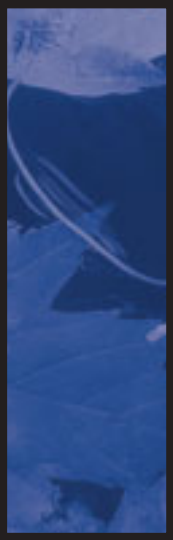
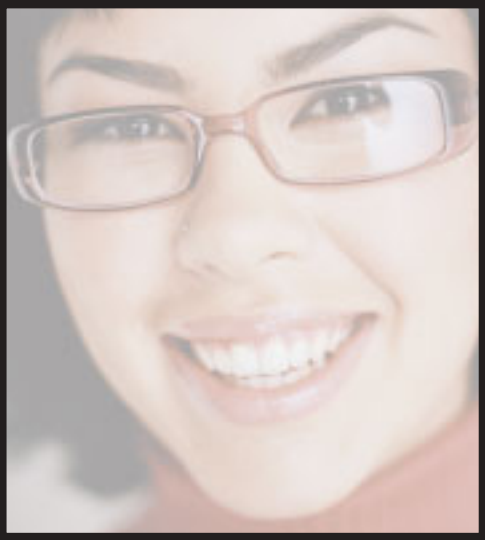
Technology Partnerships Canada

An Agency of Industry Canada

Partenariat technologique Canada

Un organisme d'Industrie Canada





Investing in innovation

2001–2002 Year in Review

Canada

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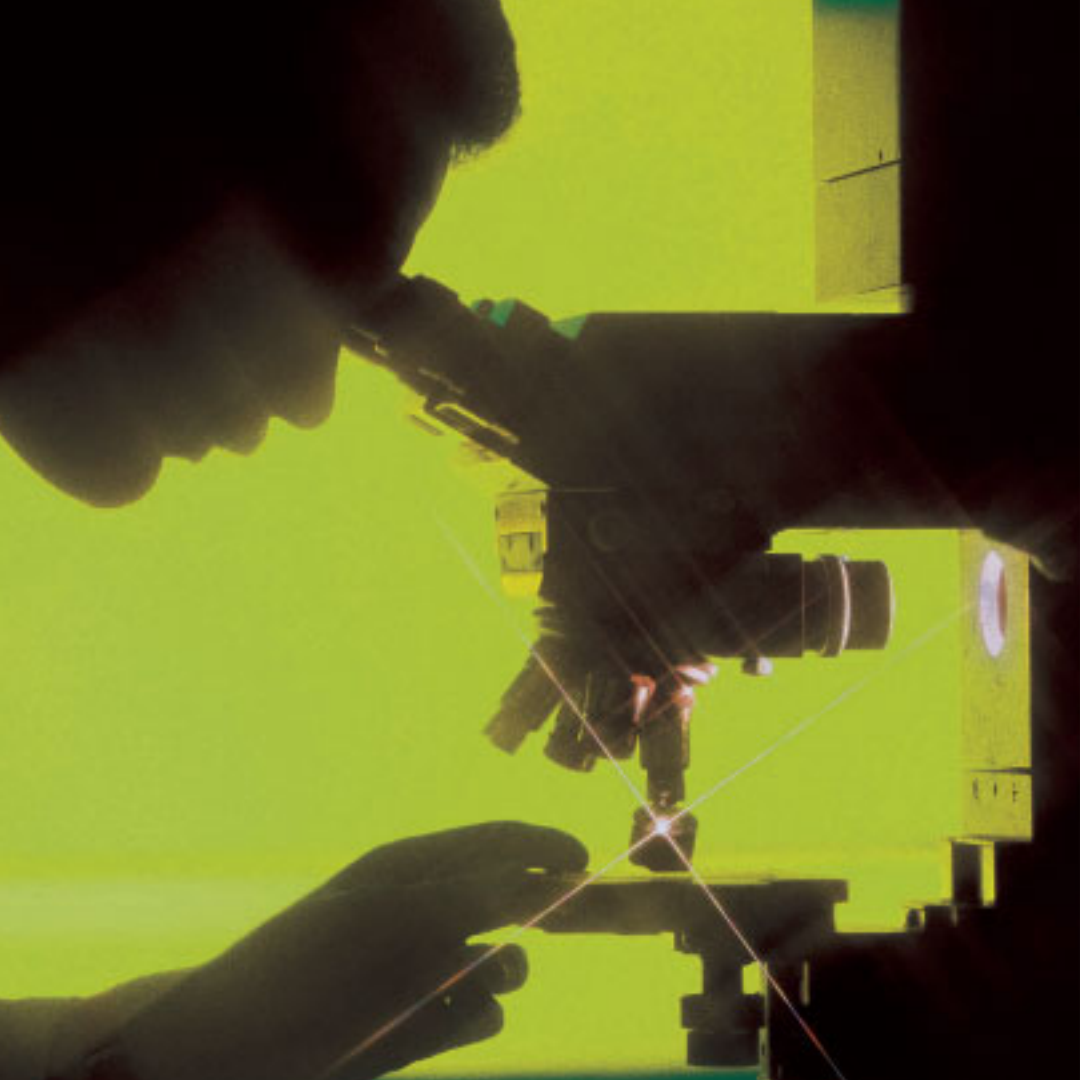
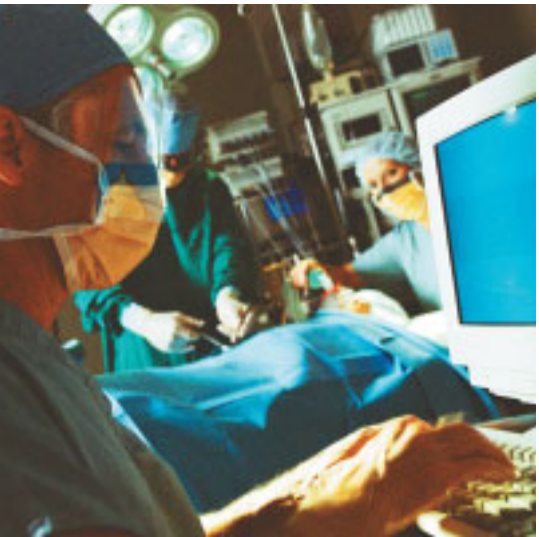
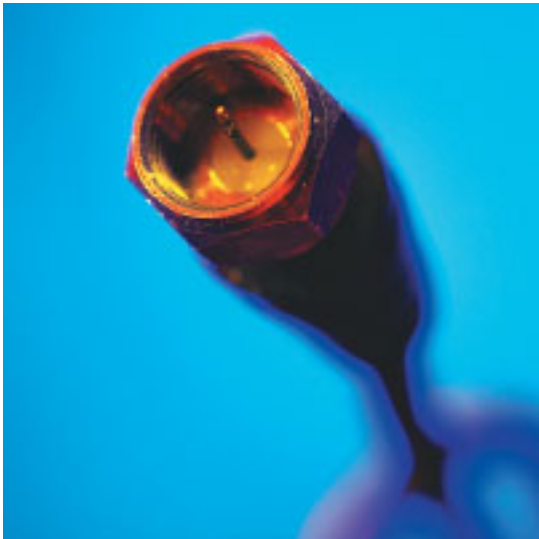
Initiatives toward our future







About Technology Partnerships Canada

Technology Partnerships Canada (TPC) is a strategic program that makes critical and timely conditionally repayable investments for research and development in areas of technology that promote innovation, commercialization, sustainable development and increased investment while enhancing the quality of life for all Canadians. Development of a new technology can be risky and takes time to perfect, but the benefits outweigh the risks. TPC acts accountably, transparently and diligently to ensure that its investments are in the best interests of Canada. As it fulfils its mission, TPC keeps Canadians informed of how money is being spent and repaid, what specific successes have been achieved and how each of these factors is contributing to the goals of *Canada's Innovation Strategy*.

Message from the Minister

INVESTING IN A VISION FOR CANADA'S FUTURE

Canada is a strong global competitor. Our people, skills, products and resources are in demand worldwide. To remain competitive in the new economy, we must work together to develop and nurture innovative, new ideas to achieve our dreams for a better life.

Great ideas are the currency of the knowledge economy, and in this respect Canada is one of the wealthiest nations in the world. To realize our potential, we must be willing to support Canadian innovation as a long-term investment.

Earlier this year, I announced *Canada's Innovation Strategy*. Its goals are to position Canada as one of the most innovative countries in the world, to build a solid foundation for continued economic prosperity and to enhance the quality of life for all Canadians. Technology Partnerships Canada (TPC) is a key instrument in the realization of this strategy, and it is making measurable progress in achieving Canada's innovation goals.

TPC is a young program that has gained valuable experience while proving its knowledge in the fast-moving, high-risk world of research and development (R&D) funding. Financial year 2001–2002 has been a year of transition, consolidation and repositioning.

Looking ahead, the Government of Canada will continue to refine the focus and activities of TPC to support the goals of *Canada's Innovation Strategy*. Through it, Canadian men and women who have great ideas will have access to capital at the right time, before critical opportunities pass us by. The immediate results of these breakthroughs will be more jobs and prosperity for Canadians.

The greatest rewards are yet to come. Our vision is to make Canada one of the top five countries in the world in R&D performance, and for Canada to be a world leader in private sector investments from innovation. In TPC, we have created a program that makes strategic and diligent investments, and leverages private sector involvement to develop the infrastructure for a healthy environment, a prosperous business community and a safer world for our children.

