



Technology Partnerships
Canada

An Agency of
Industry Canada

Partenariat technologique
Canada

Un organisme
d'Industrie Canada

Technology Partnerships Canada 2003–2004 Year in Review

Investing in Canadians with Great Ideas



Canada

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Our Mandate

Technology Partnerships Canada (TPC) is a Special Operating Agency of Industry Canada, established in 1996 to contribute to economic growth, jobs and wealth creation, and to support sustainable development. TPC has advanced and supported government initiatives by investing strategically in research, development and innovation. Investments made by TPC are designed to encourage private sector investment and work to maintain and grow the technological capabilities of Canadian industry and our research and technology base.

Today, TPC continues to encourage the development of small and medium-sized enterprises (SMEs) in all regions of Canada — promoting invention and innovation across industry. Through two key programs — Research & Development (R&D) investment and the Hydrogen Early Adopters (h2EA) program — TPC invests in critical technology sectors, stimulating innovation, developing opportunity and supporting economic growth across Canadian industry, thereby benefiting Canada.

Benefits of TPC Investment

Supporting the development of key technologies that will improve our lives is what TPC is all about. Its investments help our economy to flourish: encouraging the development of technologies that will make a significant contribution to our health, safety and quality of life.

TPC invests in technologies that help to address some of the key concerns of Canadians including enabling technologies in biotech to cure and treat illness and improve our health care system; projects that will improve our environment and prevent and protect us from pollution; and technologies that will ensure that Canada is a safe place to live.

In addition, TPC has been a key instrument in the Government of Canada's ongoing commitment to the continued growth and development of the country's aerospace industry. Through investment in the aerospace sector, TPC helps to ensure that Canada maintains its status and competitive edge in this industry — a critical driver of wealth, jobs and opportunities for Canadians.

In order to maintain a strong economy, it is important that we create an environment where companies of all sizes and in a variety of industries can grow and be successful. TPC investments help to create that environment by supporting ideas that will contribute to innovation within a given company, and entire industries. New partnerships, new skills and new ideas are all benefits of TPC investment.

From each dollar invested by TPC, additional investments are leveraged both nationally and internationally. Through TPC investment, SMEs are encouraged to grow, exploring good ideas and bringing them forward to become practical technologies. New alliances and working relationships are encouraged and developed between suppliers and industry, increasing Canada's overall innovation capacity. TPC investments are critical to these companies, helping them move ahead with the speed and scope required to succeed and become leaders in their field.

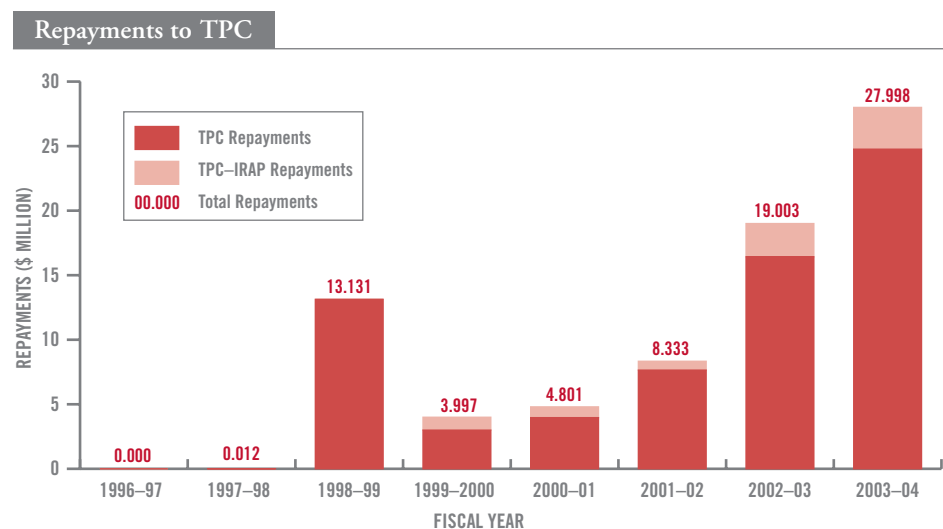
Finally, by supporting R&D activities and technological innovation, TPC is also attracting and retaining highly paid, skilled employment in Canada. Retaining and creating these knowledge-based jobs in Canada is critical to our economy and to our communities, as these workers make significant contributions that benefit all regions of Canada.

Repayments to TPC

While TPC supports innovative ideas that promise social and economic benefits to Canada and Canadians, these investments also hold promise of repayment from those projects that have reached the phase of commercial success. The subsequent re-investment of these repayments helps offset the costs and risks inherent to R&D and support further innovation. However, TPC investments represent patient capital and take into account that repayment may take 20 or more years to be completed.

Repayments to TPC from projects that have completed the R&D or Work Phase and are currently in the Benefits or Repayments Phase are continuing to grow. In fiscal year 2003–2004, repayments to TPC totalled close to \$28 million (not including warrants received), and the total cumulative repayments as of March 31, 2004 are more than \$77 million.

