



PANORAMIC TECHNOLOGY FORECASTING

Opportunities for game changing innovation

A one-day seminar

TECHNOSCAN® CENTRE

P.O. Box 390516, Edina, MN 55439

Web: www.technoscan.com

E-mail: seminars@technoscan.com

Telephone: +1 952 885 1979

PANORAMIC TECHNOLOGY FORECASTING

The need

All organizations work within a continuously expanding technological universe. Every day there is a global outburst of new technologies — new materials (M), new energy forms (E), and new information technologies (I). There exists an endless frontier of game-changing innovation opportunities.

But organizations have difficulty in harnessing these opportunities. Identification is elusive. Outcomes are erratic. While technological advance contributes more than half of overall economic growth, most innovations fail. Billions of dollars are wasted on unwise technological investments. Poorly selected technologies cause environmental degradation that destroys the very life-giving forces of nature.

A large part of the problem lies in an incomplete understanding of technological advance.

Insights needed

To effectively guide technological advance, and to capture game-changing innovation, professionals need three insights:

- The rate and direction of technological evolution
- A big picture of the technological universe, the assembly of all technologies
- An understanding of the interplay among major technologies

Traditional technological knowledge did not provide these insights. It was not based on a core theory of technology. A well known anomaly existed:

- Know-how of individual specialties was brilliant
- Knowledge of how they meshed together was non-existent

Without formal integrative knowledge, innovators had to rely on pragmatically derived technology foresight. There was no coherent way to undertake panoramic technology forecasting and formulate policy and management initiatives.

The solution

The problem was resolved through cutting edge research on a core theory of technology. A new field of knowledge emerged — *Strategic Technology Analysis (STA)*. It provides new, unifying, tools. These include:

- Better procedures for *technology tracking*
- New procedures for identifying game-changing *innovation opportunities*
- Simplified formats to *display* the right *technology-mix*

This knowledge makes technology easier to grasp, to guide and to communicate.

Participants

Participants include:

- Corporate directors
- Chief technology officers
- Engineering and technology managers
- Scientists and engineers
- S&T policy makers
- Investment professionals

Structure and Content

- Strategic Technology Analysis
 - A new core theory of technology
- Game changing innovation
 - Case studies
- Identifying landmark technologies
 - Creating a Technology Opportunity Profile (TOP)
- Choosing the right technology-mix
 - Linking the TOP to corporate competencies
- Wrap up of seminar

Seminar Materials

The seminar uses mini-cases and exercises. These are customized to suit the needs of clients. Each participant receives: (i) A set of handouts. (ii) An academic manual: *Technology – A Core Theory (2014)*

Track record

This seminar has been developed and refined over many years. It has been offered in-house to corporate clients, and has been hosted by universities and professional organizations.

Corporate clients include companies in space services, chemicals, textiles, forestry, diamond mining, electronics, sensors, mobile phone networks, instrumentation and retailing.

Professional organizations include the International Association for Management of Technology (IAMOT), Portland International Center for Management of Engineering and Technology (PICMET), and the International Forum on Technology Management (IFTM).

Admission Requirements

Graduate education in engineering and technology management (ETM), general management, engineering, or science, is recommended.

Seminar Leader



Dr Rias van Wyk is the Director of Technoscan[®] Centre Minnesota, USA. The Centre offers executive education in technology guidance. Dr. van Wyk is a former Director of the Master of Science in the Management of Technology Program (MS-MOT), University of Minnesota. At present he is a *Professor Extraordinaire*, at the University of Stellenbosch. His qualifications include a Master's degree from Harvard, focusing on science, technology and public policy. He is the author of *Technology: A Unifying Code*, and the editor of *Technoscan[®] Newsbriefs*. He is a member of IEEE.

In 2005 he received the Distinguished Achievement Award in the Management of Technology from the International Association for Management of Technology (IAMOT). During 2010-2012 he served as the first President of the *Management of Technology Accreditation Board (MOTAB)*. He has held Fellowships at *Nanyang Technological University, Singapore*, and the *Stellenbosch Institute for Advanced Study, (STIAS)*.

Venue and Date

To be arranged with client companies

Fees

To be discussed. Depends on geography and client requirements.

Contact

The Director
Technoscan[®] Centre
P.O. Box 390516, Minneapolis, MN 55439, USA
Telephone: +1 952 885 1979
e-mail: seminars@technoscan.com
web: www.technoscan.com

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