Technology Partnerships Canada

Canada

Industry Canada

Statement

SPEAKING NOTES

FOR THE HONOURABLE JOHN MANLEY

MINISTER OF INDUSTRY

TO THE CANADIAN ADVANCED TECHNOLOGY ASSOCIATION

OTTAWA

MARCH 11, 1996

Technology Partnerships Canada

Industry Canada Industrie Canada

Fact Sheet

What is the purp

TPC is designed t

What does it do?

In partnership wit
market developm

- environm
  treatment,
- enabling t
  biotechno
- aerospace
  communi
  conversio

Together,
almost 300,000 C
the jobs and grow

Industry Canada

Statement

SPEAKING NOTES

FOR THE HONOURABLE JOHN MANLEY

MINISTER OF INDUSTRY

TO THE CANADIAN ADVANCED TECHNOLOGY ASSOCIATION

OTTAWA

MARCH 11, 1996

Check Against Delivery

Government of Canada Gouvernement du Canada

Canada

I would like to thank the Canadian Advanced Technology Association for hosting this breakfast.

This Government was elected because it promised hope for Canadians. Since 1993, we have worked hard to put in place the elements necessary for sustained economic growth and job creation.

The indicators show that our programs are working. Last month, 44,000 new jobs were added to the Canadian economy. Over 600,000 new jobs have been created since this Government took office.

We have moved forward on many fronts with a coherent set of policies and programs to establish the environment in which the private sector can invest, expand and create jobs for Canadians.

Our commitment to jobs and growth was reinforced both in the Speech from the Throne and the Budget. In fact, last week's Budget outlined our priorities for investing in our future in three strategic areas:

- creating better ways to get young Canadians into the job market;

- expanding our efforts to increase international trade; and

- accelerating the development and use of technology.

This morning, Dr. Gerrard and I want to speak specifically about the the government's strategy for technology and its underlying science base.

Technology is a priority because it is fundamental to increased economic growth, the only basis on which we can have sustained job creation. Higher productivity through technological innovation leads to greater competitiveness for business and higher standards of living for workers. These in turn generate economic growth through increased exports, investment and domestic demand - and ultimately to sustained job creation.

Technologies at which Canadians excel are already creating whole new industries. Jobs that we never imagined before are now commonplace.

Job creation in knowledge intensive industries has been double the national average over the last 10 years.

Look at how new technologies have created new businesses and new jobs here in Ottawa. Last Thursday's *Ottawa Citizen* listed 145 companies as just a "core sampling" of local high tech companies. Only a handful of these businesses existed a decade ago.

Over the long term, businesses using new technologies will create new jobs faster than old jobs disappear. And that is why technology *must* remain close to the heart of the government of Canada's overall strategy for jobs and growth.

The government's emphasis on technology is not new. It predates the Budget and the Speech from the Throne. Since coming to office, we have put technology at the centre of our economic policy. Technology programs have come from many different federal departments.

In fact, the federal government, through departments and agencies ranging from the National Research Council to National Defence, from Fisheries and Oceans Canada to Human Resources Development Canada, is responsible for 5.5 billion dollars annually in direct investment in science and technology.

In the 1994 Budget, we announced that we would conduct a major review of how we spend that investment. This morning, my colleague, Jon Gerrard, and I are pleased to announce the government's science and technology strategy in response to that review.

The strategy demonstrates concretely how the government is getting its house in order so that we will be a better partner to the other players in Canada's innovation system - businesses, academic institutions, and other governments.

This morning I want to focus particularly on one of the main objectives of the strategy: How the Government of Canada will help improve the ability of the private sector to develop and commercialize technology.

Why is this so important?

First of all, because it is the commercial application of technologies that leads to new and improved products. These can be marketed domestically and abroad. They thereby expand investment and jobs and growth for Canadians.

And secondly because, although we have pockets of excellence, Canada suffers from what the OECD calls an *"innovation gap."* It is rooted in the poor performance overall of our private sector, relative to other G7 countries, in developing and commercializing technology.

Our plan is to work with the private sector to help close that gap. As outlined in the S&T strategy, we will go about this in many ways. We are committed to transferring knowledge and technologies from federal labs to industry. We're going to do this pro-actively, looking for ways to develop research and development consortia with universities and the private sector. We are going to improve private sector access to federal facilities.

The ten action plans from the departments and agencies detail how we are doing this already. They also spell out what we have planned for the future.

But those initiatives are not enough. Nor is having the best R&D tax credits in the world enough to close an innovation gap. Nor is having one of the most sophisticated financial systems in the world.

If Canada is to be serious about closing the innovation gap, we must go beyond these measures.

And that brings me to the new initiative announced in the Budget last week: the *Technology Partnerships Canada* program. Let me explain why such a program is necessary.

Canadians are leaders in a number of advanced technologies. When we meet on a level playing field, we're able to beat the competition. Unfortunately, the playing field is often tilted against us.

According to a recent report by Deloitte & Touche, the federal government in the United States, for example, provides more than 71 billion dollars U.S. in R&D technology support.

The British and Japanese governments have large budgets for science and technology subsidies. France provides substantial R&D and technology funding support and equity to state-owned industries.

The government's investment in science and technology may seem small by comparison, but that is why it is vital that we target our investments in those areas where Canada can take on the best in the world. And that is why it is vital that we do so in partnership with the private sector.

This is true in the aerospace and defence sector, which provides more than 50,000 knowledge-intensive and high-paying jobs in Canada. Our nation has built the world's sixth largest aerospace industry. We've done it by emphasizing quality in niche markets. We've done it by trading to the world. And we've done it through partnership between the government and the private sector.

Partnership is the key to success for our environmental technologies. The world is looking for new ways to build economies with less impact on the environment, and Canadians have been in the forefront in everything from pollution prevention and pollution clean-up to recycling and water treatment.

A partnership approach is also essential for the so-called "*enabling* technologies" -- the advanced manufacturing, advanced materials, information, and bio-technologies that allow Canadian industry to introduce new products and processes faster and cheaper.

The *Technology Partnerships Canada* program establishes a partnership with the private sector to promote the development of world-beating technologies in each of these areas.

At maturity, *Technology Partnerships Canada* will be funded at $250 million annually. The funding is all based on reallocation -- including a reallocation of $110 million from Industry Canada. Repayments will be recycled back into the fund, providing all partners with strong incentives to succeed.

Technology Partnerships Canada is new and it is different. It's different because it takes an *investment* approach to technology. Our investments are fully repayable. They are not grants or subsidies. The government shares with its partners in the private sector not only the risks, but the rewards of our investment.

It's different because it does not focus on a specific industry sector. Initially, we are looking at the broad spectrum of enabling technologies, environmental technologies, aerospace and defence and defence conversion to seek suitable partners for our investments.

It's different because we will impose a rigorous discipline on sharing ratios. In most cases, we will provide 25 to 30 percent of the funding for the project.

And it's different because a private sector advisory board, which I will chair, will assess market trends and benchmark Canadian firms against foreign competition when we evaluate in what technologies we should invest.

This new program is clearly a key element in our science and technology strategy. But it is not the end of the story. Successful projects must be financed. Successful projects will require strong export sales.

In the Budget, the government announced a $50 million infusion of capital into the Business Development Bank of Canada, an infusion that will allow the Bank to increase its loan portfolio by $350 million. The Budget also announced substantially increased funding for the Export Development Corporation. We are covering all the important bases for jobs and growth.

It is also not the end of the technology story. In the coming weeks we will be following through on these initiatives with others which will do more to enhance the ability of Canadians to foster growth and create jobs through technology.