In the months and years ahead, TPC will be a centre of excellence for innovation in government. Through creative partnerships with Canadian industry, it will continue to help build Canadian successes by inspiring, promoting and actively investing in Canada's ideas and dreams for a better future — right now.

Allan Rock, P.C., M.P.
Minister of Industry

Message from the Executive Director

BUILDING A MORE INNOVATIVE CANADA

Over the past six years, Technology Partnerships Canada (TPC) has built a reputation as a catalyst for excellence in Canadian innovation. It has truly been an exhilarating time for all of us involved in the organization as we witness the evolution of Canadian creativity and entrepreneurial spirit leading to new methods, products and services.

TPC has been in the forefront of exciting new investments in Canadian industry, supporting ventures that help to ensure Canada's leadership in the world economy. What's even more exciting is that these are investments that will make a difference for *all* Canadians.

With investments in information and communications technologies, we're helping to build the infrastructure of the 21st century, bringing high-speed Internet to remote and rural Canada for e-learning, e-business and e-health care. We're supporting investments in new vaccines to treat cancer and Alzheimer's. And we're working for made-in-Canada solutions to global environmental challenges in pollution control, water and wastewater treatment, and reduction of greenhouse gas emissions.

As the government moves forward over the coming months with *Canada's Innovation Strategy*, the role of TPC will become increasingly critical — and we're up to the challenge! TPC must ensure it keeps pace with technological advances around the world, and adapts quickly and appropriately to these changes. We have risen to the challenge before and I have no doubt we will continue performing at the high standards expected. Our priority is to ensure that we're as flexible, responsive and forward thinking as our innovative partners in Canadian industry. We need an organization that is positioned to work with our partners to translate today's challenges into tomorrow's opportunities.

We are pursuing an aggressive outreach strategy targeting our stakeholders — industry, other government departments, other levels of government and academia — to explore new collaborative arrangements, funding models, and investment opportunities. We will also be working diligently to streamline the way we do business, re-engineering a range of internal policies and processes and building our capabilities in terms of skills, expertise and knowledge.

There will be a particular emphasis on building improved awareness and on strengthening TPC's presence in all regions of Canada. Companies need to know they have a potential partner in TPC — a partner who will share the risk and help them to advance their innovative ideas.

Transparency and accountability guide the way we do business at TPC. Our investments are made with taxpayers' dollars. We are placing a high priority on improving how we inform Canadians of the rationale for the investment decisions we make, the process we use for making our investment decisions, how those investments ultimately turn out and their benefits. Canadians need to know what their tax dollars are doing for them.

Our vision for TPC is as a centre of excellence for innovation in government and a window to the future. We have achieved a great deal in the past six years, but the greatest challenges and opportunities are still out there — and we're going after them!

Jeff Parker, Executive Director
Technology Partnerships Canada

TPC Portfolio: Increasing Canada's Knowledge Capital

Technology Partnerships Canada's portfolio consists of total TPC investments including the investments through the IRAP–TPC initiative. The IRAP–TPC initiative is a partnership with the National Research Council of Canada's Industrial Research Assistance Program (IRAP). This initiative provides pre-commercial financial assistance to Canadian small and medium-sized enterprises (SMEs) in the three key sectors in which TPC is involved: environmental technologies, enabling technologies, and aerospace and defence technologies. IRAP–TPC was launched four years ago to help TPC in delivering its mandate toward SMEs across Canada. TPC's investments are available to firms of all sizes and in every region of Canada.

The following sections provide a summary of our achievements to date, which include TPC and IRAP–TPC initiatives.

> "Investment by Technology Partnerships Canada was a catalyst for new equity investment, which was pivotal in development of the revolutionary HeartSaver LVAD. Equity markets are difficult and evidence of support by the Government of Canada for this breakthrough technology was a key part of fund managers' decisions to invest. Thanks to the combination of private and public funds, technology is being completed which will save the lives of thousands of Canadians and people around the world who suffer from heart failure. This initiative by the Government of Canada is a highly innovative and creative approach to public/private co-operation in advancing new and exciting technologies."
>
> **Rod Bryden**
> ***President & CEO, WorldHeart***

Distribution of Investments, by Region

2001–2002 Distribution

Atlantic	8 projects	$7M	(3%)
Québec	15 projects	$47M	(20%)
Ontario	42 projects	$119M	(52%)
West	41 projects	$58M	(25%)

Cumulative Distribution as of March 31, 2002

Atlantic	34 projects	$39M	(2%)
Québec	90 projects	$773M	(40%)
Ontario	167 projects	$824M	(43%)
West	133 projects	$281M	(15%)

Distribution of Investments, by Firm Size

2001–2002 Distribution

Large Firms	8 projects	$119M	(52%)
SMEs	98 projects	$112M	(48%)

Cumulative Distribution as of March 31, 2002

Large Firms	59 projects	$1 241M	(65%)
SMEs	365 projects	$676M	(35%)

FISCAL YEAR 2001–2002

During the 2001–2002 fiscal year, TPC continued to invest in technology that will help bring Canada closer to its innovation goals.

With the approval of $231 million in multi-year investment sharing for 106 Canadian R&D projects, TPC was able to leverage an additional $679 million in innovation spending by our private sector partners. This amounts to $910 million in total R&D investment in Canada as a direct result of TPC.

Consistent with TPC's commitment, SMEs accounted for more than 90 percent of TPC projects approved this year and more than $112 million in investment.

Through the life of these investments, more than 6 300 high-quality jobs are forecast to be created and/or maintained. For the fiscal year 2001–2002, 64 percent of approved investments were in environmental and enabling technologies and 36 percent were in aerospace and defence. Total repayments to TPC for the fiscal year 2001–2002 amounted to $8.3 million.

Distribution of Investments, by Technology

2001–2002 Distribution

Environmental Technologies
13 projects $78M (34%)

Enabling Technologies
74 projects $69M (30%)

Aerospace and Defence
19 projects $84M (36%)

Cumulative Distribution as of March 31, 2002

Environmental Technologies
56 projects $285M (15%)

Enabling Technologies
274 projects $509M (26%)

Aerospace and Defence
94 projects $1 123M (59%)

TOTALS SINCE INCEPTION

As of March 31, 2002, approximately $1.9 billion in investment sharing for 424 active projects had been approved by TPC. Combined with investments leveraged from the private sector as a direct result of TPC's partnering, forecasts for R&D investment in Canada total $10.1 billion (over the duration of all projects). This translates into over $4 for every TPC dollar invested on behalf of Canadians.

These projects are forecast to create or maintain more than 36 000 high-quality jobs for Canadians during the life of the investments. They include 365 R&D projects initiated by SMEs, or 86 percent of all TPC projects. As of March 31, 2002, total investments made in the environmental and enabling technology sectors totalled 41 percent. Since inception, repayments to TPC by its partners totalled $30.3 million.

Advancing Great Ideas: TPC Successes

Technology Partnerships Canada (TPC) has been working, since 1996, to build a prosperous future for Canadians by investing today in tomorrow's technologies. Companies that invest in high-quality research are very often the same companies that build the infrastructure to develop these new technologies, creating jobs and stimulating the economy. The companies with which TPC partners are bold, innovative and, most importantly, have good ideas. Some highlights of TPC investments over the past six years include:

CLEAN AND SAFE DRINKING WATER AT 30 000 FEET

International Water-Guard, Burnaby, British Columbia

In today's global economy, air travel is more important then ever before. Access to clean and safe drinking water, regardless of location, is important to all of us. With a $236 000 investment from TPC in 1998, the company developed, tested and obtained certification of a new-generation water decontamination system using ultraviolet light. The new system, which is smaller and lighter than its predecessor, is used to eliminate bacteria and viruses in the potable water supplies of small aircraft.

"There is absolutely no doubt that the funding assistance provided by TPC played a significant role in the success of the new system," says Bill Coote, International Water-Guard's President and CEO. The company has seen rapid growth over the past few years with employment growing by more than 50 percent since 1998.

CREATING A VIEW THAT'S OUT OF THIS WORLD

Neptec Design Group, Kanata, Ontario

Learning more about our universe may unlock some of the mysteries here on Earth. In 2001, thanks in large part to the strategic partnership with TPC and the Canadian Space Agency (CSA), Neptec Design Group Limited's new 3D Laser Camera System flew onboard the Space Shuttle Discovery (Mission STS-105).

This new technology, in which TPC made a $6.15-million investment, is eye-safe laser technology that allows astronauts to work more effectively with the Canadarm and Canadarm2, giving them the capability to take 3D images and track individual targets. Created by Canadian experts, this technology is being sought to help build the largest international engineering project ever undertaken, the International Space Station.

TECHNOLOGY WITH A GENIUS IQ

INSTRUMAR, St. John's, Newfoundland and Labrador

Less waste and a better end product. Technology that can detect production flaws instantaneously will help companies to improve both their product quality and process efficiencies. It will enable companies to manage their business better and improve profitability — something all businesses want to hear and need.

With the help of a $4.3-million investment by TPC in 2001, INSTRUMAR is researching and developing advanced sensor technology that will revolutionize the production of synthetic polymer fibres such as nylon and polyester.

INSTRUMAR is an integrated supplier of real-time information systems. The company was launched in 1979 as a spin-off from Memorial University of Newfoundland and C-CORE, applying sensor technology to the offshore oil and gas industry. Since that time the company has maintained strong links with the university.

FIGHTING TO WIN AGAINST CANCERS

Aventis Pasteur, Toronto, Ontario

Having vaccines that can beat some of the most deadly diseases is no small goal. Aventis Pasteur, Canada's largest vaccine company, is constructing a state-of-the-art, high technology facility in Toronto that is dedicated to producing therapeutic vaccines to win the fight against cancers.

