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Publié aussi en français

The Honourable Edward C. Lumley
Minister of Industry, Trade and Commerce
and
Regional Economic Expansion

The Honourable William Rompkey
Minister of State for Small Business and Tourism

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Editorially speaking. . .

It's the end of an old year, the start of a new . . . the end of an old era, the start of a new.

It was just about a year ago that the announcement was made bringing to an end the era of the Departments of Industry, Trade and Commerce and of Regional Economic Expansion and the start of a new era with the merger of these two into one department. In part, the move was designed to give added emphasis to regional development of Canada's industrial base.

After a year of work, the new department is gradually taking form and its priorities are being established.

All of this has had an effect on Canada Commerce. Our emphasis has gradually changed and will continue to change as our focus becomes more oriented towards the regional aspects of the department's role.

With all of these changes, we are entering into a bright new year . . . a bright new era.

Happy New Year to you all!

J.C.H.

Both federal and provincial governments have been heavily involved in an incentive grants program to modernize pulp and paper plants, particularly in eastern Canada where the need was greatest. Industry response has been positive and it is expected that approximately $3.5 billion in capital investments in more than 60 facilities will be supported by the total modernization program. W. R. (Bill) MacMillan of the Industrial Incentives Branch, REE/IT&C, backgrounds the situation in the following article.

Modernization Program for Pulp and Paper Industry

High technology computer monitors and controls paper machine.

The pulp and paper industry is vital to the economic stability of Canada. It ranks first among manufactures in terms of overall employment, wages and salaries, and value-added by processing. Exports in 1980 amounted to more than $8 billion, about the same as the total foreign earnings of Canadian ores and metals, fish and other foods, including wheat and grain. Two other factors contribute to the economic pre-eminence of pulp and paper: the resource is renewable and is common to most regions, which means that the whole country shares in job creation and other financial benefits.

Industry Status

During the 1970s, numerous studies demonstrated that with few exceptions, the pulp and paper mills in eastern Canada required major investment to overcome their pollution abatement problems and to upgrade their facilities. The majority of the mills had been established before today's efficient technologies were available and although most of the original machinery had been upgraded and maintained over time, the mills had reached the state of requiring fundamental changes in plant and process design.

Without these investments the competitive position of many mills was such that their long term viability was in jeopardy. Without some form of government incentive, the massive funding required for this investment was not considered likely to be available due to the low profitability of much of the investment, and the scarcity of investment funds following several years of relatively poor profits.

The profitability of the Canadian pulp and paper industry during most of the seventies was significantly poorer than that of Canadian industries in general as well as that of competing U.S. forest products companies. Also, since 1977 a significant portion of the profits of the Canadian industry was derived from foreign exchange which could not be counted on in the long term. This masked even further the underlying non-competitive position of the industry. The availability of funds for productivity improvement had also been constrained by inflation which had borne heavily on this capital-intensive industry. Other funds had been devoted to pollution requirements which often did not contribute to productivity and profit improvement.

New capital had not been attracted to the industry and companies had not generated sufficient funds to undertake the investment program required to restore the mills to a competitive position. The federal and provincial governments became increasingly concerned at the prospect of a significant decline in the job and economic benefit derived from the industry and sought ways that would be most effective in stimulating the industry to commit itself to the necessary investment.

Federal-Provincial Co-operation

In February 1979, the federal government announced a new development assistance policy for the forest products industry, a major element being the allocation of $235 million of federal monies for an incentive grants program to modernize pulp and paper plants. Provincial governments in eastern Canada enthusiastically endorsed the program and

New equipment improves paper product.

federal-provincial cost-sharing agreements were developed with Ontario, Quebec, New Brunswick, Nova Scotia and Newfoundland. Provincial funding of $241 million plus an increase in the federal funding to $276 million brought the total assistance available under the program to $517 million. Total funding of the agreements by province was $180 million in Ontario, $240 million in Quebec, $42.25 million in New Brunswick, $21.25 million in Nova Scotia and $33.33 million in Newfoundland. The federal share varied by province reflecting the policy of the federal government to assume a greater share in less economically developed provinces. The federal share was one-third in Ontario, 56 per cent in Quebec, 80 per cent in New Brunswick and Nova Scotia and 90 per cent in Newfoundland.

The pulp and paper mills in the western provinces are relatively more modern. As a result the modernization program was less applicable there and the western provinces decided not to take part. Alternate initiatives tailored to the specific western needs were likely to be more appropriate and the federal government undertook to work with the forest industry and the governments of British Columbia, Alberta, Saskatchewan and Manitoba towards that end.

Agreement Guidelines

The pulp and paper modernization agreements are scheduled to terminate on March 31, 1984. The exception, Newfoundland, terminates one year later. A subsequent two-year period has been provided to allow applicants to complete their investment programs and submit claims for payment.

Guidelines specify activities and related capital costs which are eligible for incentive assistance and outline also other criteria for the administration of the program.