Contrary to low-risk activities that are financed by secured, debt capital creditors, TPC invests in much higher-risk initiatives that may encounter technical challenges, market shifts and previously unforeseen competition. As such, TPC faces the same kind of risks faced by equity investors in emerging- and advanced-technology companies.



Total collected as of March 31, 2004 = \$77 million.

Totals include TPC-IRAP investments.

Portfolio Highlights

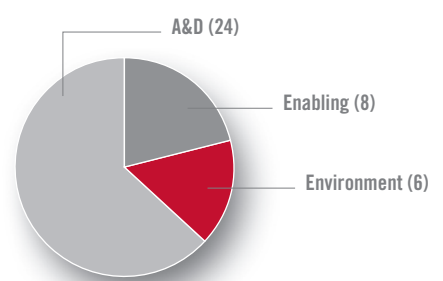
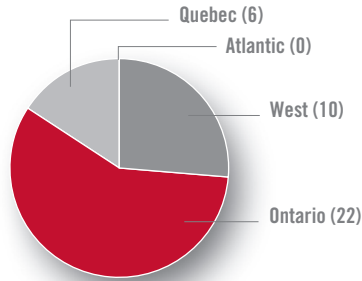
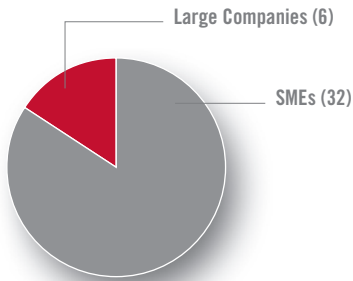
As of March 31, 2004, TPC's portfolio, including TPC-IRAP, consisted of 622 contracted projects (242 TPC and 380 TPC-IRAP), representing a multi-year investment of almost \$2.39 billion, of which \$1.7 billion had been disbursed. Of these projects, 549 or 88 percent target SMEs across Canada.

These projects have leveraged an additional \$10.1 billion in private sector innovation spending (\$4.05 per \$1 invested by TPC); thus, TPC has facilitated investment decisions totalling \$12.6 billion.

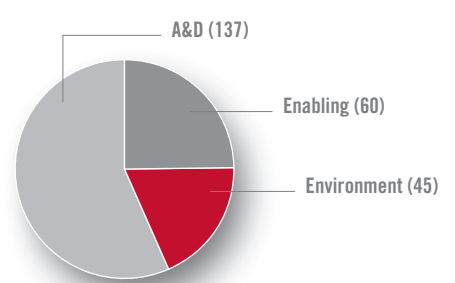
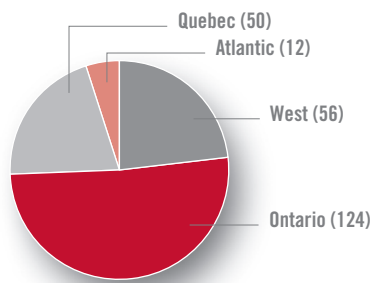
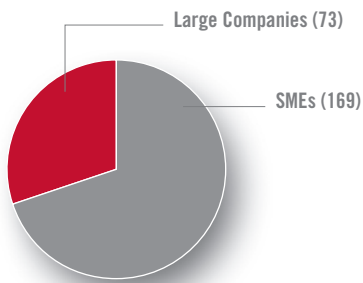
The geographical distribution of projects is consistent with R&D activity across the country.

As of March 31, 2004, in its sixth year of operation, TPC-IRAP has approved 380 projects, representing a multi-year investment of \$140 million.

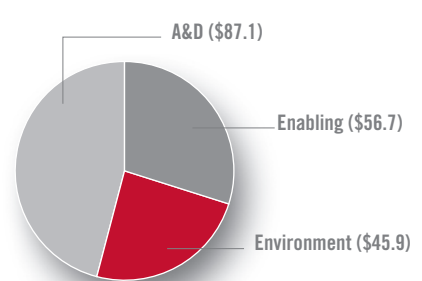
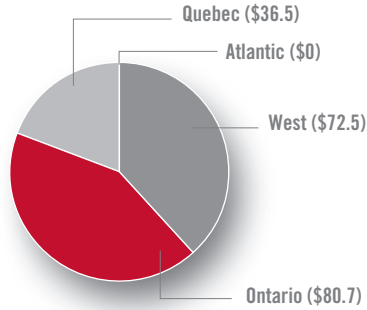
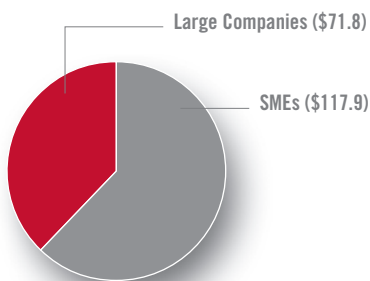
TPC Projects This Year