Aventis Pasteur received the corporate mandate from its parent company, Aventis, to build a leading-edge research facility here in Canada. This new facility will house Canada's first robotic arm for the explicit use of vaccine production. Thanks to TPC's R&D investment of up to $60 million in 1997, the arm will enable highly reproducible production of large quantities of vaccine in a Class A clean room environment. It will also minimize human handling of highly sensitive cell viral cultures in processing these injectable vaccines.

Aventis Pasteur is at the forefront of innovation in R&D of vaccine technology in Canada, employing 1 000 people at its fully integrated facility in Toronto.

IMPROVING WIRELESS COMMUNICATIONS

Spectrum Signal Processing, Burnaby, British Columbia

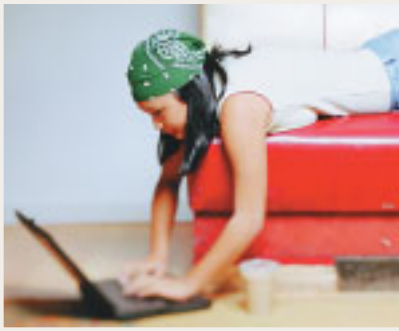
Helping Canadians communicate more effectively, wherever they may be, is a key part of Canada's Innovation Agenda. With a $6.3-million investment by TPC in 1999, Spectrum Signal Processing has embarked on an aggressive development initiative focussed on software defined radio (SDR) technologies.

In simple terms, SDR will enable wireless operators to "future-proof" their hardware by using software upgrades, rather than more costly and rigid, large-scale hardware retrofits. From a government perspective, SDR will enable the rapid reconfiguration of military communications networks to provide network interoperability for national armed forces as well as for forces involved in joint international deployments. This project opens the door for Canadians to a wide range of new digital communications services.

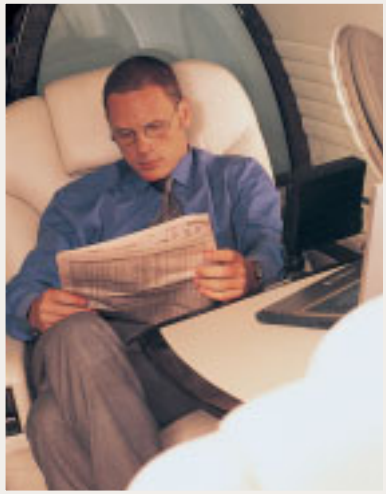
AS REAL AS IT GETS

CAE, Saint-Laurent, Québec

Providing today's pilots with the most innovative, modern and technologically advanced flight simulators is vital to ensuring they receive the best possible training before they ever leave the ground. Innovation of this type provides commercial airline passengers with the added security of knowing their pilots are highly trained and qualified and to enjoy a safe and enjoyable journey.



The Canadian-based company CAE is a world leader in this field. With a $41.4-million investment from TPC in 2001, CAE is undertaking the R&D necessary to produce new state-of-the-art flight simulation technology for use in commercial pilot training.



FEELING SAFE WHEN YOU TURN ON THE TAPS

ZENON Environmental, Oakville, Ontario

All Canadians must have access to clean and safe drinking water. As an immediate measure to help Walkerton, Ontario, ZENON was selected to deliver a mobile containerized ZeeWeed ultrafiltration water treatment unit.

In 2000, TPC made a $9.9-million investment in ZENON to develop a more energy-efficient, cost-competitive membrane technology, the ZeeWeed 1000, to filter water. As a result, ZENON has successfully patented the ZeeWeed 1000 membrane and has received $15 million in new sales orders. ZENON was also ranked as Canada's Top Corporate Citizen for 2002 by Corporate Knights, a business publication addressing corporate social responsibility.

"TPC assistance has been an important contributing factor in ZENON's growth over the years and this growth has allowed us to hire some of the best engineering talent in the country," Andrew Benedek, Chairman and CEO, ZENON Environmental. "Last year alone, our total number of new hires grew 27 percent over the previous year."

SAME LIGHTING, LESS ENERGY

TIR Systems, Vancouver, British Columbia

The light bulb has been marvelled at as one of the most significant inventions of our time. We all use lighting and take it for granted. However, our lighting technology is very inefficient, converting only 10 to 40 percent of the electrical energy into light.

TIR Systems is developing lighting solutions that will replace the lighting technology of today with a revolutionary technology that promises to utilize only one-tenth as much electrical energy, which translates into significant reductions in the environmental impacts of power plants. This new lighting technology is called Solid State Lighting (SSL), and TIR Systems has a first-mover advantage in the development of this exciting new technology.

TPC's investment of $6.6 million in 2001 is helping TIR accelerate its R&D efforts and has resulted in some significant accomplishments, including a $9-million contract with BP to provide ChipStrip SSL products for 850 gas stations as part of BP's brand re-imaging program. TIR is on the right track for "Building the Foundation of Tomorrow's Lighting."

> "TPC's financial partnership with Optech has facilitated the deployment of our next generation laser-based coastal survey products. These advanced technologies will enable the cost effective charting of EEZ's in all the world's maritime nations. Optech is very pleased with our ongoing partnership and we look forward to this, and future successes with TPC."
>
> **Don Carswell**
> ***President of Optech Incorporated***

FUELLING THE ENGINES OF TOMORROW

Teleflex GFI Control Systems, Kitchener, Ontario

Canadians understand the value of the environment. Finding new and innovative methods to run vehicles in a cleaner and more efficient way is important to Canadians and to our environment. TPC's investment of $6.5 million in Teleflex GFI Control Systems in 2001 allowed them to further develop their fuel control technology for application in sequential multipoint fuel injection (SMPI) engines used in most vehicles produced today, including heavy-duty diesel trucks and buses.

This initiative is co-funded by the Government of Canada's Technology Early Action Measures (TEAM) component of the Climate Change Action Fund (CCAF). TPC's initial investment of $4.3 million in Teleflex GFI Control Systems has led to significant job creation.

In 2002, Teleflex GFI Control Systems entered into an agreement with General Motors to develop and manufacture fuel systems for full size vans that are powered by compressed natural gas. Deliveries are scheduled to commence in October 2002, and the agreement is for a minimum of three years.

> "The investment from TPC has been instrumental in the development and progression of our project. TPC's commitment also helped us secure additional funding from the South Coast Air Quality District in California — One of the most aggressive pioneers in promoting clean air."

Ralph Rackham
Vice President Engineering & Research
FuelMaker Corporation

PREPARING CANADIAN BUSINESS FOR THE E-COMMERCE EXPLOSION

IBM Canada, Markham, Ontario

Fast and user-friendly are the key words in Web-based business. TPC's 1999 investment of $33 million in software R&D at IBM Canada helped to secure an IBM Corporation commitment to giving its Canadian operation the corporate mandate to develop WebSphere e-commerce software for international sales.

As a result, Canada can now boast of being the home of a world-leading software development facility, which is attracting attention from around the globe. The facility that IBM constructed cost $150 million. At 560 000 square feet (52 026 m^2), it is 40 percent larger than originally planned. The facility opened in September 2001, three months ahead of schedule.

"Developing technology takes money, lots of it. The SEA System™ enclosed bag technology for aquaculture is innovative and environmentally friendly. Without the continued support of TPC, Future SEA would not have been able to take the technology to the next level. Our waste management system now enables us to operate worldwide within the strictest environmental discharge regulations in effect."

Johann van Rensburg
President & CEO
Future SEA Technologies Inc.