In general, incentives are limited to primary pulp and paper facilities. Projects concerned with the conversion of paper into intermediate or final goods are not eligible. Excluded also are projects dealing with transportation and forest harvesting. Investments related to the speed-up of newsprint machines do not qualify on the grounds that such developments result in excess capacity, to the detriment of all Canadian producers. Firms applying for grants must recognize government anti-pollution and resource management objectives. Canadian manufactured equipment and services must be used where they are competitive in price, quality and delivery.

Assistance may be provided for projects which result in improved energy consumption. Exceptions are projects receiving assistance under the Forest Industry Renewable Energy (FIRE) program administered by the federal Department of Energy, Mines and Resources.

Industry Response

The industry response has been very positive. It is anticipated that capital investments of approximately $3.5 billion in over 60 facilities will be supported by the total modernization program. The investment-to-incentive ratio is such that the industry plans to allocate between five and six dollars for each dollar of government assistance.

A comparison of the recent historical capital investment with that proposed indicates significant increases in spending. The increased spending by Ontario companies during the program period is more than four times greater than in earlier periods. Equally large increases are expected to hold true for Quebec and the Atlantic region. Such major increases in capital spending to modernize existing facilities are unprecedented in recent years.

There is no doubt that the cyclical upturn which began in the industry in 1978 was a major factor in generating funds to embark on the needed modernization program. Expenditures on capital investment by Canadian paper and allied industries increased from $0.7 billion in 1978 to $1.9 billion in 1981. Unfortunately, the 1982 economic slowdown may force companies to defer part of their investment program.

Anticipated Benefits

From a socio-economic viewpoint, the major benefit expected from the modernization program is the long-term stabilization of jobs, many of them in communities which are primarily dependent on the pulp and paper industry. In the five provinces where the program is applicable, the industry provides employment for more than 80,000, including 65,000 mill workers and 15,000 employees in the logging branch which supplies pulp and paper mills.

One inevitable consequence of introducing new technology is the more efficient utilization of manpower, with resultant job reductions. While a certain number of new positions will be created by the program, job losses will not be entirely offset, since the program is aimed at modernization rather than industrial expansion. Some 1,200 fewer jobs are expected in the wake of the investment program. In most mills, attrition, early retirement, job changes and retraining will eliminate the need for lay-offs. All companies must provide detailed manpower utilization plans. In the few mills involved in major manpower adjustments, both federal and provincial manpower resources assist companies to develop appropriate programs.

Paper rolls off machines as Canada's paper industry modernizes.

Wood resource utilization is an area in which significant improvements are expected. In the past, fibre loss caused pollution problems, as well as being a significant waste of a valuable resource. The investment program will result in installations that obviate such loss and actually redirect the recovered fibres into final products. In newsprint mills there is a marked trend towards high-yield pulping processes, such as thermo-mechanical pulping, which sharply reduce the need for pulp produced from the lower yielding chemical processes.

Pulp and Paper Modernization Program Cost Estimate (by Province)

	Total	$ million Provincial Share	Federal Share
Ontario			
Agreement May 15/79	150.00	100.00	50.00
Supplement July 31/80	30.00	20.00	10.00
Total	**180.00**	**120.00**	**60.00**
Quebec			
Agreement May 15/79	150.00	60.00	90.00
Supplement July 31/80	90.00	45.00	45.00
Total	**240.00**	**105.00**	**135.00**
New Brunswick			
Agreement Aug. 27/80	42.25	8.45	33.80
Nova Scotia			
Agreement May 23/81	21.25	4.25	17.00
Newfoundland			
Agreement June 1/81	33.33	3.33	30.00
Total for 5 Agreements			
	516.83	**241.03**	**275.80**

This change permits a reduction in resource use and, in some cases, indirect capacity increases.

Energy conservation is another area which benefits from the program. The industry has established energy-conservation goals, including reduction of purchased energy. It is anticipated that by 1984 purchased energy consumption will be 30 per cent lower than in 1972.

In recent years the pulp and paper industry has made steady progress in air and water pollution abatement. A major objective of the program is to reduce pollution to the point where all mills will comply with federal and provincial environmental regulations. With few exceptions, this will be achieved with the completion of the investment program.

The value of Canadian goods and services purchased as a result of the investment program will provide Canada with significant industrial development and employment spin-offs. More than 85 per cent of the investment benefits will accrue to Canadians.

The modernization program underway in the pulp and paper industry is a clear indication that government incentives have had a major stimulative effect on the industry. The current economic slowdown is expected to delay implementation of some of the modernization projects and a review is being undertaken to ascertain the extent of any investment adjustments. It is anticipated that the majority of modernization projects will be implemented as originally scheduled and that economic and social benefits will be achieved without significant delays. To date the program has been an outstanding example of co-operation between governments and the private sector to overcome a problem threatening the existence of a significant portion of the industry.

