



Canadian **Innovation** Centre

A04W10HVEW

Market Evaluation & Validation

eWaterTek Inc.

Presented to:

Harold Moskoff, CIO

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Introduction

- The *Canadian Innovation Centre* (CIC) is Canada's leading organization dedicated to assisting inventors and innovative companies. Since 1981, CIC has assisted over 70,000 Canadian inventors and entrepreneurs and has evaluated over 13,000 new product ideas. CIC continues to provide an expanding range of programs to assist innovators across Canada and around the world.
- eWaterTek Inc., a Research & Development company, which also carries on business as Electronic Water Technologies Inc. was incorporated in Ontario in 2000 by Harold Moskoff.
- eWaterTek Inc. has engaged the *Canadian Innovation Centre* to perform a Market Evaluation & Validation analysis to assess: Market size and growth; competition, market acceptance, and barriers to market.



CIC: Guiding Innovation to be Market and Buyer Driven

- Mentor innovators through *Proof-of-Market* research and investigation
- Direct technology under development with fact-based market and buyer research
- Positively challenge the innovator to hear the buyer's voice
- Improve the likelihood that Canada's investment in technology creates wealth for Canadians
- Foster *Eureka!* moments for Canada's innovators through understanding their opportunities



Executive Summary

- Canadian provinces and municipalities are eager to identify and utilize cost savings technologies that increase reliability of water monitoring. Therefore, the market climate is excellent for introducing products such as eWaterTek's water purity sensor technology.
- Presently, United States based companies dominate the Water Monitoring and Analysis Equipment Market in Canada.
- Increasingly more stringent regulations and requirements are requiring more frequent water testing.
- Water Monitoring and Analysis Equipment is an industry playing in a Global market.
- The market for bottled water keeps expanding at an average rate of 15 to 20 percent volume increase every year, indicating a consumer preference for water that is "perceived" to be safe.
- 80% of diseases in developing nations are water related.

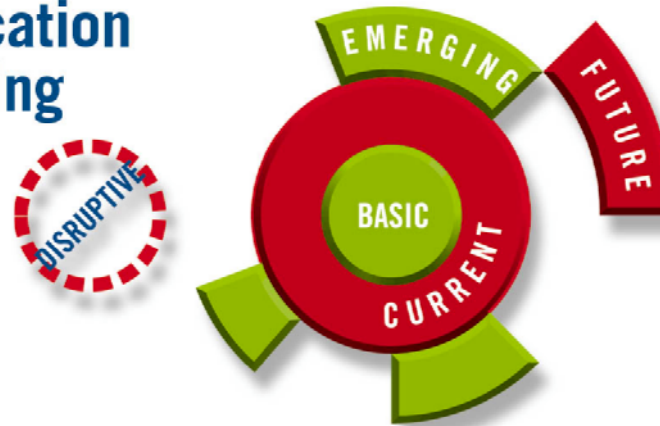


Product Overview

- eWaterTek Inc.'s water purity sensory technology system monitors water electronically in respect to chlorine, turbidity, and heavy-metal contaminants.
- The purity sensory technology system monitors water between the main station, and its communal destination - previously monitored only through the costly process of manual sample collection of tap water and subsequent independent laboratory testing.
- Constant monitoring and testing is provided by the purity sensory technology system rather than periodic sample testing provided by present monitoring processes.
- Municipalities may now have available to them, a water monitoring system that is efficient, effective and affordable and relies less on human operator performance.

Product Overview (cont'd)

Technology Application Mapping



eWaterTek's water purity sensor technology system significantly reduces risks and disasters such as the Walkerton (Ontario) tragedy by continually monitoring water quality and safety downstream from the main station and prior to reaching its communal destination. Alarms and alerts are triggered in real-time if any contamination is detected.

Market Overview

- In 2001, the total Canadian market for water testing equipment, estimated at US\$71 million was forecast to show real annual growth of between 10% and 20% between 2002 and 2005.
- Canada represents more than ten different provincial markets, each with a different growth rate, since purchasing will be largely dependent on the extent to which new legislation and regulations are introduced and enforced.
- The two largest markets, Quebec and Ontario are expected to show the most promise; however, all jurisdictions should be considered as having significant potential as legislation and the number of “water owners” will have a direct impact on the markets.