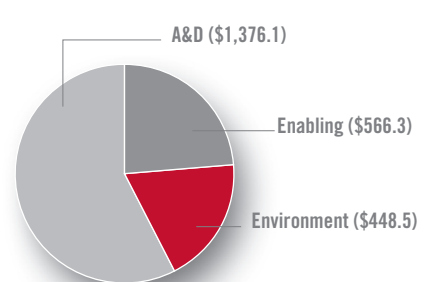
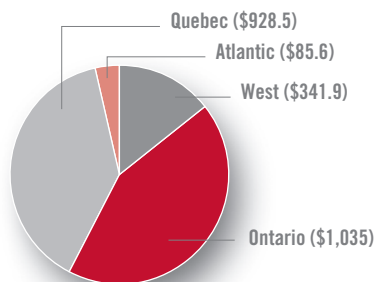
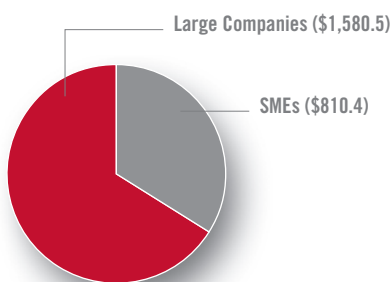
TPC Projects Overall



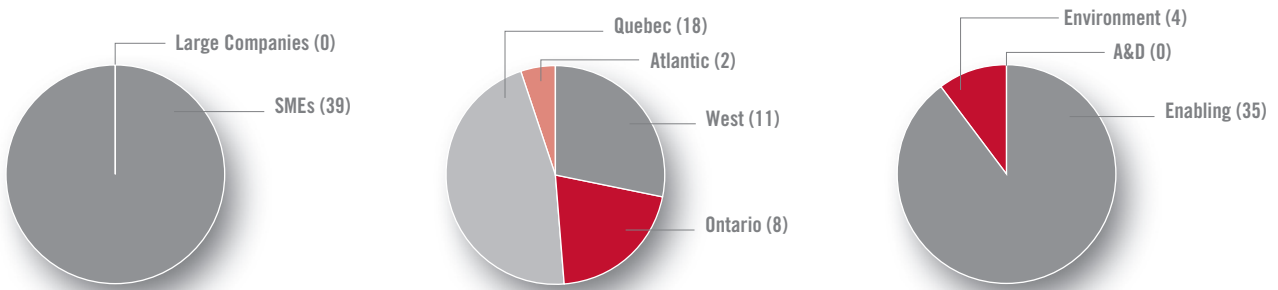
TPC Commitment This Year (In Millions)



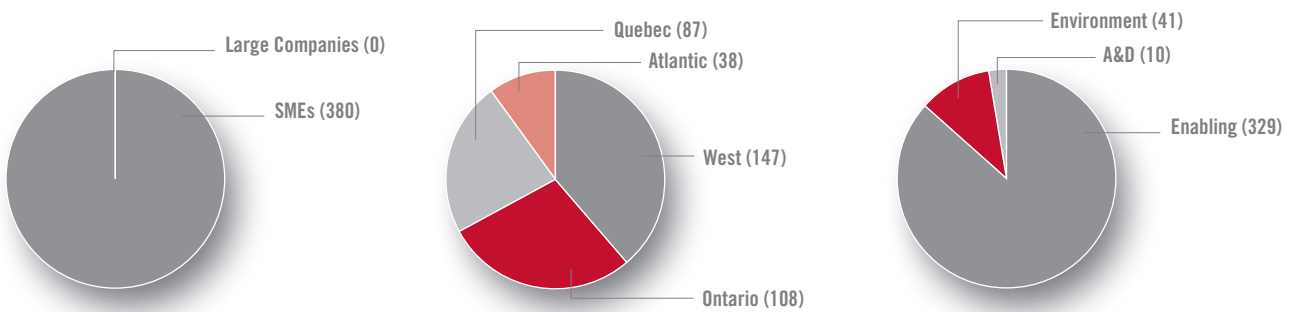
TPC Commitment Overall (In Millions)