The Budget outlined some of these initiatives:

- the expansion of *SchoolNet* and the *Community Access Program;*
- the creation of a *Connect with a Student* initiative to help small businesses plug into the Internet;
- a program to have students digitize heritage collections;
- the launch of the *Canadian Technology Network.*

Others will follow. Very soon, for example, we will launch *Strategis,* the largest Canadian business information site on the World-Wide Web.

What is the vision behind these initiatives? Jobs and growth, yes. But more: we want to build a nation where our *children* and *grandchildren* will be better off than their parents and grandparents. Jobs and growth for *future generations* based upon technological innovation.

We want Canada to be a nation where our children and grandchildren look forward to *their* future with a spirit of enterprise and adventure. A nation where technology is regarded as part of the solution to jobs and growth, not part of the problem.

Canada, after all, is a nation that built a tolerant and prosperous society by turning our challenges into accomplishments.

We inhabit a terrain that is often tough and forbidding. And so we became world leaders in developing technologies to extract and process natural resources from that harsh landscape.

We are scattered across an enormous land mass. So we became the best in the world at innovative communications technologies.

We live on the edge and in the midst of some of the most spectacular and scenic -- and fragile -- ecosystems on the planet. And so we took the lead in developing environmental technologies.

Our domestic markets have been relatively small. So we have become global traders.

This is a legacy we inherited. We expanded upon it. Together we must now work to leave to our children and grandchildren our own legacy of harnessing the technological challenges of our day. We must work *together* to turn technological innovation into jobs and growth for the future.

This vision has been at the heart of our philosophy as a government. It's a key element of our jobs and growth agenda. It's the foundation upon which the federal Science and Technology Strategy has been built.

I'm looking forward to working together with you to use the enabling power of technology to create jobs and growth for Canadians.

Thank you.

Industry Canada Industrie Canada

Technology Partnerships Canada

Canada

The national imperative for job creation, sustainable development and economic growth is clearly linked to the success of Canada's knowledge-based industries.

To strengthen this innovation economy, the federal government will continue to sharply focus industry and science policy initiatives on areas that underpin the innovative transformation of technology into high-value products, prized in today's competitive global marketplace.

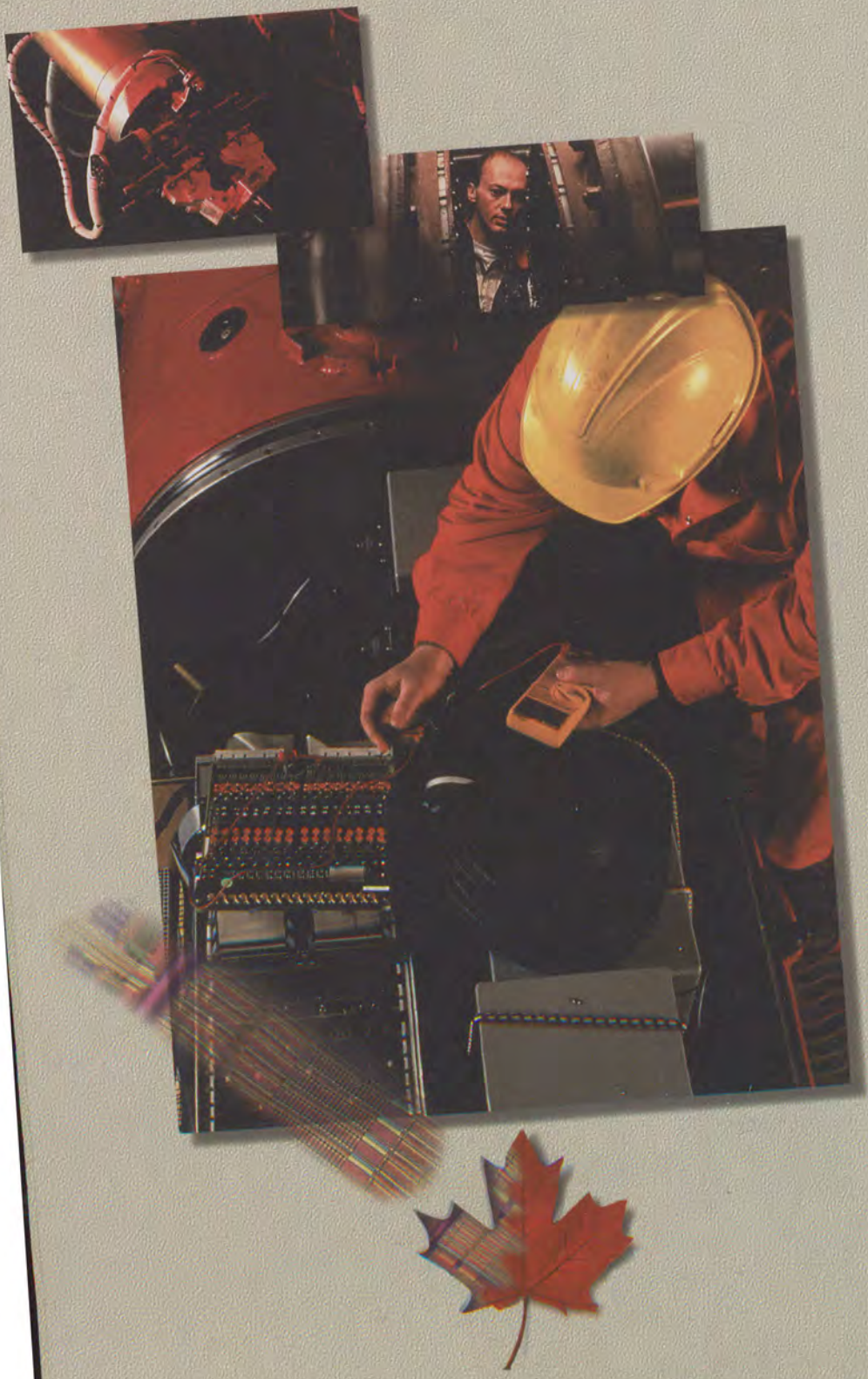
Technology Partnerships Canada was created to address the need by established companies in specific industrial segments to ensure that near-market products — those with a high potential to stimulate economic growth and job creation — actually reach the marketplace.

Technology Partnerships Canada, a model of innovation and teamwork with the private sector, presents an affordable and workable solution to a significant challenge in the product development cycle of the targeted industries.

It signals a new and important role for government in stimulating the growth of technology-intensive industries that will ultimately be the source of high-value jobs for young Canadian women and men now completing their formal education.

John Manley
Minister of Industry

"Canada has a vision - a vision of jobs and growth, improved quality of life and the advancement of knowledge"