CONNECTING CANADIANS ON THE MOVE

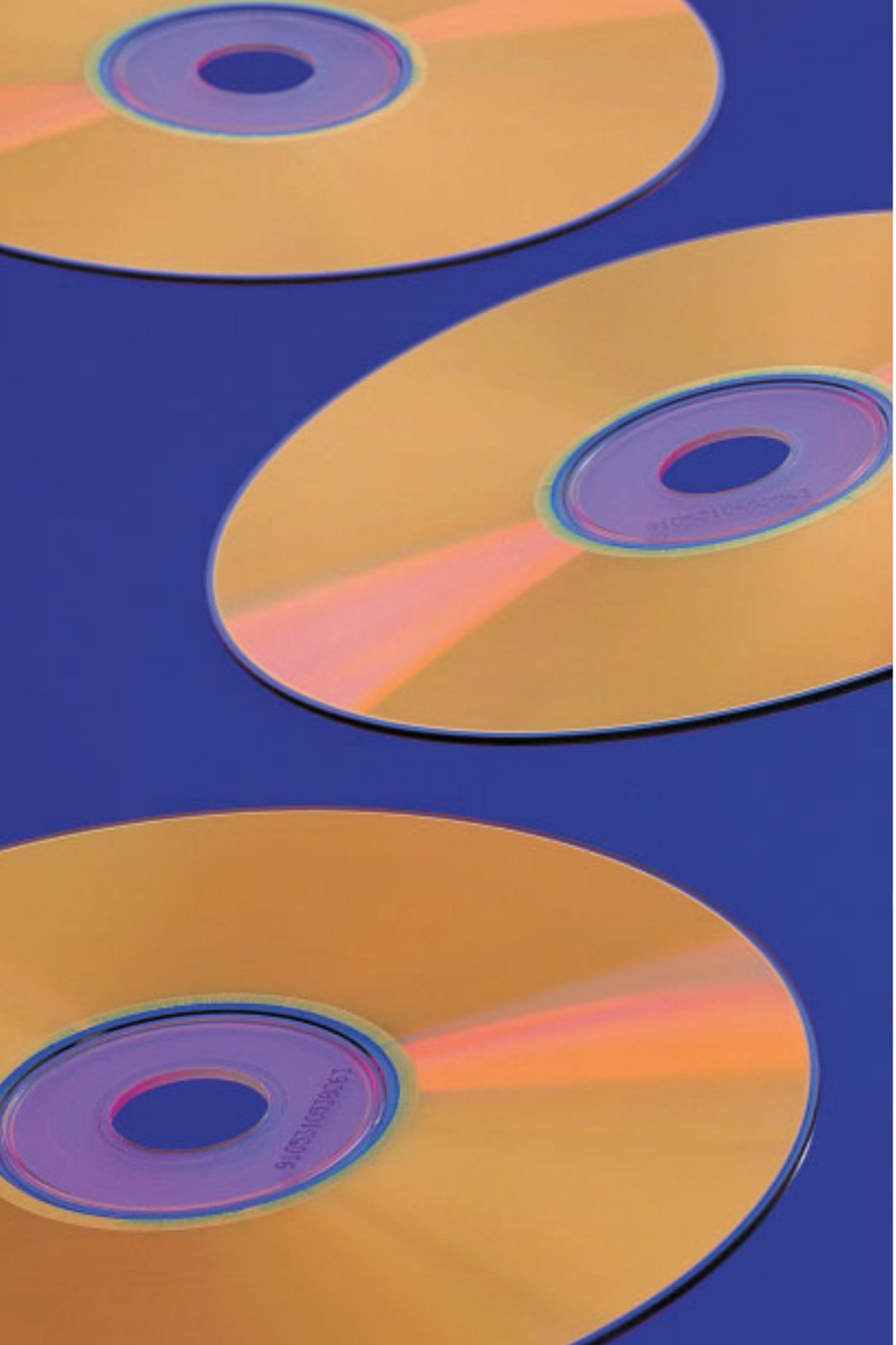
Research In Motion, Waterloo, Ontario

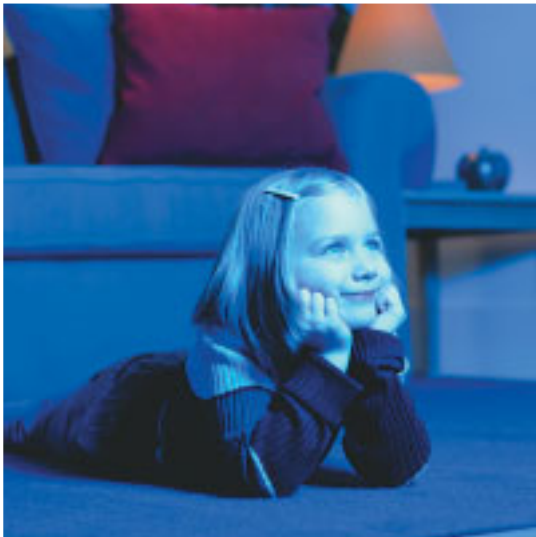
In today's business world, staying connected is essential. Research In Motion (RIM) is the leader in the highly competitive market of wireless communications, but ongoing R&D is essential to staying on top. In 2000, RIM received a $33.9-million investment from TPC that will lead to the next generation in Canadian wireless communications technology.

Today, RIM's ever increasing popularity has led to unexpected market breakthroughs. The U.S. National Security Agency plans to deploy RIM's BlackBerry wireless solution to various government organizations, including the U.S. Department of Defense. RIM is now supplying the National Basketball Association (NBA) with the BlackBerry wireless solution, which allows employees such as league officials and executives to communicate easily throughout the organization and obtain up-to-date NBA scores and statistics of games in progress using a customized software application.

TPC's contribution is part of a $178-million project, which will help RIM accelerate its R&D efforts to provide new and advanced technologies for the rapidly expanding wireless world.

Performance review





Collaborating with Industry Innovators across Canada

TPC PERFORMANCE TO DATE (EXCLUDING IRAP–TPC FIGURES)

Since the beginning in 1996, TPC has been committed to establishing a more visible presence in communities across Canada. By informing Canadians with great ideas that we are here to help, we are advancing the benefits of investments in innovation as creators of jobs, wealth and opportunities for Canadians. TPC recognizes that not all projects will succeed. However, results to date clearly demonstrate that the significant long-term benefits outweigh the risk.

TPC projects are undertaken in two phases. During the work phase, research and development are carried out, and contributions toward eligible costs are provided by TPC and its partners. The benefits phase follows, when the resulting technology is applied by the company to its products or processes, and many of the economic benefits of the project are realized, including repayment of TPC contributions. The work phase typically lasts between three and five years, while the benefits phase may vary in length from five to 20 years.

TPC quantifies its performance according to three core factors: jobs created, investment leveraged, and risk and reward sharing including repayments. The qualitative long-term benefits go well beyond these numbers.

> TPC has given Offshore the opportunity to fast track its development and move to the forefront of an extremely competitive global market. The program has allowed us to recruit and retain the resources required to not only gain a competitive advantage, but maintain it moving forward. Without TPC, Canadian industry would not be a player in our market niche.

Andrew Carniel
Vice-President, Business Development
Offshore Systems International Ltd.

CREATING LONG-TERM JOB OPPORTUNITIES FOR CANADIANS

All companies being considered for TPC investments must provide a schedule of forecasted jobs to be created or maintained, an annual report of their job achievements, and regularly updated job forecasts. Between 1996 and December 31, 2001, partner companies reported that as a result of TPC's investment 7 400 jobs had been created or maintained. (Note: Companies report job numbers by calendar year, not fiscal year.)

TPC counts two types of jobs created or maintained: jobs directly involved in the work phase of a project; and jobs directly involved in the subsequent benefits phase.

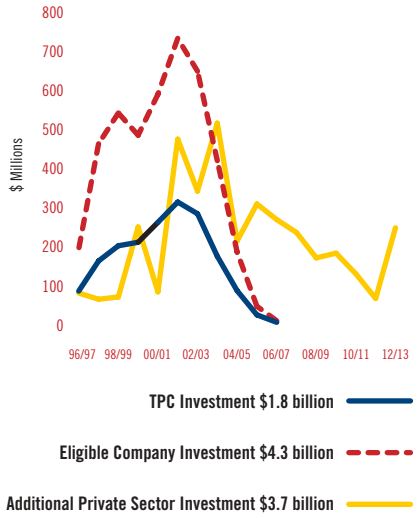
TPC's job estimates include only jobs generated directly by its project commitments, and so are conservative. TPC's job count totals exclude the following types of job creation, which are often very substantial: jobs created or maintained concurrently in other areas of a company; and jobs created or maintained indirectly by suppliers, producers of ancillary products or purchasers of end products.

LEVERAGING INVESTMENTS

Since TPC's inception in 1996, leveraged innovation spending to the end of the 2001–2002 fiscal year reported by partner companies totalled $3.4 billion.

Private sector spending is leveraged in R&D and commercialization, which are both key to stimulating economic growth. The private sector share of leveraged spending is

Projected Investment Leverage on 158 Projects, Contracted as of March 31, 2002



financed through a variety of sources, including internally generated cash flow from operations, debt and equity financing, generally available tax incentives such as the Government of Canada's Scientific Research and Experimental Development tax credits, and other federal and provincial assistance programs.

For TPC's purposes, forecast project investment is divided into three parts: TPC's investment, the company's share of eligible development costs and additional non-supported development costs such as the cost of land and buildings to conduct R&D, and follow-on investment such as the cost of establishing manufacturing facilities in Canada.

Investment leverage occasionally includes project costs incurred outside Canada that are deemed essential to the successful completion of a project. Examples are costs for activities that, for practical reasons, cannot normally be performed in Canada, such as the use of specialized test facilities.

SHARING RISKS AND REAPING REWARDS FOR ALL OF CANADA

Development of new technology can be risky and takes time to perfect. Mandated to make high-risk, conditionally repayable investments, TPC administers investments that share both risks and rewards with its private sector partners. Its balance of financial and public policy objectives, however, distinguishes TPC from commercial financial institutions.

Unlike commercial financial institutions that measure return solely in financial terms, TPC also takes into account a variety of non-financial benefits to Canada that flow from successful projects. The benefits of these investments far outweigh the risks. These benefits may include contributions to economic growth and job creation, contributions to sustainable development, development of capable and competitive SMEs in all regions, growth in private sector investment spending, and maintenance and growth of the industrial technology and skill base essential for an innovative and productive economy.

TPC makes long-term conditionally repayable investments, and repayments are not expected until R&D benefits are fully realized. Since TPC has been in operation for only six years, and because projects on average take three to five years to reach the benefits phase, most conditionally repayable investments are in the work phase and, of those that have reached the benefits phase, most are still in the early stages of commercialization. Total repayments to date have amounted to $27.7 million. All TPC repayments are reinvested to help grow and enhance future investment opportunities.

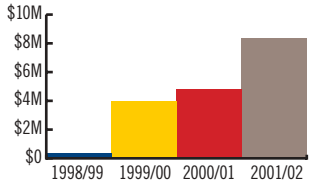
For each conditionally repayable investment, TPC determines an appropriate balance of investment risk and repayment terms that will enable its private sector partners to proceed with the project. Sharing ratios (the ratio of TPC investment to total supported development costs) are in the range of 20–50 percent. As of March 31, 2002, the weighted average sharing ratio of TPC's investment portfolio was 29.6 percent. When negotiating an appropriate sharing ratio, TPC takes into account funding from other

governments, both federal and provincial, that may be available to support the project, and the level of TPC investment needed to allow the project to proceed as defined.