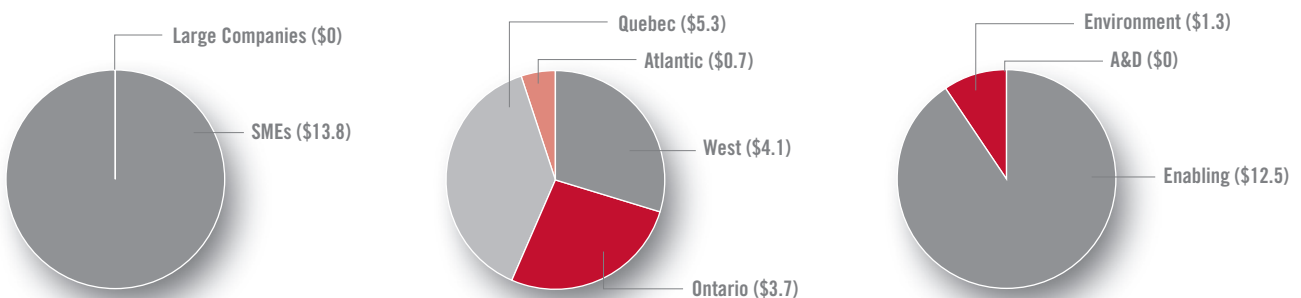
TPC-IRAP Projects This Year



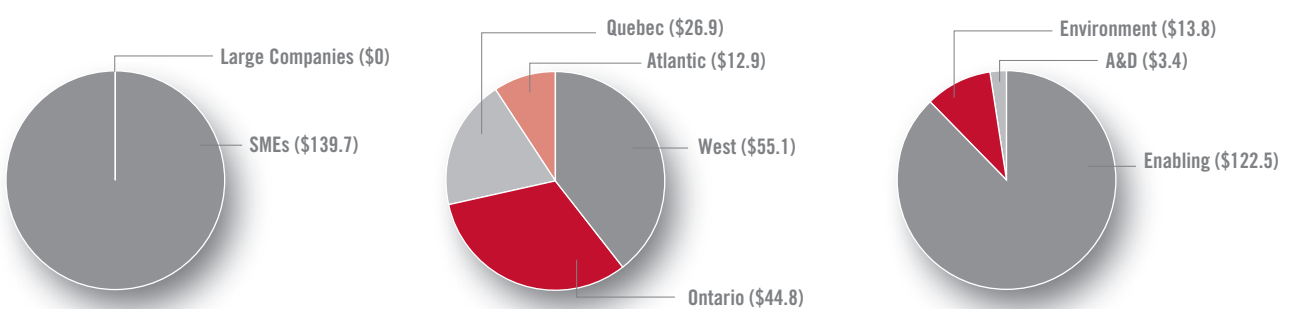
TPC-IRAP Projects Overall



TPC-IRAP Commitment This Year (In Millions)



TPC-IRAP Commitment Overall (In Millions)



A new environmental initiative: Hydrogen Early Adopters (h2EA) Program

On October 9, 2003, the Government of Canada announced a \$215-million investment to capitalize on the use of hydrogen and fuel cells to promote cleaner air and a more sustainable economy in Canada. TPC announced a \$60-million allocation to the Hydrogen Early Adopters (h2EA) program to invest in demonstration projects of existing hydrogen and hydrogen-compatible technologies and activities across Canada. In addition, Industry Canada announced an \$85-million commitment undertaken by the department and its portfolio partners to increase involvement in hydrogen activity across the Industry portfolio.

In conjunction with other Government of Canada agencies, the h2EA program has begun working with Canadian industry on the development of concepts such as “hydrogen villages” and “hydrogen highways” across Canada. Some of the brightest and most advanced thinkers and developers in hydrogen technologies in the world are now working together — right here in Canada.

In the years to come, these projects will contribute to the development of a hydrogen infrastructure, developing the skills, standards and supply mechanisms required to support a hydrogen economy. They will assure Canada’s role as the foremost developer of hydrogen technologies and will influence the worldwide hydrogen industry as it looks toward finding increased applications for hydrogen technologies in our daily lives.

The h2EA program complements the environmental investments and initiatives already under way through the traditional TPC R&D program.

This Year's TPC R&D Investments

Enabling Technologies	Project Description	Approved Contribution
Infowave Software Inc. (Burnaby, British Columbia)	Providing web-based access to internal network applications through portable computing devices	\$ 7 289 500
MetroPhotonics Inc. (Gloucester, Ontario)	Advancing photon integrated circuits to improve the cost, efficiency and capacity of telecommunications infrastructure	\$ 7 736 000
OMNEX Control Systems Incorporated (Port Coquitlam, British Columbia)	Developing state-of-the-art wireless technologies for controlling equipment in an industrial setting	\$ 7 500 000
Sandvine Incorporated (Waterloo, Ontario)	Developing technologies to provide new and advanced services over the Internet	\$ 9 500 000
Sierra Wireless Inc. (Richmond, British Columbia)	Developing a new integrated "smartphone" device with wireless messaging and modem technology	\$ 9 539 954
Spectral Diagnostics Inc. (Etobicoke, Ontario)	Developing diagnostic technologies for doctors and other primary care medical practitioners	\$ 3 900 000
Tm Bioscience Corporation (Toronto, Ontario)	Assisting in the development of new testing processes for genetic diseases	\$ 7 300 000
VisuAide Inc. (Longueuil, Quebec)	Producing innovative digital devices to assist blind or visually impaired persons to access print, electronic or directional resources	\$ 3 937 500

