutical Product Forecasting*", Business Forecasting Planning USA, February 25-26, 2010, Las Vegas.

Carbone, R. "*Enterprise Patient Flow Forecasting*", Pharma Forecasting Excellence Europe 2010, June 8-9, 2010, Zurich, Switzerland.

Carbone, R. "*Who are my Friends?*" Pharma Forecasting Excellence USA 2010, October 5-6, 2010, Boston, MA.