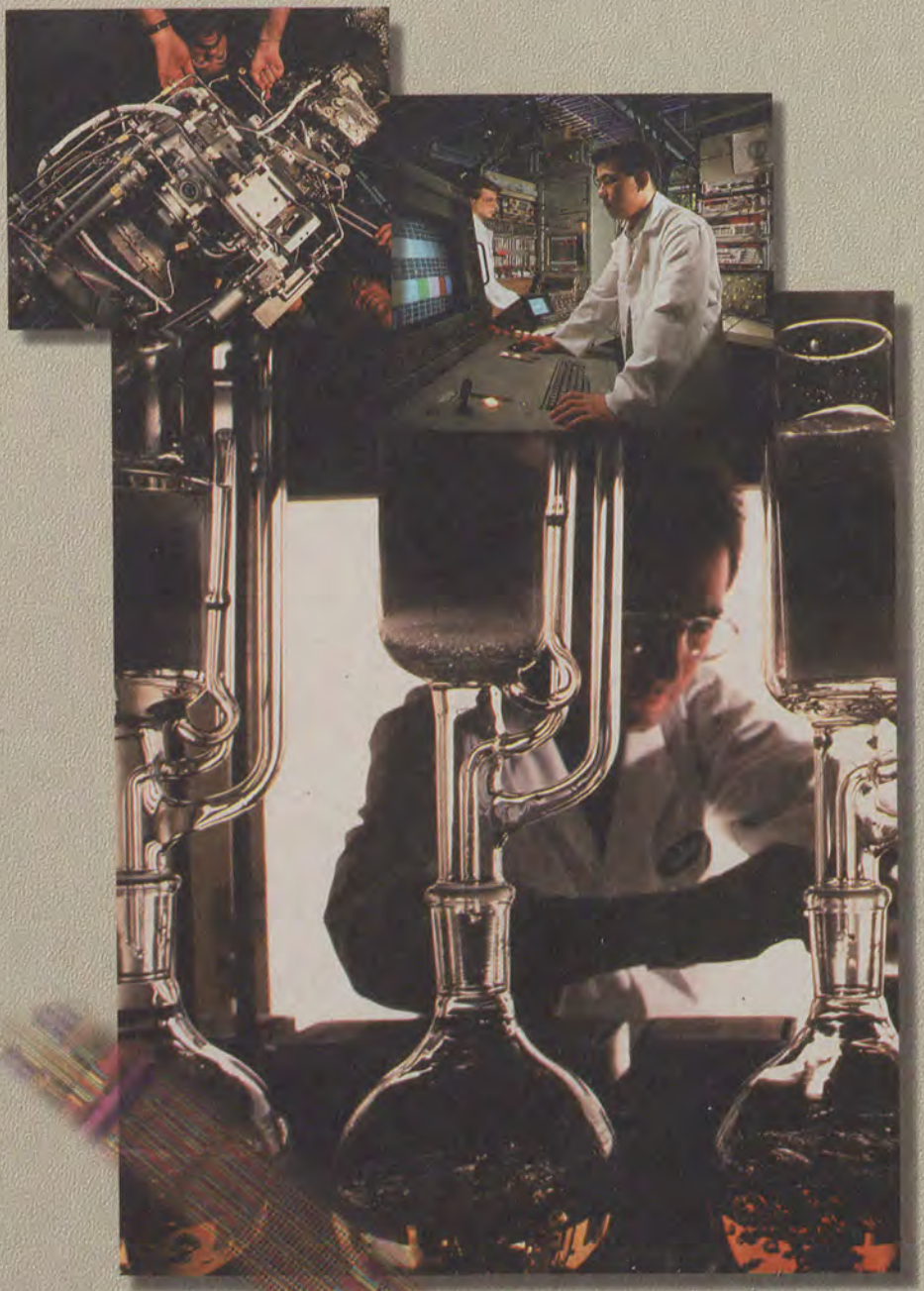
Innovative Partnerships for the Future

Technology Partnerships Canada ... a Team Canada approach to technology demonstration and development ... a partnership between business and the federal government to encourage economic growth and create jobs.

Technology Partnerships Canada is a made-for-the-21st-century solution to some pressing challenges standing in the way of our ability to be globally competitive. Canada is not keeping pace with other countries in using the new technologies that improve productivity. This gap must be closed, and Technology Partnerships Canada is poised to meet that challenge.

This financially innovative approach is designed to share the risks and rewards of high technology investment with the private sector and recycle the proceeds to help more companies grow into globally competitive industries.

The focus is on environmental technologies, on strategic enabling technologies that make industries more efficient and productive such as biotechnology, advanced manufacturing, advanced materials and selected information technologies, and on the aerospace and defence industries, including defence conversion.



Innovative Technologies for the Future

Technology Partnerships Canada focuses on cutting-edge environmental technologies that substantially reduce the harmful effects of pollution, improve water treatment systems, enhance soil quality or restore industrial wastewater.

It targets innovative enabling technologies — the technologies that profoundly change and improve products and processes and the way we work. These are the companies building Canada's new economy. They develop and demonstrate technologies in such areas as advanced manufacturing and processing; advanced materials, processes and applications; applications of biotechnology; and applications of advanced information technologies.

Technology Partnerships Canada will help level the playing field for the aerospace and defence industries, focusing on developing products for civilian markets. These industries are global leaders in niche markets, applying advanced technologies in such areas as electronic airport navigation equipment, space and defence communications, air traffic control systems, simulators and advanced composite aerospace components.

Partnerships + Innovation = Jobs + Growth

Results-oriented, fiscally responsible and innovative, Technology Partnerships Canada is an innovative partnership with the private sector.

- Successful and financially sound businesses, including small and medium-sized enterprises that can bring innovative technological solutions to the marketplace are encouraged to participate, either alone or in an alliance with a lead company.
- The focus is on near-market products and processes that will generate long-term, quality jobs.
- Eligible projects will have a high probability of commercial success, despite the inherent technological and financial risks.
- Partnerships and alliances may be eligible when there is a lead company to assume overall direction of the project.
- Canadian companies in projects under international collaborative R&D programs may also be eligible.
- Technology Partnerships Canada will reach out to firms from all regions of the country.

How It Works

The government will partner with the private sector through a cost-sharing investment approach. The goal is for the private sector to provide two thirds of the investment.

Stringent repayment criteria apply. On successful projects the federal government's investment is repayable, and moreover it will share in any upside returns. Repayment conditions will be negotiated on a project-by-project basis.

The program will be funded, as far as possible, through recycled proceeds to help even more companies develop technologies. In the long term, Technology Partnerships Canada's goal is to be more than 50% self-financing.

A Technology Advisory Board of private sector experts and industry leaders, chaired by the Minister of Industry, will assess trends in the marketplace and ensure that Technology Partnerships Canada targets opportunities and generates jobs and economic growth.

Some Specifics ...

Technology Partnerships Canada is highly focused on firms that meet specific criteria. It is a tool to create partnerships and leverage private sector spending on near-market development of products and processes. Eligible high technology sectors include environmental technologies, enabling technologies, and aerospace and defence industries.

Technology Partnerships Canada targets ...

- technologies at the near-market end of the research and development cycle, such as demonstrations and related developments.
- high-quality companies with high-risk projects and identified market opportunities.
- companies that can generate lasting, quality jobs.
- successful, financially sound small and medium-sized companies with opportunities for growth from all regions of the country.
- innovations that produce beneficial effects on productivity throughout the economy.
- technologies that will lead to greater innovation and spinoffs in more than one industrial sector.
- projects that result in a high technology product or process for sale in domestic and export markets.

To obtain more information about **Technology Partnerships Canada,** including details on eligibility criteria, please

---

CALL: **Technology Partnerships Canada** Office
1-613-954-0870 or
1-800-266-7531

FAX: Fill out the enclosed card, and fax it to us at:
1-613-954-9117

MAIL: Fill out the enclosed card, and mail it to:
Technology Partnerships Canada
10th floor
300 Slater Street
OTTAWA, Ontario
K1A 0C8

INTERNET:

Visit the **Technology Partnerships Canada** Web site at
http://info.ic.gc.ca/ic-data/industry/tpc/broche.html

or e-mail us at
tpc@ic.gc.ca

Cat. No. C2-295/1996
ISBN 0-662-62321-5

Industrie Canada Industry Canada

Partenariat technologique Canada

Canada

Hautement prioritaires, la création d'emplois, le développement durable et la croissance économique au Canada sont tributaires de la réussite des entreprises canadiennes fondées sur le savoir.

Le gouvernement fédéral veut renforcer cette économie axée sur l'innovation. En matière de politique industrielle et scientifique, il continuera par conséquent à concentrer ses initiatives dans des domaines qui appuient l'utilisation innovatrice de la technologie pour obtenir des produits de valeur supérieure. De tels produits sont recherchés en cette époque où le marché mondial est très concurrentiel.