TPC's approach to risk and reward sharing is based on the anticipated return on successful projects, and takes into account the level of risk, other expected benefits to Canadians and the level of return received by the company. Given TPC's mandate, these projects often have significant technological and market risks associated with them and thus it is expected that some projects will eventually fail, either at the R&D stage or at the commercialization stage. This means that although TPC negotiates an upside return, in some cases repayment levels will not reach the original anticipated forecasts and, in fact, TPC may not recoup its investment.

Since it began in 1996, TPC has approved conditionally repayable investments worth $1.8 billion in 173 projects. Of these 173 projects, six have been voluntarily withdrawn, seven smaller conditionally repayable investments have been unsuccessful, and two have been terminated by settlement agreement with the company. Voluntarily withdrawn and unsuccessful projects represent 0.3 percent of funds disbursed. As for the two terminated projects, TPC has negotiated termination agreements with the two companies for a settlement of $4.06 million, which represents repayment of the original conditionally repayable investment plus an additional return of more than 26 percent to TPC. This leaves 158 active TPC projects, as of March 31, 2002.

Repayments to TPC



Note: $9.3 million in repayment in 1998–1999 through the sale of warrants is not included

$3.5 million in repayment in 1998–1999 through the negotiated termination of a project is not included

$6.95 million of warrants received in 2001–2002 but not yet cashed are not included

Industrial Research Assistance Program–Technology Partnerships Canada (IRAP–TPC)

Four years ago, Technology Partnerships Canada (TPC) launched a cooperative venture with the National Research Council of Canada's Industrial Research Assistance Program (IRAP) to provide pre-commercial financial assistance to Canadian SMEs. The intent was to expand the reach of TPC across Canada with special emphasis on Canadian SMEs.

The program has a budget of $30 million per year, shared 50-50 between IRAP and TPC. IRAP–TPC is designed to encourage SME (firms with fewer than 500 employees) innovation by investing in projects with authorized eligible costs of $1.5 million or less. It also stimulates technology development by providing support for innovation projects prior to the commercial stage, to serve as a source of information and technical assistance in the latest technological advances, facilities and other resources, and to provide access to expertise in the business aspects of innovation.

The National Research Council is able to deliver IRAP–TPC through a network of more than 260 industrial technology advisors in seven IRAP regions across Canada and over 100 partner organizations in 90 communities. IRAP's advisors provide direct liaison with clients and consider regional concerns, priorities and resources.

Through IRAP–TPC, TPC invests in a wide range of companies, projects and regions. IRAP–TPC works with SMEs of all sizes, from a few employees to some with a staff of up to 500. The technology being supported is also diverse, covering all TPC eligible

areas including aerospace, environment, advanced materials, biotechnology, information technology and advanced manufacturing. Likewise, the geographic scope of investments is far-reaching, with projects in every province.

In 2001–2002, IRAP's wide distribution network was able to approve 77 projects totalling $28.7 million in investments. As of March 31, 2002, the IRAP–TPC portfolio consisted of 266 projects with total investments over four years of more than $99.2 million, for an average investment of approximately $373 000 per project.

These projects span all targeted sectors across Canada, with the Atlantic provinces and western Canada receiving nearly 48 percent of cumulative investments.

This innovative partnership has produced many positive outcomes. By capitalizing on IRAP's well-established and extensive network of industrial technology advisors, TPC is building a solid rapport with Canadian SMEs. In addition, this collaboration is allocating funds to the key players in Canada's success in the global market: the small, innovative, technology organizations.

To further increase its contributions to Canada's innovation strategy, it is clear that IRAP–TPC must expand its network across Canada and build on past successes. This initiative will become an even more important instrument for the Government of Canada's investment in research, development and innovation — innovation that is creating private sector investment and jobs while increasing the technology base and capabilities of Canadian industry.

Supporting Canadians Who Have Great Ideas

PROGRAM MANAGEMENT

Performance relevance is founded on its capacity to make informed decisions and to monitor performance effectively. It is an ongoing process that requires continuous due diligence. There are five key steps.

First, to be eligible for a TPC investment, an applicant must represent a Canadian firm or institution that can demonstrate its ability to achieve the stated objectives of the research, development and innovative activities of the proposed project. A company applying for a TPC investment must first assess itself and the project against the eligibility criteria.

Second, if all requirements are met, the firm may submit an investment outline, which is primarily used for priority setting and the determination of basic eligibility of the project. This is reviewed by a TPC Investment Officer, along with other government experts and external specialists. They assess the investment outline's validity to ensure it meets TPC's high standards and goals of increasing economic growth, creating jobs and wealth and supporting sustainable development. TPC also encourages the development of SMEs in all regions of Canada.

Third, if all of these requirements are met, the TPC Investment Officer works with the company to expand the investment outline into an investment proposal. This document specifies, among other things, estimated jobs to be created, technological

and economic benefits, anticipated sales, investment expectations and repayment proposal. It is then reviewed and assessed by technical and business analysts to assess technical, managerial and financial risk, prior to being considered by the appropriate approval authorities.

Fourth, once the due diligence is complete, a contribution agreement is drawn up. This solidifies all the negotiated terms outlined in the investment proposal, as well as performance requirements and a reporting schedule, all the while ensuring optimum results to the company and guaranteeing maximum benefits for all Canadians.

Fifth, in order for a contracted project to receive a TPC investment, the company must regularly submit claims substantiating the eligible expenses that have been incurred as the project progresses. TPC validates the claims, examines performance requirements, and issues investments reflecting its share of the incurred eligible costs. At no time does TPC provide a single full payment, or advance payment, for a contracted project.

The TPC review, assessment, approval and monitoring of applications and investments comprise a process that operates with the highest standards of integrity and due diligence. Contracts are actively monitored to ensure that the company meets its obligations and the Crown's position is protected by a rigorous default provision.

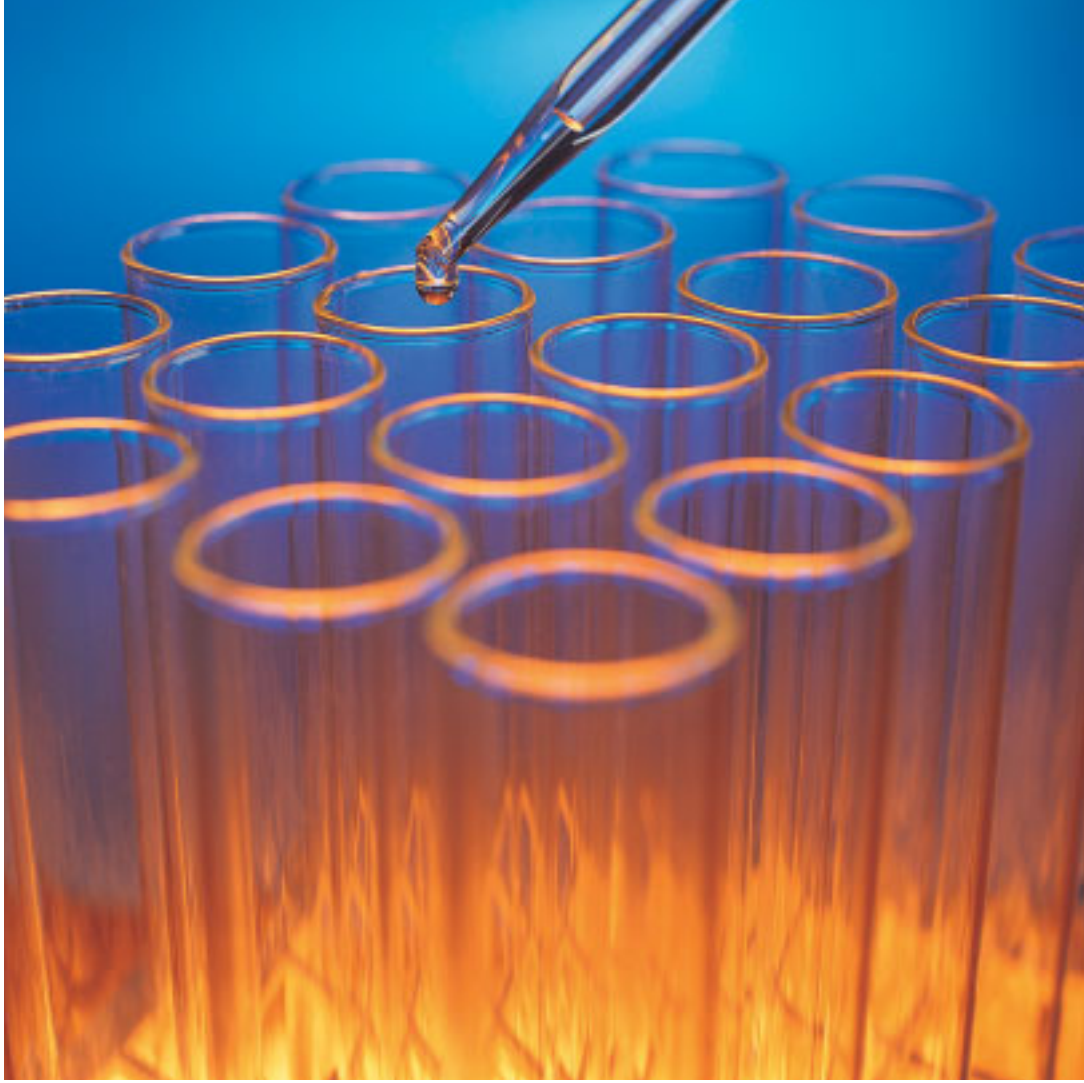
KEEPING ADMINISTRATION COSTS LOW

TPC keeps administration costs low by using new and innovative delivery mechanisms. In addition to its own expertise, TPC has entered into partnership and service agreements with other areas of Industry Canada and other Government of Canada departments and agencies. Such arrangements provide TPC with access to expertise in areas such as technological assessments, repayment administration, communications, finance, legal, contracting, cost analysis, claim verification and audit.