Market Overview (cont'd)

- The most significant group of end-users for potable water quality monitoring and analysis equipment are the certified laboratories across Canada.
- The second largest group of end-users for potable water quality and monitoring are municipalities, which for the most part monitor their output for chlorine and fluorides.
- For municipalities, Ontario and Quebec represent one-half the total with 677 municipal units registered in the Environment Canada Municipal Water Use Database (MUD).
- The remaining from largest to smallest are as follows:
 - Atlantic provinces with 202;
 - British Columbia with 140; and
 - Alberta with 124.

Market Overview (cont'd)

- For analytical laboratories, members of the Canadian Association for Environmental Analytical Laboratories (CAEL), the largest number are in Ontario with 90, followed by British Columbia with 79.
 - Only certified laboratories that are members of CAEL are accepted by the various provincial health authorities as being able to confirm the status of water samples submitted by municipalities and other sources.
 - Most municipalities can monitor for chlorine content, but accredited labs must be used for bacteria and chemical analysis.
- The United States is the major source of imported products used in Canada for water monitoring and analysis.
- Bottled water and water purification is a sub-sector of the Soft Drink and Ice Manufacturing Industry
 - Definition of Industry: This industry comprises establishments primarily engaged in manufacturing soft drinks, ice or bottle water including that which is naturally carbonated. Water-bottling establishments in this industry purify the water before bottling it.



Market Size

- In 2001, the total Canadian Market for Water Monitoring and Analysis Equipment was estimated at U.S \$71 million.
- Canadian total revenues in the Measuring, Medical and Controlling Devices Manufacturing national industry has increased from \$1.8 billion in 1992 to \$3.2 billion in 2001.
- Total revenues in the Soft Drink and Ice Manufacturing industry was reported to be \$3.6 billion by Statistics Canada.
- Net revenues in the Canadian Soft Drink and Ice Manufacturing industry reported to be \$924.7 million in 2001.

Source: Statistics Canada 2004



Market Growth

- Total revenues in the Canadian Measuring, Medical and Controlling Devices Manufacturing national industry has increased from \$1.8 billion in 1992 to \$3.2 billion in 2001 or by 6.9% per annum on average.
- In the latest year, the growth rate was 0.7%.
- Over the 1992-2001 period, manufacturing shipments increased by 6.5% on average.

Source: Statistics Canada 2004



Market Growth (cont'd)

Total Revenue Principal Establishments** Manufacturing vs. Non-Manufacturing Activity 1992-2001					
Measuring, Medical and Controlling Devices Manufacturing National Industry					
Type of Output	Value in \$billions		% of Total 2001	CAGR* 1992-2001	% Change 2000-2001
	1992	2001			
Manufacturing Shipments	1.5	2.7	83.60%	6.50%	1.60%
Other Revenues	0.2	0.5	16.40%	9.20%	-3.70%
Total	1.8	3.2	100%	6.90%	0.70%
Notes:					
* Compound annual growth rate					
** Incorporated establishments with employees, primarily engaged in manufacturing and with sales of manufactured goods equal or greater than \$30,000					

Source: Statistics Canada 2004



Market Growth (cont'd)

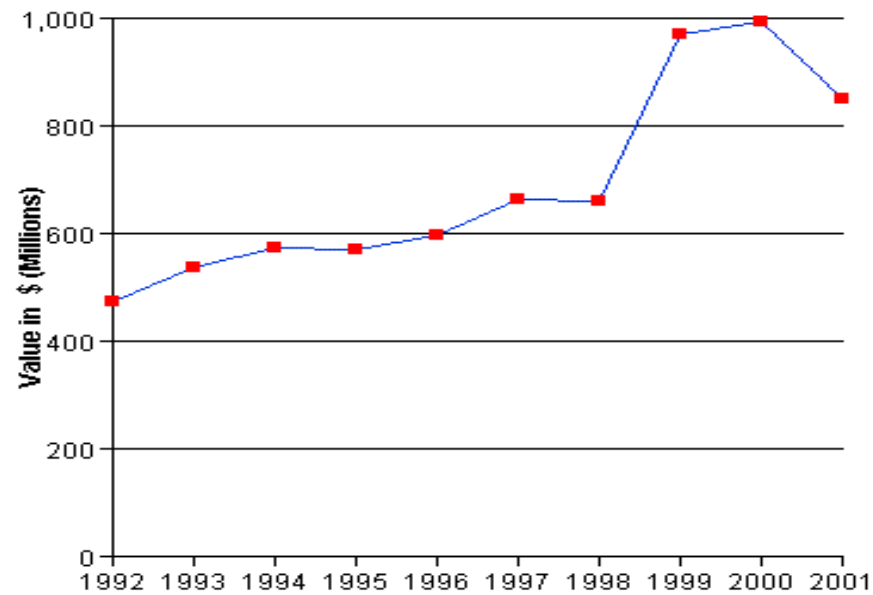
- Net revenues in the Canadian Measuring, Medical, and Controlling Devices Manufacturing national industry have increased from \$475.6 million in 1992 to \$852.8 million in 2001 or by 6.7% per annum on average.
- Between 2000 and 2001, the growth rate was 14.2%.