Partenariat technologique Canada a été conçu pour répondre à un besoin précis des entreprises déjà établies. Cette initiative veille à ce que les produits prêts à être commercialisés, particulièrement ceux qui offrent une grande possibilité de stimuler la croissance économique et la création d'emplois, puissent être introduits sur le marché.

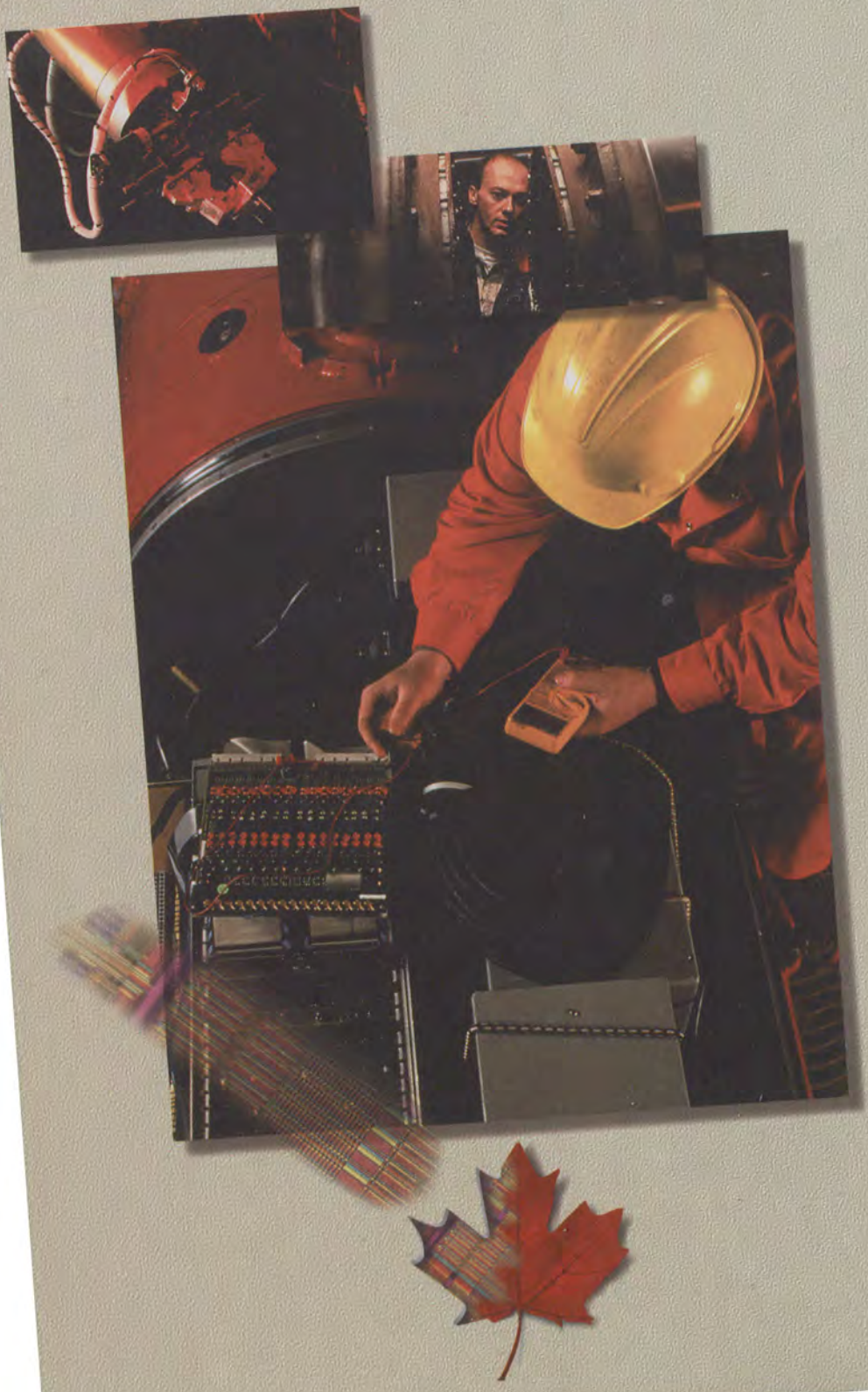
Partenariat technologique Canada est un modèle en matière d'innovation et de collaboration avec le secteur privé. Cette initiative se veut une façon pratique et peu coûteuse de surmonter les obstacles qui entravent la mise au point de produits dans des secteurs ciblés.

Elle reflète le rôle à la fois nouveau et important du gouvernement dans les secteurs de pointe. Ce sont eux qui, en définitive, seront la source des emplois bien rémunérés qui seront offerts aux jeunes Canadiennes et Canadiens sur le point de se lancer sur le marché du travail.

Le ministre de l'Industrie,

John Manley

« Le Canada est tourné vers l'avenir, un avenir où il y a à la fois emplois et croissance économique, meilleure qualité de vie et nouvelles connaissances. »



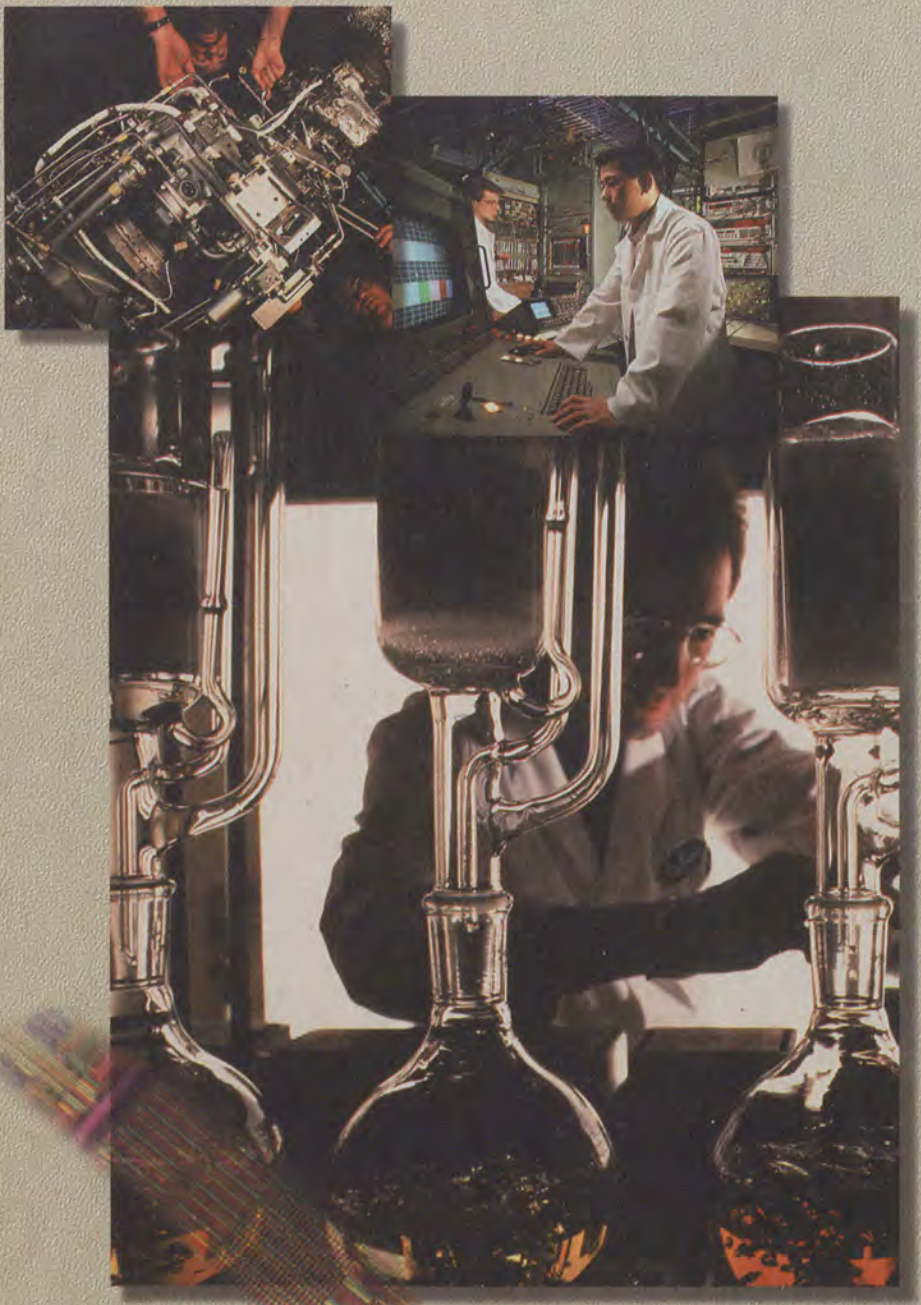
Partenariat innovateur tourné vers l'avenir