Environmental Technologies	Project Description	Approved Contribution
Fermag Inc. (Montréal, Quebec)	Designing, developing and demonstrating an improved process for the treatment of hazardous waste produced by the steel industry	\$ 1 868 230
Honeywell ASCa Inc. (North Vancouver, British Columbia)	Developing technologies that will reduce the amount of materials and energy required for the pulp and paper process	\$ 8 700 000
QuestAir Technologies Inc. (Burnaby, British Columbia)	Developing hydrogen purification and gas management technologies for high temperature fuel cells	\$ 9 600 000
Trojan Technologies Inc. (London, Ontario)	Refining ultraviolet water treatment technologies to destroy toxic chemicals and pathogens, and to improve the technology's energy efficiency	\$ 9 360 000
Xantrex Technology Inc. (Burnaby, British Columbia)	Advancing power electronics technologies for green energy applications	\$ 7 200 000
ZENON Environmental Inc. (Oakville, Ontario)	Producing an affordable, robust and reliable thermally induced phase separation membrane for the filtration of waste water and drinking water	\$ 9 199 200

Aerospace and Defence Sector	Project Description	Approved Contribution
Adacel Inc. (Brossard and Dorval, Quebec)	Developing advanced air traffic control simulation and air traffic management technologies	\$ 4 068 900
Bell Helicopter Textron Canada Limited (Mirabel, Quebec)	Developing resin transfer moulded manufacturing technology for low-cost bonded composite wing structures	\$ 680 000
Cloakware Corporation (Kanata, Ontario)	Providing advanced security software to help fight hackers and other network intrusions	\$ 4 636 280
Edgewater Computer Systems Inc. (Ottawa, Ontario)	Developing new aircraft data transfer technology for the Joint Strike Fighter Program	\$ 2 408 000
Kongsberg Mesotech Ltd. (Port Coquitlam, British Columbia)	Advancing the development of sonar and acoustic technologies for national security and military applications	\$ 5 220 000
Pratt & Whitney Canada Corp. (Longueuil, Quebec)	Developing gas turbine engines to power civil and military aircraft, as well as other industrial applications	\$ 42 000 000
Raytheon Canada Limited (Waterloo, Ontario)	Improving civilian and military flight safety radar applications to improve affordability and enhance safety	\$ 4 040 400
Spectrum Signal Processing Inc. (Burnaby, British Columbia)	Implementing software-defined radio platforms for use in defence communications, intelligence and surveillance applications	\$ 8 299 616
YottaYotta Inc. (Edmonton, Alberta)	Developing data-sharing and communications technologies for security and public safety organizations for use in the event of a national emergency	\$ 7 673 513

*The following SMEs received assistance from the Aerospace and Defence Supplier Development Initiative. This program is designed to help SMEs improve their technical, quality assurance and management systems or capabilities, in order to better position them for growth beyond their current tier in the aerospace and defence supply chain.

Aerospace and Defence Sector	Project Description	Approved Contribution
A-Line Precision Tool Ltd. (York, Ontario)	Expanding manufacturing and quality assurance capabilities through upgrades to essential machinery and equipment	\$ 372 680
Asco Aerospace Canada Ltd. (Delta, British Columbia)	Developing and incorporating world-class business/ manufacturing processes and practices	\$ 1 000 000
Avior Integrated Products Inc. (Laval, Quebec)	Developing and improving internal processes and systems for quality and program management	\$ 818 028
Cajic Family Holdings Incorporated (Brampton, Ontario)	Achieving industry certifications and accreditations through improved manufacturing processes and equipment	\$ 446 445
Cametoid Limited (Whitby, Ontario)	Developing advanced systems and development applications	\$ 799 560
Casebank Technologies Inc. (Brampton, Ontario)	Developing aviation business management integration and quality processes	\$ 799 084
Cross & Associates Manufacturing Inc. (Nepean, Ontario)	Upgrading to ISO 9001:2000	\$ 31 200
Cyclone Manufacturing Inc. (Mississauga, Ontario)	Developing management and manufacturing systems	\$ 892 800
Exactatherm Limited (Mississauga, Ontario)	Improving workflow efficiency and expansion of core capabilities through certification and improvements to technical infrastructure and equipment	\$ 499 050
Koss Machine & Tool Limited (333111 Ontario Limited) (Brampton, Ontario)	Achieving essential quality assurance certification through the incorporation of new software and manufacturing equipment	\$ 433 980
LETAR Inc. (Vaughan, Ontario)	Upgrading company-wide design and production systems to industry certification	\$ 497 500
Luxell Technologies Inc. (Mississauga, Ontario)	Upgrading quality management system and implementation and certification to ISO 9001:2000 and AS9100	\$ 92 552
Novatronics Inc. (Stratford, Ontario)	Developing a flexible manufacturing system	\$ 800 000
Pirlitor Machine & Tool Ltd. (Mississauga, Ontario)	Improving an integrated systems development project	\$ 145 823
Reil Industrial Enterprises Limited (Mississauga, Ontario)	Improving equipment and technical infrastructure, and achieving industry certification goals	\$ 415 125

Success Stories

RESEARCH IN MOTION (RIM) LTD.