Source: Statistics Canada 2004



Market Growth (cont'd)

Net Revenues Principal Establishments 1992-2001 Measuring, Medical and Controlling Devices Manufacturing



Net Revenues

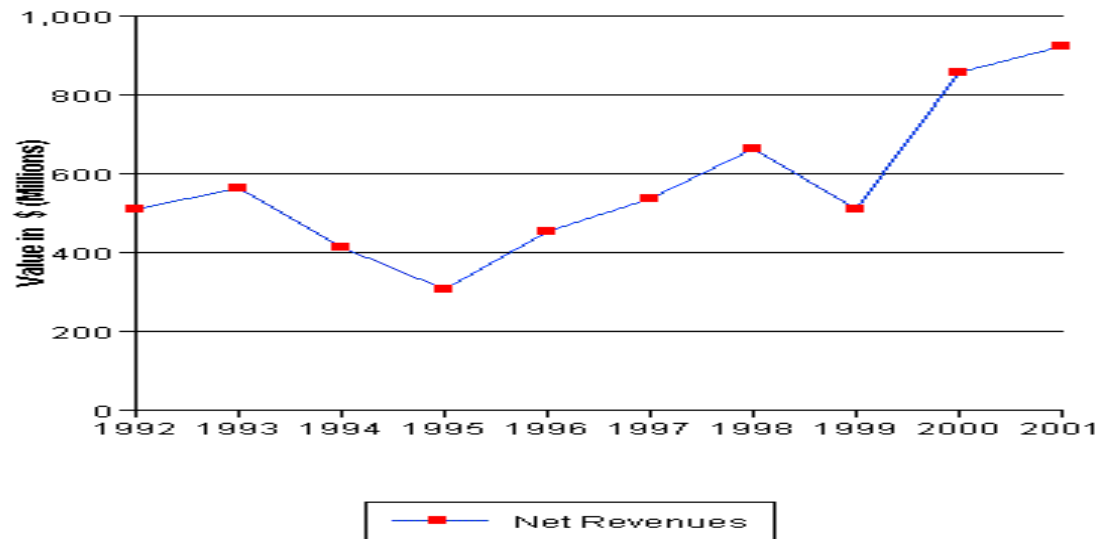
Source: Statistics Canada 2004



Market Growth (cont'd)

- The world wide market for bottled water continues expanding at an average rate of 15 to 20 percent (volume) every year.

**Net Revenues
Principal Establishments
1992-2001
Soft Drink and Ice Manufacturing**



Sources: 2001 Global Bottled Water Report: A Worldview, March 1, 2002; Statistics Canada 2004



Market Growth (cont'd)

- Bottled Water consumption is growing at a steady rate.

Year	Total Value of Shipments
1997	785,869
1998	891,509
1999	1,386,232
2000	1,449,388
2001	1,341,894



Source: U.S. Census Bureau 2004



Market Trends

- Since the May 2000 tragedy in Walkerton (Ontario), Canadian municipalities and others responsible for water quality have become especially cognizant of the need for ongoing water testing, analysis, and training of staff responsible for the overall utility management.
- A principal result of the Walkerton disaster, the provinces and municipalities are reviewing existing and new water monitoring methods and systems and therefore, interest is high in those systems which can generate cost savings, while at the same time maintain or elevate the required levels of quality control.
- British Columbia released a draft drinking water protection plan which is designed to ensure overall improvements to the potable water supply. The plan included four major components, one of which was the need to more effectively monitor water quality. [Re: Appendix A – Drinking Water Protection Act](#)
- Manitoba has set up a Drinking Water Advisory Committee which has implemented numerous benchmarks for testing frequency and quality assurance. [Re: Appendix B – Drinking Water Advisory Report](#)