TPC program administration costs for 2001–2002 were $9.8 million, or about 3.4 percent of its base program funding. While TPC must invest internally to ensure the organization and its staff remain as informed and innovative as the companies and sectors in which it is investing, through enterprising and effective administration mechanisms TPC ensures that the maximum amount of funding possible is reinvested into future projects.

IRAP–TPC delivers a large number of small projects through a highly decentralized network. Understandably, this results in a higher administrative cost, which is $2.3 million, or 7.7 percent of the $30 million IRAP–TPC budget. IRAP–TPC fully expended its budgeted amount of $2.3 million in 2001–2002.

A solid portfolio



Transforming Good Canadian Ideas into Reality

Working with the attainable dreams and aspirations of all Canadians as its guide, Technology Partnerships Canada (TPC) makes strategic investments in exciting, innovative industries to help turn great Canadian ideas into future successes that will dramatically improve our global competitiveness and national quality of life.

Through R&D of new technologies within their respective sectors, these companies are providing opportunities throughout industry that bring us new products and new processes in many other sectors, which also have long-term benefits to numerous industries.

IMPROVING HEALTH AND THE ENVIRONMENT

Environmental Technologies

The Government of Canada has placed the environment as a key priority on the national agenda. The solution to the environmental challenges of the 21st century lies in innovation and new green technologies. To pursue this goal, TPC has targeted environmental technologies as a key investment area. TPC has also formed partnerships with other federal government innovation funds, such as the Technology Early Action Measures (TEAM) component of the government's Climate Change Action Fund (CCAF), with other levels of government, and with the private sector to maximize investment in key sustainable technologies. The following projects are examples of these.

Clean, Efficient Power Generation

Smaller community-based power plants and generators that reduce or even eliminate pollution are among the technologies being developed by Canadian companies benefiting from TPC's R&D investments.

Ballard Power Systems is developing a low-pollution, fuel cell-based power plant that combines hydrogen from natural gas with oxygen from the air to efficiently generate electricity without combustion. Their 200-kilowatt plant unit is expected to provide enough power for about 60 homes, or backup power for a hospital or an industrial plant.

Cleaner, more efficient gas turbine power generation is expected to reduce the greenhouse gases that contribute to climate change, because this type of power displaces coal, oil and nuclear power. TPC is supporting Rolls Royce Industries Canada's work toward the development of turbines in the 5–75-megawatt power range, which is expected to substantially reduce nitrogen oxide, carbon monoxide and carbon dioxide emissions.

Turbines need cleaner-burning fuels to reduce greenhouse gases, and TPC has invested with Orenda Aerospace in a project which will use liquid bio-oil fuel (derived from feedstocks such as wood, grasses, waste paper and agricultural residues) to operate an innovative and robust industrial turbine power generation system providing green electricity and indirectly reducing waste matter requiring disposal.

Clean Fuel, Clean Air

It's a fact that cleaner-running vehicles produce fewer greenhouse gases. TPC has invested in a number of projects designed to make it easier to drive clean. Iogen Corporation's cutting-edge enzyme system will produce cleaner, more affordable fuel ethanol for blending with gasoline, by breaking down farm waste products, like straw and oat hulls while reducing waste at the same time.

GFI Control Systems' advanced fuel injection system will enable vehicles to switch between gasoline and cleaner-burning propane and natural gas, and a small natural gas refuelling appliance, being developed by FuelMaker, will enable drivers to fill up on natural gas right at home.

Clean Water

Safer drinking water is a worldwide concern and, with support from TPC, Canadian technology could revolutionize global water treatment systems for municipalities and industry, with more affordable enhanced municipal water treatment systems. Work is under way at Trojan Technologies on a project to improve the energy efficiency and lower the cost of ultraviolet-based water disinfection systems.

ZENON Environmental's advancement of membrane filtration technology is helping to set a global standard for efficient municipal water treatment. In addition to reducing energy use and operating costs, these innovations are expected to simplify operations.

Like communities, industries are also looking for technologies that will reduce water use and produce cleaner water. Northstar Energy Corporation is developing a cost-effective water treatment and purification system called Produced Water Recycle (PWR), which is aimed at recycling the water that is co-produced during bitumen extraction. The technology is expected to reduce the cost of extracting bitumen from the Athabasca oil sands, which are estimated to increase to 50 percent of Canada's crude oil production by 2005.

TPC investments are also supporting the Pulp and Paper Research Institute of Canada (PAPRICAN) in developing more than 30 exciting new technologies designed to reduce the waste being discharged by pulp and paper mills. If the technologies are successfully implemented, this industry would produce cleaner water for reuse and discharge, and could significantly reduce overall greenhouse gas emissions.

PROMOTING PROSPERITY AND PRODUCTIVITY

Enabling Technologies

Enabling technologies are precursors of industrial advancements that ultimately improve quality of life for all Canadians. Advanced materials processes and applications — advanced, smart manufacturing and processing technologies, biotechnology, information and communication technologies — all have the potential to significantly

improve the performance and productivity of Canadian industries, including traditional manufacturing and resource industries.

Biotechnology — for Canada's Future Health and Wealth

Although technically an enabling technology, biotechnology further supports TPC's environmental vision, as it embodies the characteristics needed to address some of our most pressing social issues.

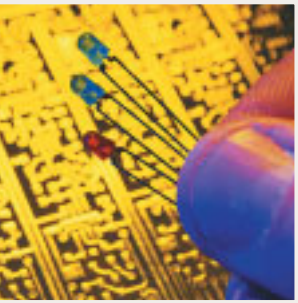
In medical biotechnology, TPC's investment goal is to help unlock biotechnology's potential to achieve dramatic improvements in human health and quality of life. In the area of cancer research, TPC's investments include support for Aventis Pasteur in the development of non-invasive therapeutic cancer vaccines and R&D by Celmed BioSciences related to a photodynamic bone marrow therapy. In treatments for other diseases, TPC investments are supporting the advancement of new approaches that could lead to effective treatments for primarily age-related illnesses like the work under way at Neurochem related to Alzheimer's disease.

> "The support we received from Technology Partnerships Canada was clearly instrumental in allowing us to develop, and apply a number of innovative ideas we had to improve technology in the field of energy control systems."
>
> **Alain Poplemon**
> ***Senior Vice-President and General Manager of SNC-Lavalin Energy Control Systems Inc.***

Similarly, biotechnology advances in agricultural applications promise significant benefits for Canadians. Such developments include technologies being developed by Bioniche Life Sciences to improve public health and animal health. TPC is investing in the development of vaccines for the immunization of cattle against *E. coli*, which could reduce the danger of the transmission of this deadly microbe to humans through food and drinking water. Another project, with SemBioSys Genetics, is accelerating the development of molecular farming methods to facilitate the production of high-value proteins in plants.

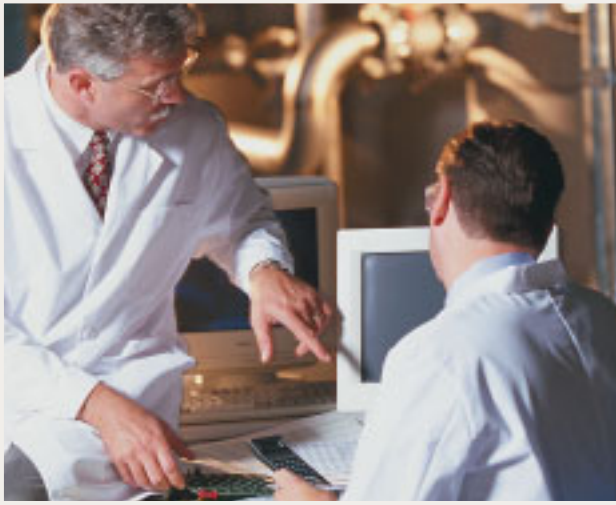
In environmental biotechnology, a TPC investment is also supporting Eastern Power in the development of an enhanced multi-stage system that uses microbes to break down municipal solid waste, while generating bio methane for power generation.

Building the Infrastructure for the 21st Century



Information and communications technologies underpin the Government of Canada's agenda for the knowledge-based economy and for a connected nation. TPC is supporting advances in these critical enabling technologies through a range of strategic investments that will lead to faster and more cost-effective use of the Internet and e-commerce, including next-generation technology for voice and data convergence, communications networks and wireless devices. Again, the social benefits are substantial and pervasive, bringing high-speed Internet to rural and remote Canada for e-learning, e-business and e-health care.

Connectivity and Broadband Access



TPC is helping further the government's goal of making Canada the most connected country in the world by supporting a number of companies whose technologies promise to give Canadians rapid and affordable wireline and wireless Internet access.

Urban businesses may soon have a lower-cost option than conventional fibre optic-based communications to access the Internet. TPC is supporting the fSONA Communications Corporation's work on the development of new laser-based free space optics (FSO) technology, which transmits data via air instead of fibre. If successfully implemented, FSO is expected to more quickly and affordably link companies that lack fibre connections.