In 1998, when TPC originally invested in RIM, the company employed just over 200 people. Now, six years later, RIM has well over 2800 employees and has become a world leader in wireless communications. Their renowned BlackBerry® wireless platform has become the standard in wireless communications, with more than 1 million subscribers worldwide and new subscribers signing on every day.

Through the combination of award-winning BlackBerry® hardware, software and services, users can send and receive emails and text messages, make phone calls, surf the Internet and securely access their corporate data, all through one small, wireless, hand-held device. Users stay in touch while on the go — making decisions and taking care of business, or simply connecting with family and friends.

TPC is proud to have played a role in the success of RIM and the realization of their innovative vision for wireless communications. We were there before BlackBerry® was first sold, supporting RIM's development of essential core wireless technologies and capabilities that have been incorporated into today's BlackBerry® design.

Many of the important innovations that distinguish BlackBerry® from its competition today — including its “push” architecture, advanced integration and end-to-end security model — were developed with the support of TPC.

ZENON ENVIRONMENTAL INC.

ZENON Environmental Inc., based in Oakville, Ontario, develops water filtration technologies that protect our drinking water supply and reduce the impact of human activities on local aquifers. The company has developed advanced membrane filtration technologies to remove waste, bacteria, viruses and other contaminants — harmful to people, animals and the environment — from the water that we consume and the waste water we return back into our environment.

In 1998, when TPC invested with ZENON to accelerate R&D, the company employed 375 people. Today, the company employs more than 1100 people and their innovative ZeeWeed® membrane filter technology is used in widespread applications for water filtration worldwide. From municipal drinking and waste-water facilities to emergency relief and portable water-filtration units, this technology has benefited human and environmental health through improved water treatment and enhanced water potability.

With more than 80 ZeeWeed® filtration plants operating in Canada and more than 400 worldwide, ZENON is delivering on the promise of a clean water supply for today and tomorrow. This success has allowed for notable repayments of the TPC investment.

SEMBIOSYS GENETICS INC.

Simple plant proteins are the basis of some of the world's most widely used pharmaceutical, personal care and food products. But isolating and purifying those proteins can be anything but simple. In many cases, complex microbial fermentation processes must take place. The time, equipment and expertise that must be committed to this work can add significantly to the ultimate cost paid by consumers.

The firm's innovative approach, called the Stratosome™ Biologics System, received a major boost in 2001 when TPC made a strategic investment of \$5.5 million. This support leveraged an additional \$13 million in outside investments, enabling growth and expansion.

Today, the company is using a technique dubbed "molecular farming" by cultivating genetically modified versions of these plants that can concentrate different types of proteins in the oil of their seeds. With this technology, obtaining a commercially viable quality and quantity of specified proteins should be as straightforward as processing the oil — a far cry from the elaborate and expensive chemical engineering that might otherwise be required.

For SemBioSys, applying this crop to protein production has some additional advantages. The plants need only a small acreage to flourish. They already grow in the northern and southern hemisphere, so crops can be collected year-round. Best of all, safflower has no weedy relatives in the western hemisphere, so there is little chance that genetically modified plants will interact significantly with others.

IOGEN CORPORATION

It is estimated that as much as 25 percent of greenhouse gas emissions generated in Canada come from the transportation sector. With millions of cars and trucks on the roads every day across the country, reducing emissions from vehicles is one way we can make a significant impact on climate change. Ottawa-based Iogen Corporation is leading the way with the production of cellulose ethanol fuel.

Currently, ethanol is made from the distillation of fermented grains such as corn and wheat, which are in demand for food and feed purposes. However, Iogen has developed a process to convert lower-cost feedstocks such as wheat straw and corn stalks into environmentally friendly ethanol fuel. This new cellulose-based ethanol technology offers twice the greenhouse gas reduction potential of conventional grain-based ethanol technologies and, relative to gasoline, could offer a greenhouse gas reduction potential of greater than 90 percent. As well, by using a wider range of biomass, such as agricultural residues, cellulose ethanol offers economic development to rural communities, adds income for farmers, and reduces waste and pollution coming from our cars.

In 1999, TPC, along with the Climate Change Action Fund, invested \$10 million to help Iogen develop and demonstrate this new process for producing ethanol. Today, the Iogen demonstration plant is producing cellulose ethanol on a continuous basis, and the company is moving forward with its commercialization plans, so that consumers will soon be able to buy cellulose ethanol blended fuel at their local pump.

PRATT & WHITNEY CANADA CORP.

The intensely competitive aerospace industry proudly delivers a high quality of life for all Canadians. Since 1928, Pratt & Whitney Canada Corp. (P&WC) has become one of the most significant players in this sector in Canada, with facilities in Quebec, Ontario, Nova Scotia and Alberta. Today, this large company employs approximately 6500 people across the country.