Partenariat technologique Canada aborde les activités de mise au point et de démonstration de la technologie à la façon d'Équipe Canada. Il s'agit d'un partenariat entre le secteur privé et le gouvernement fédéral qui favorise la croissance économique et la création d'emplois.

Partenariat technologique Canada est orienté vers le XXIe siècle. Cette initiative permet de lever certains obstacles encombrants qui diminuent la capacité du pays de livrer concurrence sur la scène internationale. Le Canada ne parvient pas aussi facilement que d'autres pays à se servir des nouvelles techniques qui améliorent la production. Or, Partenariat technologique Canada a été conçu pour résoudre ce problème.

Sur le plan financier, cette initiative innove. Elle permet au gouvernement et au secteur privé de partager les risques et les retombées associés à l'investissement dans la technologie de pointe et de réinvestir les gains obtenus pour aider un plus grand nombre d'entreprises à accroître leur compétitivité à l'échelle internationale.

L'initiative met l'accent sur les techniques environnementales et les techniques prometteuses et stratégiques qui accroissent la rentabilité et la productivité de secteurs, comme la biotechnologie, la fabrication de pointe, les matériaux de pointe et la technologie de l'information. Elle s'adresse aussi aux secteurs de l'aérospatiale et de la défense ainsi qu'à la conversion de ce dernier.



Technologie innovatrice de l'avenir

Partenariat technologique Canada s'intéresse aux techniques environnementales de pointe qui réduisent les incidences néfastes de la pollution, améliorent les systèmes d'épuration de l'eau, rehaussent la qualité des sols ou traitent les eaux usées industrielles.

L'initiative vise la technologie prometteuse, donc les techniques qui transforment et améliorent les produits, les procédés et les façons de travailler. Elle cible les entreprises qui édifient la nouvelle économie du Canada. Celles-ci mettent au point et font la démonstration de la technologie de pointe destinée à des secteurs comme la fabrication et la transformation, les matériaux, les procédés et les applications de pointe, et les applications de la biotechnologie et de la technologie de l'information.

Partenariat technologique Canada aidera les secteurs de l'aérospatiale et de la défense à livrer concurrence sur un pied d'égalité avec leurs concurrents en se concentrant sur la mise au point de produits pour les marchés civils. Ces secteurs sont des chefs de file mondiaux dans des créneaux précis. Ils appliquent la technologie de pointe dans des domaines tels que le matériel de navigation électronique des aéroports, les communications spatiales et de la défense, les systèmes de contrôle de la circulation aérienne, les simulateurs et les composantes aérospatiales composites de pointe.

Partenariat + innovation = emplois + croissance

Orienté vers les résultats, innovateur et responsable du point de vue fiscal, Partenariat technologique Canada est un rapprochement innovateur avec le secteur privé.

- Les entreprises prospères et jouissant d'une situation financière saine, surtout parmi les PME, qui peuvent introduire des solutions techniques innovatrices sur le marché, sont invitées à participer, soit seules, soit dans le cadre d'un regroupement avec une entreprise de premier plan.
- Le programme vise les produits et les procédés prêts à être commercialisés et qui peuvent entraîner la création d'emplois intéressants et durables.
- Les projets admissibles présenteront une forte probabilité de réussite commerciale malgré les risques inhérents sur les plans financier et technologique.
- Les partenariats et les regroupements peuvent être admissibles si une entreprise de premier plan prend la direction du projet.
- Les entreprise canadiennes qui participent à des projets dans le cadre de programmes internationaux de R-D en collaboration peuvent aussi être admissibles.
- Partenariat technologique Canada s'adresse aux entreprises de toutes les régions du pays.

Fonctionnement

En tant que partenaire, le gouvernement fédéral partagera les coûts de l'investissement avec le secteur privé. L'objectif est d'en arriver à ce que ce dernier injecte les deux tiers de cet investissement.

Des critères rigoureux de remboursement s'appliquent. Dans le cas des projets qui connaîtront la réussite, l'investissement du gouvernement fédéral est entièrement remboursable, et celui-ci obtiendra sa part de la rentabilité de l'investissement. Les conditions de remboursement seront négociées pour chaque projet.

Le financement du programme se fera, autant que possible, avec le produit de l'investissement. Ainsi, il sera possible d'aider un nombre encore plus grand d'entreprises à mettre au point de la technologie. A longue échéance, Partenariat technologique Canada cherchera à atteindre l'autofinancement dans une proportion supérieure à 50 p. 100.

Un conseil consultatif sur la technologie, composé de spécialistes du secteur privé et de chefs de file de l'industrie et présidé par le ministre de l'Industrie, évaluera les tendances du marché. Il s'assurera que Partenariat technologique Canada repère les véritables occasions et produit des résultats en termes d'emplois et de croissance économique.

Quelques précisions ...

Partenariat technologique Canada s'adresse aux entreprises qui répondent à des critères précis. C'est un instrument qui sert à instaurer des partenariats et à encourager les investissements du secteur privé dans la mise au point de produits et de procédés de pointe prêts à être commercialisés. Les secteurs des techniques environnementales, de la technologie prometteuse, de la défense et de l'aérospatiale sont admissibles.

Partenariat technologique Canada s'intéresse :

- à la technologie liée à la fin du cycle de la R-D, soit à l'étape des démonstrations et des dernières mises au point;
- aux entreprises de qualité supérieure qui ont repéré leurs marchés et dont les projets comportent des risques élevés;
- aux entreprises qui peuvent créer des emplois intéressants et durables;
- aux PME prospères dont la situation financière est saine et qui ont un potentiel de croissance, quelle que soit la région où elles sont installées au Canada;
- aux innovations qui entraînent des avantages sur le plan de la productivité dans l'ensemble de l'économie;
- à la technologie qui ouvrira la voie à l'innovation et aux applications dans plus d'un secteur industriel;
- aux projets desquels découleront des produits et des procédés de pointe qui pourront être commercialisés sur les marchés intérieurs et internationaux.

Pour obtenir plus de renseignements au sujet de **Partenariat technologique Canada,** notamment sur les critères d'admissibilité, veuillez ...