Increasing the efficiency of electronic equipment is another area of TPC investment activity, with Aastra Technologies' work on the development of telephone products to seamlessly link wireline and wireless devices that use the evolving Bluetooth™ wireless standard. Bluetooth uses short-range radio technology to enable home and office users to connect computers, printers and other communication devices without cables in a type of mini network.

Another investment is helping Research In Motion (RIM) advance its innovative technology to address Canadians' increasing demand to send and receive e-mail anywhere, anytime, with the development of next-generation, hand-held wireless communications devices.

E-commerce Applications and Software Systems Development

Advances in e-commerce are enabling us to use the telephone, fax, e-mail or the Internet to pay our bills, file our income tax returns, and conduct stock trades. We can also use many of these modes of communication to shop for almost any product and service imaginable. For our economy to grow, it is vital for business to adopt e-commerce technology. TPC is helping to make that happen by investing, along with companies like IBM Canada, to help position Canada as a location of choice for e-commerce R&D.

Digital Signal Processing

Micro-miniature hearing aids that eliminate background noise and produce a more natural sound for the listener would be a boon to the hearing impaired. TPC's investments are helping accelerate the development of next-generation audio and

> The Technology Partnerships Canada (TPC) Programme has contributed significantly to Trojan's ability to conduct pioneering research and development in the area of ultraviolet (UV) disinfection of wastewater and drinking water. The invested TPC resources have supported Trojan's programs to advance improvements in the efficiency of UV technologies through the selection and development of more efficient lamps and power supplies, reactor designs and sizing strategies. For Canada and Trojan, the result of this investment will be a continuing leadership in the international UV industry.
>
> **Allan G. Bulckaert**
> ***President and Chief Executive Officer***
> ***Trojan Technologies Inc.***

speech processing technologies by dspFactory. Ultra-miniature, ultra-low power, software-programmable digital signal processing (DSP) technology may produce just such a hearing aid.

ENSURING SAFETY AND SECURITY

Aerospace and Defence

As well as safeguarding our sovereignty and helping protect both air passengers and our armed forces, the knowledge-intensive aerospace and defence industries lead the nation in providing science and engineering-related jobs. Aerospace and defence account for some 15 percent of all R&D performed in Canada. More than 700 aerospace and defence firms employ more than 90 000 Canadians, many of them in highly paid, highly qualified scientific and engineering related positions.

These businesses design, develop, acquire, build and install advanced avionics and electronics, aircraft engines and components, aircraft structures and components, systems and materials, as well as space systems and components including communications systems.

The aerospace and defence sector is also a very active incubator of advanced technologies that find applications in almost every other sector of our economy. TPC is playing a critical role in supporting the development and application of technologies essential to the advancement of Canada's aerospace industry. TPC's investments target six major areas: (1) advanced avionics and electronics (2) aircraft engines and engine components (3) aircraft structures, components, systems and materials (4) simulation and modelling (5) space systems and components, including communications systems, and (6) defence conversion.

Flight Simulation

Focussing on the growing market of advanced flight simulators, TPC investments are supporting CAE Inc. in the development of more affordable advanced visual technologies for flight simulators. The technologies are expected to provide regional and business jet pilots with the detail and realism needed in flight simulation applications at a reduced cost. TPC's investments are also supporting development of Internet-based training systems for distance learning.

Space Systems and Components

Technologies that increase the safety and accuracy of space docking and International Space Station (ISS) construction are critical as construction of the ISS continues. TPC support is helping to ensure that Canadian technology is front and centre.

TPC has invested in MDA Robotics' development of a highly integrated video space camera for use in docking with the ISS. The camera can also be used for satellite rescue and Earth observation. Another investment, with Neptec Design Group, is advancing an eye-safe enhanced laser camera system that will improve the user friendliness of the Shuttle and Station Canadarms and allow astronauts to work more effectively — contributing markedly to the safe and accurate movement of materials required to construct the ISS.

Getting rid of a satellite's shimmy and shake is critical to its accurate functioning. TPC is supporting Bristol Aerospace as it advances its technology to develop the flight model for an attitude control device aimed at increasing small satellite stability. This could lead to substantial savings in satellite mass, power and cost.

> The investment from TPC will allow us to bring a number of new products to market, based upon our core SignaKlara technology, much quicker than otherwise achievable during the critical growth phase of our company. Already, the TPC investment has helped us to be positioned to launch our second generation chipsets — Toccata Plus and BelaSigna-2 — in the Fall of 2002, which is less than 18 months since our extremely successful launch of our first generation SignaKlara chipset.
>
> **Robert Tong**
> ***CEO & President***
> ***dspFactory Ltd.***

Helping Aerospace SMEs Get Off the Ground

Globalization poses particular challenges for SMEs in adapting to the soaring aerospace industry. While SMEs across the country help to provide the strength and vitality needed for the larger firms to succeed, there is a critical need for aerospace SMEs to adopt advanced business and production technologies to effectively compete and win in the global marketplace.

TPC's strategy has responded directly to these challenges through the *Aerospace and Defence Supplier Development Initiative*. TPC directs investments to SMEs for projects that improve their internal systems and capabilities, and help them become efficient and effective suppliers to larger, more integrated aerospace companies and military forces. TPC has also launched the *Canadian Aerospace Collaborative Technology Development Program*, which assists SMEs in conducting early-stage R&D.

Joint Strike Fighter Program

Canada has signed on as a partner to the United States-led Joint Strike Fighter (JSF) program, which will develop a future-generation fighter aircraft for U.S. and Allied air forces at an affordable price. TPC is supporting Canadian industry involvement in the program by providing R&D funding to Canadian aerospace firms on favourable terms to assist them in securing work on the systems development and demonstration phase of the program. It is anticipated that those firms that are successful will be able to obtain long-term work during the production phase.

Strategic Investments in 2001–2002

ENVIRONMENTAL TECHNOLOGIES

Company	Location	TPC investment	Project
ATS Automation Tooling Systems Inc.	Cambridge, Ontario	$25.5 million (plus $4 million TEAM)	Development of a prototype manufacturing system for producing spheral photovoltaic cells.
Azure Dynamics Corp.	Vancouver, British Columbia	$9 million	Testing and integrating hybrid electric vehicle control technology and power trains for commercial vehicles such as delivery vans.
Devon Energy (formerly Northstar Energy Corp.)	Calgary, Alberta	$7.5 million	Development of cleaner and more efficient methods of extracting bitumen thus reducing green-house gas emissions.
DuPont Canada Inc.	Kingston, Ontario	$19 million	Advancement of two critical components considered to be the core building blocks of fuel cell systems: conductive flowfield plates and unitized cells.
TIR Systems Ltd.	Vancouver, British Columbia	$6.6 million	Development of the next generation of solid-state light sources capable of producing more light than either incandescent bulbs or fluorescent tubes.
Trojan Technologies Inc.	London, Ontario	$3.3 million	Development of more energy-efficient ultraviolet-based water disinfection systems.

Company	Location	TPC investment	Project
IRAP–TPC invested in seven environmental technologies projects	*Various locations across Canada*	*$2.7 million*	*The IRAP–TPC initiative delivers investments for projects with eligible costs of $1.5 million or less.*

ENABLING TECHNOLOGIES

Aastra Technologies Ltd.	Concord, Ontario; Calgary, Alberta	$9.9 million	Development of a family of enhanced telecom products that provide a seamless infrastructure linking wired and wireless devices using the Bluetooth wireless standard.
dspFactory Ltd.	Waterloo, Ontario	$4.6 million	Development of world-class, ultra-low-power digital signal processing chips for portable speech and audio applications.
fSONA Communications Corp.	Richmond, British Columbia	$10 million	Development of laser communication systems instead of fibre optics to provide reliable, high bandwidth network access for point-to-point connections over short distances (4 km).
Redline Communications Inc.	Markham, Ontario	$4.6 million	Development of wireless broadband access systems for business and residential video, voice and data communications that will provide customers with better coverage and a less expensive solution to currently available systems.

Company	Location	TPC investment	Project
Wavemakers Inc.	Vancouver, British Columbia	$4.4 million	Development of technology capable of separating specific speech from other interfering voices in communication devices such as cell phones, hand-held computers and other consumer electronics.
WorldHeart Corp.	Ottawa, Ontario	$10 million	Undertaking clinical trials for a fully implantable heart-assist device, called HeartSaver LVAD.
IRAP–TPC invested in 68 enabling technologies projects	*Various locations across Canada*	*$25.5 million*	*The IRAP–TPC initiative delivers investments for projects with eligible costs of $1.5 million or less.*

AEROSPACE AND DEFENCE

CAE Inc.	Saint-Laurent, Québec	$39 million	Development of networked simulation technology for military air crew training.
CMC Electronics Inc.	Kanata, Ontario; Saint-Laurent, Québec	$16.9 million	Development of enhanced, synthetic vision, aeronautical communications and global positioning systems (GPS) for commercial airline facilities.
Comtek Advanced Structures Ltd.	Burlington, Ontario	$7 million	Advancing the use of electronic data exchange, determine the feasibility of alternative composite repair materials and processes and develop new composite capabilities.