Over the years, TPC has invested heavily in companies in the aerospace industry. To date, investments have been made in multiple technology development programs with P&WC to develop innovative engine technologies, and allowing them to advance these technologies, and develop more reliable and efficient engines.

These focussed research initiatives have enabled P&WC to strengthen the Canadian innovation network by creating ongoing alliances with the National Research Council and with 15 Canadian universities. P&WC is also spearheading undergraduate aerospace institutes at three Canadian universities, providing up to \$11 million annually to university research and hiring more than 150 university students each year.

P&WC's initiatives in R&D have led to high-quality employment opportunities, not only within the company but also for more than 2500 product and non-product suppliers across the country, from which the company buys over \$600 million worth of parts, components and services annually, generating approximately 15 000 additional jobs.

Enhancing Program Administration

In 2003–2004, Industry Canada conducted an internal audit to review TPC operations and to ensure that the program is administered as efficiently as possible and continues to adhere to high standards of accountability. At the same time, a formative program evaluation was conducted.

It is notable that the audit and evaluation studies both showed TPC to be a key instrument in improving the technological capabilities and indeed the competitiveness of companies in which it invests. In fact, these studies showed that TPC investments leveraged private investments, contributed to the creation of high quality, highly skilled jobs, and resulted in the development of improved technologies across industry.

As recommended in the audit and evaluation process, TPC has begun to implement a new system to help track and report the economic, social and environmental benefits that its investments deliver. The development of this system will allow TPC to more effectively demonstrate the important benefits that Canadians can anticipate from the program's investments.

Using this new model, benefits to the company, industry and Canadians in general will be used to demonstrate the value of investing in projects. Work is now under way to develop these important measurement criteria. This new reporting and evaluation system is expected to be developed in 2004–2005.

TPC is also developing new procedures and administrative improvements to address a number of recommendations that flow from the audit and evaluation. These commitments to improvement will be reassessed on an ongoing basis to ensure TPC's ability to keep up with the changing business realities our industry faces.

Both reports were made available to the public by Industry Canada and TPC on the TPC website.

Financial Statements

STATEMENT OF EXPENDITURES (\$000) (For the year ended March 31, 2004)		
TECHNOLOGY PARTNERSHIPS CANADA	2003–2004	2002–2003
OPERATING		
TPC		
SALARY		
Regular salaries	7 380	5 136
Employee benefits	1 476	1 027
PWGSC accommodations	216	–
Total Salary	9 072	6 163
NON-SALARY		
Transportation and communications	513	360
Information	384	832
Professional and special services	2 274	1 909
Other	1 154	1 412
Total Non-Salary	4 325	4 513
Surplus of Operating	224	–
TPC Operating*	13 621	10 676
IRAP–TPC		
SALARY		
Regular salaries	1 938	1 688
Employee benefits	388	337
NON-SALARY		
	825	661
IRAP–TPC Operating	3 151	2 686
TOTAL OPERATING	16 772	13 362
CONTRIBUTIONS		
Environmental Technologies	60 258	37 602
Enabling Technologies	57 667	82 070
Aerospace and Defence	173 670	179 872
Industrial Research Assistance Program (IRAP–TPC)	20 190	28 226
Sub-total Contributions	311 785	327 770
Contributions under sunsetted programs:		
Environmental Technology Commercialization Program (ETCP)	33	0
TOTAL CONTRIBUTIONS	311 818	327 770

* Increase to TPC operations is mainly attributable to a \$2.8M increase to the program's operating resources as per TB Approval (TB#831116).

STATEMENT OF EXPENDITURES (\$000) (For the year ended March 31, 2004)

HYDROGEN EARLY ADOPTERS PROGRAM (h2EA)	2003–2004	2002–2003
OPERATING		
SALARY		
Regular salaries	433	–
Employee benefits	87	–
PWGSC accommodations	63	–
Total Salary	583	–
NON-SALARY		
Transportation and communications	78	–
Information	63	–
Professional and special services	341	–
Other	120	–
Total Non-Salary	602	–
Surplus of Operating	115	–
TOTAL OPERATING	1 300	–
CONTRIBUTIONS		
Contribution disbursements	–	–
TOTAL CONTRIBUTIONS	0	–

STATUS OF CONTRIBUTION PORTFOLIO (\$000)