TÉLÉPHONER : au bureau de **Partenariat technologique Canada**
en composant le (613) 954-0870 ou le 1-800-266-7531

TÉLÉCOPIER : le carton ci-joint dûment rempli
en composant le (613) 954-9117

POSTER : le carton ci-joint dûment rempli
à **Partenariat technologique Canada**
10e étage
300, rue Slater
OTTAWA (Ontario)
K1A 0C8

NAVIGUER SUR INTERNET :
et visiter le site Web de **Partenariat technologique Canada** à l'adresse suivante,
http://info.ic.gc.ca/ic-data/industry/tpc/brochf.html

ou à l'adresse de notre courrier électronique,
tpc@ic.gc.ca

Nº au cat. C2-295/1996
ISBN 0-662-62321-5
50979B

Fact Sheet

TECHNOLOGY PARTNERSHIPS CANADA

"A Team Canada Approach to Technology Development"

What is the purpose of Technology Partnerships Canada (TPC)?

TPC is designed to enhance wealth creation by making Canadian firms more innovative.

What does it do?

In partnership with the private sector, TPC invests in research, development, demonstration, and market development of:

- environmental technologies, including: pollution prevention and protection, water treatment, recycling technologies, and clean car technologies;
- enabling technologies, such as advanced manufacturing technologies; advanced materials, biotechnology, and selected information technologies;
- aerospace and defence industries, including avionics, flight simulators, aircraft communications, satellite remote sensing and surveillance, security systems, and defence conversion.

Together, these high technology sectors had estimated sales of $47 billion and employed almost 300,000 Canadians in 1994. These are the sectors of the new economy that will generate the jobs and growth Canada needs.

Technology Partnerships Canada
10th floor, 300 Slater Street
OTTAWA, Ontario K1A 0C8

Partenariat technologique Canada
10e étage, 300, rue Slater
OTTAWA (Ontario) K1A 0C8

Canada

How is TPC different?

TPC takes a new *investment* approach to technology. A TPC investment is fully repayable, not a subsidy. The government shares with the private sector both the risks and the rewards of this investment, including a share of the proceeds.

TPC will recycle all repayments back into the fund for future investments, providing an incentive to all involved to succeed.

Rather than focusing on a specific industry sector, TPC takes a multi-sectoral approach to technology investment. Environmental technologies, aerospace and defence industry, and key enabling technologies are all eligible.

Why is it necessary?

TPC addresses part of the "innovation gap" identified by the OECD study on Canada, which found that our tax incentives for R&D were an important factor in promoting innovation, but were not sufficient.

TPC also levels the playing field for Canadian firms facing foreign competitors who are backed by their governments' technology programs.

How much money is involved?

When TPC becomes fully funded in 1998-99, it will have $250 million to invest annually.

TPC is funded by reallocations from existing programs ($110 million from within Industry Canada; $140 million from the rest of government). The government is making a strategic reallocation decision toward science and technology.

How much funding will TPC contribute?

TPC will have rigorous disciplines on sharing ratios, ranging from 25% to 30% of the project funding in most cases. In exceptional cases, TPC will contribute more. This will provide excellent leverage for the government's partners to invest in the project.

How will it be managed?

A new delivery mechanism is planned through a Special Operating Agency. An interdepartmental committee will provide effective coordination with other programs, such as the Industrial Research Assistance Program (IRAP), Regional Agencies, the Business Development Bank, etc.

A private sector advisory board will be another new feature of TPC, advising the Minister on technology and market trends and benchmarking Canadian firms against foreign competitors.

What is the "multi-sectoral" approach?

TPC will support environmental and enabling technologies, as well as aerospace and defence industries (including defence conversion). This approach avoids precluding new technologies, and ensures the best projects will be supported.

TPC will look for projects that have the potential to:

- generate jobs and exports;
- transform and strengthen the competitiveness of whole sectors; and,
- create new industries.

The new focus on environmental technologies strengthens commitment to sustainable development while the new focus on enabling technologies allows for projects in biotechnology (such as aquaculture), advanced materials (ceramics, composites), advanced manufacturing processes (robotics), and selected information technologies (telemedicine).

Fact Sheet

TECHNOLOGY PARTNERSHIPS CANADA

"A Team Canada Approach to Technology Development"

ENVIRONMENTAL TECHNOLOGIES

ENVIRONMENTAL TECHNOLOGIES AND INNOVATION

The growing international commitment to sustainable development and environmental protection will have a major impact on industry worldwide. It will drive many economic decisions, creating new investment opportunities in products, technologies and clean processes. Canada's environmental firms have an opportunity to take the lead in developing solutions to the challenge of promoting environmentally sustainable economic development both in Canada and around the world.

Canadian firms which work with suppliers to develop and use solutions to environmental challenges, will enjoy a strategic competitive advantages in the global marketplace. This will allow them to reduce input costs, including energy and resource costs. They can enjoy the marketing advantage associated with environmentally friendly production, and get a head start on leading edge on the technologies that may become essential to future trends, such as automotive clean car technologies for future advanced vehicles.

By promoting made-in-Canada environmental technologies that are, in turn, used by Canadian producers to gain a competitive advantage, we have an opportunity to become a world leader in a fast-growing, knowledge-intensive industry that will provide highly-skilled jobs and economic growth for decades to come.

Technology Partnerships Canada
10th floor, 300 Slater Street
OTTAWA, Ontario K1A 0C8

Partenariat technologique Canada
10e étage, 300, rue Slater
OTTAWA (Ontario) K1A 0C8

Canada

Canada has a strong and enterprising environmental industry sector, with the potential for positive impact on jobs and regional economies. The sector generated $11 billion in revenue in 1994 -- over 600 companies are exporting and 1,200 are export-ready.

The global market for environmental industries has been growing at an annual rate of 11% and is estimated to reach $US600 billion by the year 2000. Canadian exports are poised to grow by 15% per year. The industry provides the benefits of a cleaner environment through waste reduction while, at the same time, promotes cost savings and energy efficiencies.

Pollution clean-up is another growth area where Canadian environmental companies have developed leading technologies capable of cleaning contaminated soils. The sub-sector has potential markets around the world, especially in the efforts to clean up the pollution caused by past gas and coke industries and modern day petroleum and petrochemical production facilities.

Water treatment technologies have access to an almost unlimited international market as the world looks for a healthier approach to water purification. Canadian firms are in the forefront of providing clean, cost-saving technologies not only to treat the water, but also to provide the opportunity to recycle it back to the plant for reuse.

Recycling technologies are another area for global growth potential. The cost of recycled fibres is lower than for new material, an added attraction to this fast-growing sector. For example, worldwide wood panel producers face declining forest inventories, increasing costs and environmental restrictions on current manufacturing processes. Consumers demand safe, hazard-free building and furniture products. Canadian technology is in the forefront in presenting solutions to these issues by using post-consumer waste wood to manufacture "green" recycled panel board at significant cost savings over standard producers.

THE CHALLENGE

Developing environmental solutions requires a considerable commitment to research, development, demonstration, and market development. Many of the most innovative environmental firms are small and medium-sized businesses that do not have the financial resources to undertake this kind of investment without help.

THE SOLUTION

Technology Partnerships Canada (TPC) is a program to enhance wealth creation by making Canadian firms more innovative. It provides a new approach -- an "investment approach" to technology, with real risk and reward shared between the government and the private sector. TPC works with established companies in specific segments of the economy to ensure that near-market projects result in products that actually reach the marketplace.

HOW TECHNOLOGY PARTNERSHIPS CANADA WORKS

TPC will reach $250 million annually, with money coming both from federal government contributions and repayments from companies with successful TPC projects. The original funding is reallocated from existing funding within the government; it does not entail new money.

A key element of the new TPC approach is that these funds will be used as investments, where successful projects will fund future TPC investments. They will leverage even larger investments by the program's partners in the private sector: TPC investments will range from 25% to 30% of project costs in most cases; in exceptional circumstances, TPC will contribute more. The partners must provide the balance.