Market Trends (cont'd)

- With 600 water systems and 90 registered labs operating in Ontario, this provincial market is easily the most significant in Canada. Ontario is actively revising many of its policies related to water quality, and monitoring and analysis will have to be a major part of any new regulatory regime.
- In 2001, Quebec's Environment Ministry announced its intention to introduce what some consider Canada's most stringent drinking water regulations. One resulting rule is that any source of drinking water serving more than 6 homes or 20 people to be subject to regular testing. The new regulations are expected to cost municipalities \$600 million. The provincial government is slated to contribute \$300 million of the total cost.
- All water supplies in Quebec will be tested semi-annually for bacteria such as E. coli and protozoa such as giardia, and once a year for nitrates. The water analysis will include the testing for 42 organic and 17 inorganic substances. [Re: Appendix C – Quebec Water Policy.](#)

Market Trends (cont'd)

- New Brunswick follows the Clean Water Act which requires that anyone operating a public water supply regularly test that water according to a plan submitted to and approved by the Minister of Health and Community Services.
- In 2000, Nova Scotia announced a comprehensive new law requiring water supply owners, including municipal suppliers as well as commercial and nonprofit organizations such as: restaurants; schools; nursing homes; and campgrounds; that have their own wells, to register their water supply. All water supplied will have to meet new Nova Scotia guidelines which call for regular and frequent sampling and testing of water as well as micro-biological and chemical testing to be conducted by approved laboratories.

Market Acceptance

- Industry sources strongly suggest that recognized accreditation and/or support from organizations, such as the Canadian Association for Environmental Analytical Laboratories, is essential to marketing eWaterTek's water purity sensor technology system.
- Compliance to Canadian Standards Association (CSA) is mandatory to sell electronic devices in Canada while UL compliance is mandatory the United States.
- Industry contacts in housing development strongly suggest that ISO 9001 registration as a marketing strategy for new home builders and residential builders.
- A synergy between existing home security systems and eWaterTek may provide marketing leverage to sell the pure water sensor technology system. Contacts suggested that with data to prove the systems reliability, recognized home security system suppliers would be interested in developing a relationship with eWaterTek Inc.



Market Overview - Opportunity Matrix

- The CIC invented an ‘opportunity matrix’ which allows innovators to focus on two critical success factors:
 - ✓ Market attractiveness; and
 - ✓ Ability to compete.
- The objective of the process is to drive the ‘X’ as far as possible into the top right quadrant of the matrix – i.e. by maximizing the product’s attractiveness and enhancing competitiveness
- We believe that in general the **eWaterTek Inc.** will be an attractive offering because:
 - ✓ of the real time monitoring and reporting features;
 - ✓ of the information accessibility by subscribers;
 - ✓ of the cost savings offered to municipalities while adhering to increasingly more stringent water quality testing; and
 - ✓ internet based data acquisition and reporting structure.

Market Review - Opportunity Matrix (cont'd)

Market's Attractiveness

- relatively large market
- strong market growth

High

substantial

X

Ability to Compete

Low

High

- extensive competition
- low customer acceptance

- limited competition
- high customer acceptance

Limited

Low

- relatively small market
- market in decline

The location of the 'X' indicates that market attractiveness for the product could be high, but the ability to compete could be impacted by the strength of the market leaders.



Resources

- *Canadian Guidelines for Drinking Water and Wastewater (GCDWQ)*
- *2001 Global Bottled Water Report: A Worldview, March 1, 2002*, Pub ID: BEV800864
- *From Source to Tap*, an Environment Canada 2003 publication
- National Water Quality Monitoring Council web site – <http://water.usgs.gov>
- *Providing accurate and current water-level and water-quality data in real time for protecting the Nation's ground-water resources*, Granato, G.E., and Smith, K.P., Robowell, 2002
- *International market Insights on Water Monitoring*, Richard Vinson, 2001
- Environment Canada web site – www.ec.gc.ca
- *A Synopsis on the Bottled Water Market*, Javier Jativa, 2001
- *Elements of a State Water Monitoring and Assessment Program*, an EPA publication, March 2003