TECHNOLOGY PARTNERSHIPS CANADA	ACTUAL	PLANNED SPENDING			
	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008
TOTAL PROGRAM FUNDING:	300 000	300 000	300 000	300 000	300 000
Funding from National Research Council for IRAP–TPC	15 000	15 000	15 000	15 000	15 000
Allocation for Program Operations (1)	(16 772)	(16 893)	(17 037)	(17 037)	(17 037)
Funds reprofiled from previous years	40 000	63 885	38 224	0	0
Funds lapsed in 2003–2004 carried forward	(11 172)	0	0	11 172	0
TPC repayments (2)	16 426	24 763	39 843	59 764	89 646
IRAP–TPC repayments (2)	2 577	3 235	3 235	3 235	3 235
Program reductions	(6 000)	(6 000)	(6 000)	(6 000)	(6 000)
Share of \$1 billion reallocation	(30 000)	(4 900)			
Other adjustments (ARLU/Internal)	1 759	1 320	1 096	1 096	696
AVAILABLE CONTRIBUTION FUNDING	311 818	380 410	374 361	367 230	385 540
COMMITMENTS UNDER SUNSETTED PROGRAMS:					
Environmental Technology					
Commercialization Program (ETCP)	33				
TOTAL COMMITMENTS UNDER SUNSETTED PROGRAMS	33				
COMMITMENTS UNDER TPC as of March 31, 2004:					
Environmental Technologies	60 258	78 427	60 675	25 231	11 845
Enabling Technologies	57 667	69 660	52 801	58 362	14 476
Aerospace and Defence Industries	173 670	95 035	70 469	46 528	16 280
Industrial Research Assistance Program (IRAP–TPC) (3)	20 190	12 315	1 237	86	0
TOTAL COMMITMENTS UNDER TPC	311 785	255 437	185 182	130 207	42 601
TOTAL PORTFOLIO COMMITMENTS	311 818	255 437	185 182	130 207	42 601
TOTAL FUNDS AVAILABLE FOR NEW CONTRIBUTIONS IN FUTURE YEARS	0	124 973	189 179	237 023	342 939
FUNDS AVAILABLE FOR NEW TPC CONTRIBUTIONS		102 934	157 816	213 009	318 839
FUNDS AVAILABLE FOR NEW IRAP–TPC CONTRIBUTIONS		22 039	31 363	24 014	24 100

Note (1) Program Operations includes funds for TPC and IRAP–TPC, as well as administration of repayments.

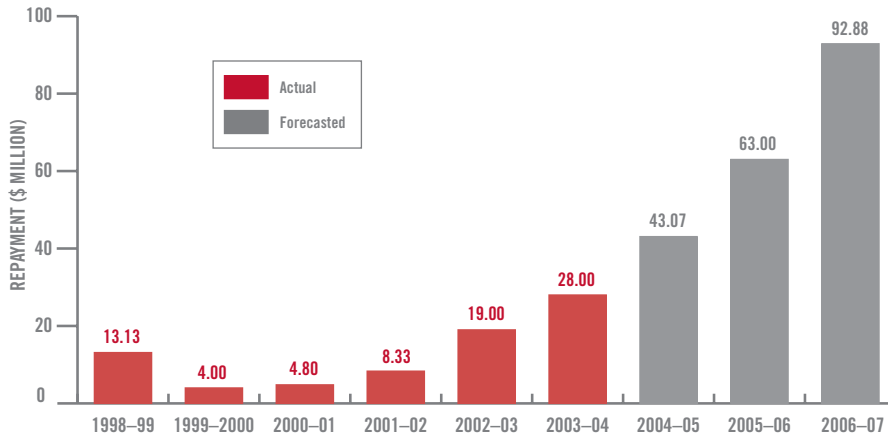
Note (2) Figures represent amount collected or forecasted to be collected, in the previous year. Repayments collected in a given year are deposited in the Consolidated Revenue Fund, which are then made available to TPC the following year through its access to repayments authority. Contrary to repayment amounts listed in prior year Annual Reports/Year in Review, the figures above include the portion related to repayment administration.

Note (3) IRAP–TPC projects have a shorter disbursement phase than those of TPC, which in part would explain the relatively low future years commitments.

STATUS OF CONTRIBUTION PORTFOLIO (\$000)

HYDROGEN EARLY ADOPTERS PROGRAM (h2EA)	ACTUAL		PLANNED SPENDING		
	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008
TOTAL PROGRAM FUNDING:					
Funding for Hydrogen Early Adopters (h2EA) program	26 000	6 000	6 000	10 000	12 000
Hydrogen Early Adopters program funds reprofiled to future years	(23 000)	4 000	13 000	6 000	0
Hydrogen Early Adopters lapse in 2003–04	(1 700)				
Allocation for Program Operations	(1 300)	(1 175)	(1 175)	(1 175)	(1 175)
AVAILABLE CONTRIBUTION FUNDING	0	8 825	17 825	14 825	10 825
COMMITMENTS as of March 31, 2004:	0	0	0	0	0
TOTAL FUNDS AVAILABLE FOR NEW CONTRIBUTIONS IN FUTURE YEARS	0	8 825	17 825	14 825	10 825

Actuals and Short-Term Repayment Projections



NOTE:

- Negotiated settlements and special receipts are included
- Forecasts do not include the selling of warrants
- Totals include TPC-IRAP investments