From this investment, the Government will share in the upside returns on successes through royalty repayments on successful projects. TPC will recycle all repayments back into the fund for future investments. This provides an incentive to all involved to succeed.

As with any investment, TPC will have a keen eye for potential returns. Consequently, the program will be results-oriented, focusing on the near-market end of the R&D continuum and on high quality companies with high risk projects in identified markets. The program will lever high technology investment by sharing risks with the private sector.

A Technology Advisory Board of private sector experts and industry leaders from across Canada, chaired by the Minister of Industry, will assess trends in the marketplace and ensure that Technology Partnerships Canada targets opportunities and generates jobs and economic growth in all regions.

As well as the aerospace and defence industry and environmental technologies, Technology Partnerships Canada focuses on enabling technologies as a key area for investment.

WHO IS ELIGIBLE?

In general, potential partners in Technology Partnerships Canada will be well-managed, financially-sound, incorporated businesses that can demonstrate their ability to successfully complete their project. Entities operating in Canada representing a partnership, strategic alliance, joint venture or consortium, and under certain circumstances, a single applicant may also be eligible. TPC will look for partners from all regions of Canada.

Eligible activities will include:

- all activities related to the development and demonstration of products, processes and technologies including related R&D;
- pre-production activities, including the development of production capabilities that might determine where an industry locates; and
- studies related to a potential project that could be supported under one of the other eligible activities.

Potential partners with Technology Partnerships Canada will be assessed on a project-by-project basis. Other assessment criteria are based on the program's overall objectives, and may include the extent to which:

a) the project has the potential for generating net economic benefits to Canada;
b) the recipient has demonstrated the technical and managerial capability for completing the project;

c) the recipient has demonstrated that the contribution under TPC is necessary to ensure that the project proceeds with the desired scope and timing in the desired location and/or that it is required to ensure that the recipient is competitive in the global market;
d) the recipient has demonstrated the ability to finance its share of the project costs, of the commercial exploitation of the project results;
e) the project goals are linked to the corporate/technical strategies of the recipients;
f) the recipient has demonstrated the ability to repay the contribution plus any incremental payments based on risk-reward sharing;
g) the extent to which the project involves alliances between producers and users of technology;
h) the extent to which the project supports sustainable development, aligning economic, social and environmental factors;
I) the extent to which the project offers solutions to priority environmental problems.

JOBS AND GROWTH

Technology Partnerships Canada is a key element in the Government's Job and Growth Agenda: technological innovation will improve productivity, which will increase the competitiveness of Canadian businesses. This will lead to economic growth and the creation of jobs for Canadians.

Fact Sheet

TECHNOLOGY PARTNERSHIPS CANADA

"A Team Canada Approach to Technology Development"

ENABLING TECHNOLOGIES

ENABLING TECHNOLOGIES AND INNOVATION

Enabling technologies include advanced manufacturing technologies, advanced materials, information technology, and biotechnology. While these are truly growing sectors in their own right, they also have spill-over benefits across the domestic economy. They transform products and processes in high technology industries like aerospace as well as in manufacturing and resource-based industries and in services -- industries upon which Canada has traditionally relied for job creation and economic growth. Competitiveness in these industries depends largely on our ability to apply the enabling technologies that improve productivity. Canada, therefore, has a major domestic market for enabling technologies. Canada's enabling technology developers provide Canadian companies with timely access to leading edge technologies, equal to or ahead of their competitors.

Canada's advanced manufacturing technologies compete on a global scale. These technologies enable manufacturers to introduce new products and processes faster and cheaper. Automobile producers can produce parts from light, recyclable materials and improve overall vehicle efficiency -- an important element of the next generation of vehicles. Capital goods producers can achieve manufacturing efficiencies similar to high volume producers. Manufacturers can produce prototype products in days rather than months, thus speeding up the introduction of new products, and with technologies, making products that were not possible before.

Technology Partnerships Canada
10th floor, 300 Slater Street
OTTAWA, Ontario K1A 0C8

Partenariat technologique Canada
10^{e} étage, 300, rue Slater
OTTAWA (Ontario) K1A 0C8

Canada

Enabling technologies have the ability to transform and strengthen the basis of competition in whole industries. For example, advanced materials and biomaterials have had a major impact on Canada's health care industry. Canadians have made major advances in using advanced materials for implant technology like cardiovascular, dental and orthopaedic surgery. Devices manufactured with improved materials cut health care costs by reducing hospital stays and patient trauma.

Information technologies provide many examples of how enabling technologies can touch nearly every aspect of our lives. For small and medium-sized businesses advanced software technologies mean streamlined administrative processes, reduced costs and improved service to clients. Multi-Media Learnware (MML) means time and cost savings and productivity gains in the workplace as this technology has benefits across many sectors of the economy.

Information technologies in the health sector can produce broad economic benefits. For example, Canada enjoys a reputation for excellence in diagnostic imaging and telemedicine (including remote access applications), distance health education, simulation and multi-media health education tools. Canadian companies can build on this reputation to create international alliances that will improve their competitiveness and further open the markets of the world.

Biotechnology applications have improved returns to farmers by up to 40% since they were first introduced. All aspects of crop and animal production have benefited, resulting in increased exports. Biotechnology has resulted in increased yields, resistance to disease and pests, improved adaptation of crops to grow in a wide variety of climatic conditions and the generation of new products.

Biotechnology has also revolutionized the aquaculture industry, increasing Canada's share of world trade through increased production of farmed fish. It has also led to decreased loss due to disease, conservatively estimated at worth over $30 million to the industry so far.

THE CHALLENGE

Maintaining Canada's competitive advantage in enabling technologies requires constant innovation and an increase in the partnership between the firms that design and create the enabling technology and the firms that will use it. The industries are R&D-intensive, and must frequently risk their profitability by investing heavily in new projects. For many of these technologies, the product cycles are very short, and suppliers and users must respond quickly to new developments. Projects must move quickly through the innovation cycle, from research and development to demonstration to market development. The firms which work with enabling technologies require government as a partner, not only to share the risks of technology development, but also to help the formation of alliances and partnerships.

THE SOLUTION

Technology Partnerships Canada (TPC) is a program to enhance wealth creation by making Canadian firms more innovative. It provides a new approach -- an "investment approach" to technology, with real risk and reward shared between the government and the private sector. TPC works with established companies in specific segments of the economy to ensure that near-market projects result in products that actually reach the marketplace.

HOW TECHNOLOGY PARTNERSHIPS CANADA WORKS

TPC will reach $250 million annually, with money coming both from federal government contributions and repayments from companies with successful TPC projects. The original funding is reallocated from existing funding within the government; it does not entail new money.

A key element of the new TPC approach is that these funds will be used as investments, where successful projects will fund future TPC investments. They will leverage even larger investments by the program's partners in the private sector: TPC investments will range from 25% to 30% of project costs in most cases; in exceptional circumstances, TPC will contribute more. The partners must provide the balance.

From this investment, the Government will share in the upside returns on successes through royalty repayments on successful projects. TPC will recycle all repayments back into the fund for future investments. This provides an incentive to all involved to succeed.

As with any investment, TPC will have a keen eye for potential returns. Consequently, the program will be results-oriented, focusing on the near-market end of the R&D continuum and on high quality companies with high risk projects in identified markets. The program will lever high technology investment by sharing risks with the private sector.

A Technology Advisory Board of private sector experts and industry leaders from across Canada, chaired by the Minister of Industry, will assess trends in the marketplace and ensure that Technology Partnerships Canada targets opportunities and generates jobs and economic growth in all regions.

As well as the aerospace and defence industry and environmental technologies, Technology Partnerships Canada focuses on enabling technologies as a key area for investment.

WHO IS ELIGIBLE?