Company	Location	TPC investment	Project
General Dynamics Canada Ltd.	Calgary, Alberta	$246 180	Development of a decision-making software program that integrates the findings of several land mine detectors.
INSTRUMAR Ltd.	St. John's, Newfoundland and Labrador	$4.3 million	Integrating sensor and information processing technologies with on-line, real-time measurements during the manufacture of synthetic polymer fibres.
Lockheed Martin Canada Inc.	Kanata, Ontario	$4.6 million	Development of improved sonar technology for detecting and classifying mines that have been operationally undetectable because of sound wave interference from the seabed and sea surface.
MacDonald Dettwiler and Associates Ltd.	Richmond, British Columbia	$1.6 million	Development of Windows-based software for improved airspace design and management at airports.
MDS Aero Support Corp.	Ottawa, Ontario	$3.4 million	Design and development of improved engine test facilities for gas turbine engines to improve repair, increase safety and enhance efficient power generation.

Company	Location	TPC investment	Project
AEROSPACE AND DEFENCE SUPPLIER DEVELOPMENT INITIATIVE			
Cormer Group Industries Inc.	Winnipeg, Manitoba	$998 000	Developing computer-assisted design and manufacturing support systems that will allow it to grow as a recognized supplier of aerospace components.
GasTOPS Ltd.	Ottawa, Ontario	$670 000	Concurrently upgrading its manufacturing and testing processes and capabilities in order to allow round-the-clock operations, thus helping to evolve into a Tier II supplier to the major aerospace companies.
International Water-Guard Industries Inc.	Burnaby, British Columbia	$389 860	Implementing continuous improvement procedures for workflow efficiency to better integrate within the supply chain to the Tier I major firms.
ITS Electronics Inc.	Concord, Ontario	$900 000	Upgrading its ISO 9001 accreditation to incorporate the AS 9001 quality standards while developing advanced systems for the automated manufacture of wireless communications products.
NMF Canada Ltd.	Saint-Janvier-de-Mirabel, Québec	$1 million	Implementing integrated quality, business, manufacturing, processing plant, information management systems to improve its technical capacity and become an advanced Tier III provider of higher-value parts for the aerospace industry.

Company	Location	TPC investment	Project
Oceanworks International Corp.	North Vancouver, British Columbia	$554 176	Developing a new internal management information system for budgeting work and costs, a requirement of major military customers.
Rivait Machine Tools Inc.	Oldcastle, Ontario	$766 485	Incorporating lean manufacturing processes into the company's existing system of producing tools for aerospace parts manufacture, and upgrading the company's ISO quality assurance certification.
Taylor-Corp. Inc.	Mississauga, Ontario	$860 000	Designing, developing, acquiring and incorporating automated testing and processing systems, a logistics management system, and advanced quality standards into its operations.
Viking Air Ltd.	Sidney, British Columbia	$191 800	Developing and incorporating lean enterprise concepts for its new manufacture, as well as its repair and overhaul, systems.
IRAP–TPC invested in two aerospace and defence projects.	*Various locations across Canada*	*$0.5 million*	*The IRAP–TPC initiative delivers investments for projects with eligible costs of $1.5 million or less.*

For more information on IRAP-TPC projects, please contact the National Research Council of Canada at 1-877-994-4727.

The Way Ahead — Continuous Improvement

In the fast-paced and ever-changing high-tech world, it is important that government programs stay on the forefront of innovation to ensure that they remain effective in meeting their mandates and remain relevant. Technology Partnerships Canada (TPC) is no exception. Constant evaluation and renewal are key priorities for TPC in order to ensure it continues to secure new investments in innovation, while concurrently strengthening its capacity to effectively support an expanding portfolio. The process is particularly important given the integral role of TPC in *Canada's Innovation Strategy*. The role of TPC is to lay the groundwork for Canada's new economy by building a strong technological foundation that embraces better processes, more efficient systems and greater innovation, the keys to success in the 21st century economy.

ENSURING TPC'S VALUE TO ALL CANADIANS

To ensure the process is focussed and effective, TPC is taking a critical look at what it does. Are clients helped? Are strategic benefits secured? Are all actions effective? Are operations transparent? Are Canadians receiving value for their tax dollars? The intent is to use this knowledge to sharpen and focus the program.

INCREASING REGIONAL PRESENCE

TPC has worked to enhance its support to regional innovation through initiatives such as IRAP–TPC. TPC is pursuing a more aggressive outreach strategy, examining new mechanisms to increase its presence and exposure across Canada. The objective is to ensure that Canadians in every region with great ideas know about TPC and know how to benefit from TPC.

COMMUNICATING THE VISION

A key element of TPC's outreach activities will be promoting public awareness (through tangible examples) of the importance of innovation and the need to invest in Canada's technological future. With a strong commitment to transparency and accountability, TPC will improve how it informs Canadians about the rationale for investment decisions, the process used in making investment decisions, and the results of its investments.

FINE-TUNING PROCESSES

TPC is also re-examining its business model, particularly with respect to the following features: the application process; the investment review and approval process; the contribution agreement; risk/reward sharing; and benefits. We want to ensure that TPC can meet the diverse needs of different industry sectors and how they operate. For relevance and effectiveness, TPC's processes must reflect industry's business model.

BUILDING PARTNERSHIPS FOR THE FUTURE

In the coming years, TPC will also be working to build stronger relationships with other key players in the innovation process. This includes all levels of government and businesses to leverage maximum benefits from TPC's investments, access sources of technical knowledge, obtain financial advice and support other government institutions in fulfilling their respective innovation mandates.

Contacts

For more information, please contact TPC by:

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Fax: (613) 954-9117

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300 Slater Street

Ottawa ON K1A 0C8

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Web site: **http://www.tpc.ic.gc.ca**

Electronic copies of this document can also be downloaded from our Web site.

Statements

Statement of Operations

($000)

(For the year-ended March 31, 2002)

TPC	2001–2002	2000–2001
SALARY		
Regular salaries	4 205	3 532
Employee benefits	841	706
Total Salary	5 046	4 238
NON-SALARY		
Transportation and communications	461	353
Information	851	690
Professional and special services	2 052	1 607
Other	1 421	1 386
Total Non-salary	4 785	4 036
TPC Operations	9 831	8 274

IRAP–TPC	2001–2002	2000–2001
SALARY	1 413	1 287
EMPLOYEE BENEFITS	282	257
NON-SALARY	620	620
IRAP–TPC Operations	2 315	2 164
Total Operations	12 146	10 438

Statement of Contribution Funding

($000)

(For the year-ended March 31, 2002)

	2001–2002	2000–2001
Contribution disbursements under TPC:		
Environmental Technologies	33 428	36 422
Enabling Technologies	72 412	64 403
Aerospace and Defence	184 022	136 515
Industrial Research Assistance Program (IRAP–TPC)	29 711	25 475
Total contributions under TPC	319 573	262 815
Contribution disbursements under sunsetted programs:		
Defence Industry Productivity Program (DIPP)	84	55
Environmental Technology Commercialization Program (ETCP)	0	0
Total contribution under sunsetted programs	84	55
Total contribution disbursements during fiscal year	319 657	262 870
Funds carried forward to future years	40 611	60 000
Funds not eligible for carry forward	0	8 888
Total contribution funds available	360 268	331 758

Status of Contribution Portfolio

($000)

	ACTUAL	PLANNED SPENDING			
	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006
TOTAL PROGRAM FUNDING:	300 000	300 000	300 000	300 000	300 000
Funding from Other Government Departments (1)	15 755	15 378	15 000	15 000	15 000
Allocation for program operations	(12 146)	(10 511)	(10 500)	(10 500)	(10 500)
Funds reprofiled to future years	27 817	61 359	1 092	768	400
Funds lapsed in 1999–2000 carried forward	30 000	15 000	0	0	0
Funds lapsed in 2000–2001 carried forward	0	0	20 000	20 000	20 000
Funds lapsed in 2001–2002 carried forward (tentative)	(40 611)	0	20 000	20 611	0
Repayments	3 885	7 301	16 300	28 200	57 500
Transfers to DND/DFAIT	(667)	(367)	0	0	0
Program Reductions	(6 000)	(6 000)	(6 000)	(6 000)	(6 000)
Transfer to Industry Canada	0	(12 000)	0	0	0
Other adjustments — operations	1 624	0	0	0	0
AVAILABLE CONTRIBUTION FUNDING	319 657	370 160	355 892	368 079	376 400
COMMITMENTS UNDER SUNSETTED PROGRAMS:					
Defence Industry Productivity Program (DIPP)	84	0	0	0	0
Environmental Technology Commercialization Program (ETCP)	0	0	0	0	0
TOTAL COMMITMENTS UNDER SUNSETTED PROGRAMS	84	0	0	0	0
COMMITMENTS UNDER TPC as of March 31, 2002:					
Environmental Technologies	33 428	36 126	29 045	40 815	18 825
Enabling Technologies	72 412	62 985	49 019	40 274	26 309
Aerospace and Defence Industries	184 022	140 908	94 465	84 421	27 710
Industrial Research Assistance Program (IRAP–TPC)	29 711	20 039	1 263	0	0
TOTAL COMMITMENTS UNDER TPC	319 573	260 058	173 792	165 510	72 844
TOTAL PORTFOLIO COMMITMENTS	319 657	260 058	173 792	165 510	72 844
TOTAL FUNDS AVAILABLE FOR NEW CONTRIBUTIONS IN FUTURE YEARS	0	110 102	182 100	202 569	303 556
FUNDS AVAILABLE FOR NEW IRAP–TPC CONTRIBUTIONS		11 197	29 737	30 821	28 000
FUNDS AVAILABLE FOR NEW DIRECT TPC CONTRIBUTIONS		98 905	152 363	171 748	275 556
	0	110 102	182 100	202 569	303 556

Note (1) Includes funds for the Canadian Landmines Fund and the Industrial Research Assistance Program (IRAP–TPC)