In general, potential partners in Technology Partnerships Canada will be well-managed, financially-sound, incorporated businesses that can demonstrate their ability to successfully complete their project. Groups or alliances of eligible partners may receive funding, as well as associations or consortia that take the management responsibility for groups of projects. TPC will look for partners from all regions of Canada.

Eligible activities will include:

- all activities related to the development and demonstration of products, processes and technologies including related R&D in the specific enabling technologies;
- pre-production activities, including the development of production capabilities; and
- studies related to a potential project that could be supported under one of the other eligible activities.

Potential partners with Technology Partnerships Canada will be assessed on a project-by-project basis. Other assessment criteria are based on the program's overall objectives, and may include the extent to which:

a) the project has the potential for generating net economic benefits to Canada;
b) the recipient has demonstrated the technical and managerial capability for completing the project;
c) the recipient has demonstrated that the contribution under TPC is necessary to ensure that the project proceeds with the desired scope and timing in the desired location and/or that it is required to ensure that the recipient is competitive in the global market;
d) the recipient has demonstrated the ability to finance its share of the project costs, of the commercial exploitation of the project results;
e) the project goals are linked to the corporate/technical strategies of the recipients;
f) the recipient has demonstrated the ability to repay the contribution plus any incremental payments based on risk-reward sharing.

JOBS AND GROWTH

Technology Partnerships Canada is a key element in the Government's Job and Growth Agenda: technological innovation will improve productivity, which will increase the competitiveness of Canadian businesses. This will lead to economic growth and the creation of jobs for Canadians.

Fact Sheet

TECHNOLOGY PARTNERSHIPS CANADA

"A Team Canada Approach to Technology Development"

THE AEROSPACE AND DEFENCE SECTOR

AEROSPACE AND DEFENCE AND INNOVATION

Canada's aerospace and defence sector is innovative, export-oriented and provides well-paid high-quality engineering and production jobs in the global knowledge-based economy. Through a partnership between industry and government forged in the years following the Second World War, Canada has built the sixth largest aerospace industry in the world.

Canadians have succeeded by finding niche markets where targeted government assistance has helped them develop world-class technologies and products. The extent of Canada's competitiveness is underlined by the fact that aerospace and defence is one of the few high technology sectors where Canada has a positive balance of international trade.

Canada is a world leader in aerospace and defence equipment such as avionics, flight simulators, aircraft communications, satellite remote sensing and surveillance, security systems and defence conversion. It is also a leading manufacturer of commercial aircraft and parts, specializing in regional aircraft, business jets, commercial helicopters, space communications technologies, small turbine engines, aerostructures and landing gear. Canadian aerospace firms hold the world product mandates for many of these high-technology, value-added products.

Technology Partnerships Canada
10th floor, 300 Slater Street
OTTAWA, Ontario K1A 0C8

Partenariat technologique Canada
10e étage, 300, rue Slater
OTTAWA (Ontario) K1A 0C8

Canada

Because the domestic market for aerospace and defence is limited, Canadian businesses have become global traders, and have led the world in the application of their technologies to civilian purposes, with 70% of its $10 billion sales in 1995 in export and commercial markets. The sector provides more than 50,000 knowledge-intensive and high paying jobs, employing more science and engineering related workers than manufacturing or the Canadian economy as a whole. Six in ten employees have post secondary education, compared with 45 percent in the general economy.

Canada's aerospace and defence companies are some of the highest generators of Gross Domestic Product and labour income among the country's high technology companies. The sector is an important contributor to the economy across Canada, and figures prominently in the manufacturing economies of Ontario, Quebec, Manitoba and Nova Scotia, with key components located in other provinces. Aerospace and defence invests over $1 billion annually in new product R&D, placing the sector among the top performers in Canada's manufacturing industries.

THE CHALLENGE

Canada's continued success in this sector is precarious. Around the world, governments invest heavily in their own aerospace and defence sectors, either through funded programs, defence procurement, or state ownership. Unlike its competitors, Canada's industry cannot rely upon the cushioning effect of massive domestic government procurement and R&D budgets, nor the large structural mass of the giant U.S. and European aerospace and defence corporations. Canada needs to level the playing field.

Moreover, aerospace R&D projects often require up front, patient financing. They face high market risk. Some have long product cycles with uncertain payback periods. In the case of electronic systems, on the other hand, product cycles are very short and require constant investment in R&D to maintain a leading-edge. Some firms require major investments to shift away from declining defence markets, or out of markets which are uncertain in light of defence export control policy.

THE SOLUTION

Technology Partnerships Canada (TPC) is a program to enhance wealth creation by making Canadian firms more innovative. It provides a new approach -- an "investment approach" to technology, with real risk and reward shared between the government and the private sector. TPC works with established companies in specific segments of the economy, including aerospace and defence, to ensure that near-market projects result in products that actually reach the marketplace.

HOW TECHNOLOGY PARTNERSHIPS CANADA WORKS

TPC will reach $250 million annually, with money coming both from federal government contributions and repayments from companies with successful TPC projects. The original funding is reallocated from existing funding within the government; it does not entail new money.

A key element of the new TPC approach is that these funds will be used as investments, where successful projects will fund future TPC investments. They will leverage even larger investments by the program's partners in the private sector: TPC investments will range from 25%

to 30% of project costs in most cases; in exceptional circumstances, TPC will contribute more. The partners must provide the balance.

From this investment, the Government will share in the upside returns on successes through royalty repayments on successful projects. TPC will recycle all repayments back into the fund for future investments. This provides an incentive to all involved to succeed.

As with any investment, TPC will have a keen eye for potential returns. Consequently, the program will be results-oriented, focusing on the near-market end of the R&D continuum and on high quality companies with high risk projects in identified markets. The program will lever high technology investment by sharing risks with the private sector.

A Technology Advisory Board of private sector experts and industry leaders from across Canada, chaired by the Minister of Industry, will assess trends in the marketplace and ensure that Technology Partnerships Canada targets opportunities and generates jobs and economic growth in all regions.

As well as the aerospace and defence industry and environmental technologies, Technology Partnerships Canada focuses on enabling technologies as a key area for investment.

WHO IS ELIGIBLE?

In general, potential partners in Technology Partnerships Canada will be well-managed, financially-sound, incorporated businesses that can demonstrate their ability to successfully complete their project. Groups or alliances of eligible partners, as well as associations or consortia may also be eligible. TPC will look for partners from all regions of Canada.

Eligible activities will include:

- all activities related to the development and demonstration of products, processes and technologies including related R&D;
- pre-production activities, including the development of production capabilities that might determine where an industry locates; and
- studies related to a potential project that could be supported under one of the other eligible activities.

Potential partners with Technology Partnerships Canada will be assessed on a project-by-project basis. Other assessment criteria are based on the program's overall objectives, and may include the extent to which:

a) the project has the potential for generating net economic benefits to Canada;
b) the recipient has demonstrated the technical and managerial capability for completing the project;
c) the recipient has demonstrated that the contribution under TPC is necessary to ensure that the project proceeds with the desired scope and timing in the desired location and/or that it is required to ensure that the recipient is competitive in the global market;

d) the recipient has demonstrated the ability to finance its share of the project costs, of the commercial exploitation of the project results;
e) the project goals are linked to the corporate/technical strategies of the recipients;
f) the recipient has demonstrated the ability to repay the contribution plus any incremental payments based on risk-reward sharing.

JOBS AND GROWTH

Technology Partnerships Canada is a key element in the Government's Job and Growth Agenda: technological innovation will improve productivity, which will increase the competitiveness of Canadian businesses. This will lead to economic growth and the creation of jobs for Canadians.


PRINTED IN CANADA
IMPRIMÉ AU CANADA