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With the arrival in Halifax harbour of the huge floating drydock "Panamax" which is described in the accompanying article, a whole new dimension was added to Atlantic Canada's shipyard capabilities. But what of other, on-going, activities which are advancing Canada's ocean industry expertise in this region?

High Technology Characterizes Ocean Industries

There's a new look to the growing offshore industry support sector that is fast becoming an important part of the economic future of Atlantic Canada — and the accent is on high technology.

As recently as half a decade ago, the number of ocean industry companies using the technology that is now becoming commonplace could have been counted on the fingers of one hand.

The early search for excellence in technology to unlock the secrets of the oceans dates back to the 1970s when the Bedford Institute in Halifax, the Centre for Cold Ocean Resources Engineering (C-CORE), and the Newfoundland Oceans Research and Development Corporation Ltd. (NORDCO), both of St. John's, Newfoundland, joined in and enhanced the work being done in marine research and development. The Defence Research Establishment at Dartmouth was already established as a world pioneer in the development of metals anticorrosion, variable depth sonar, and hydrofoil shipping.

Eastern Canadians, in preparing for a resurgence of the fisheries sector, the expansion of oil and gas exploration, and the prospect of tidal and wave energy production, realize that the future lies in high technology. This is particularly true if the onshore support operations are to be competitive and in place in order to capitalize on the benefits of offshore operations.

Companies like Hermes Electronics Ltd. and Seimac Ltd., both of Dartmouth, have already earned a world reputation for their knowledge of high technology. Hermes exports, among others things, sonar sensing buoys for the navies of the United States and other nations. Seimac, at first a developer of existing technology, has earned a top rating with its world customers and is now expanding into research to put it still further ahead of its competitors.

Dalhousie University's oceanographic department is growing in size and scope each year. At the Nova Scotia Research Foundation Corporation and the Technical University of Nova Scotia, the accent is moving more and more toward meeting the needs of ocean industry.

Although Canadian ocean engineering dates back to at least the time the 18th century settlers used the power of Bay of Fundy tides to grind grain, it was the defence needs of World War II that provided

Built in a record eight months in Saint John, New Brunswick, the KIGORIAK, an ugly-duckling icebreaker, continues to set performance records.

the impetus for entry into active marine research and development.

As offshore expenditures in Atlantic Canada rose to $250 million in 1980, entrepreneurs of Newfoundland and Nova Scotia — and to a lesser degree in New Brunswick and Prince Edward Island — began to seriously consider how to get in on the ground floor of the hoped-for bonanza that was just around the corner.

In that year, a small ocean manufacturing and service industry base of some 25 companies already existed, including Hermes, Seiman, and Internav Ltd., an impressive company established in Sydney, Nova Scotia. Using high technology to a large degree produced in the company's own research department, Internav marketed a long-range navigation system that is now selling worldwide.

Convinced that ocean industry is destined to become a major factor in the economic expansion of Atlantic Canada, the federal government, through the Department of Regional Economic Expansion (DREE), committed $22.9 million to assist in building the region's high technology to world standards.

An Ocean Industry Development Office was located in Halifax. With a mandate to support companies with potential offshore services capabilities. In addition, the transfer of technology from research departments to practical use is permitted by the office's mandate. The office has already assisted 14 new and expanding firms.

Many high technology companies, which produce ocean chemistry analysis, provide electronic monitoring, handle non-destructive testing, build salt water-activated batteries, and assemble submersible robots (among other things) needed more than money to become a factor in the ocean industry expansion. The Ocean Industry Development Office has helped solve problems of high technology concepts and projects and linked entrepreneurs with scientists to find answers.

A sum of $7.5 million of federal funds has been earmarked to directly foster this transfer of research and to encourage interaction between researchers and industry.

An incubator mall, in a newly designated Ocean Industry Industrial Park, is being built to nurture fledgling companies which need a place — at favorable rental rates — to bring their ideas to fruition.

In 1980, an estimate showed that less than 2,000 people were involved in the high technology sector of Atlantic Canada. Despite the subdued economic climate existing in the world, this figure had more than doubled by the end of October 1982.

In the past, Atlantic Canadians proved their high technology abilities by producing the world's first dynamically-positioned, semi-submersible drilling rig in Halifax, and in building — at the Saint John, New Brunswick, Shipbuilding and Drydock Ltd. in a record eight months — the prototype ice-breaker, Kigoriak, which has astounded everyone with its performance in the Arctic waters.

Knowing that the contracts from offshore operators will go to the most-prepared companies, Atlantic Region firms plan to be ready when the demand comes.

Future Looking Good at Halifax Shipyard as Panamax Drydock Arrives for Assembly

by Charles Foster
ITC/REE, Moncton, N.B.

Assembly of the huge PANAMAX drydock nears completion at the Marine Industries Ltd. yards, Tracey, Sorel, Québec. The drydock, 257 metres (843 ft.) long by 52 metres (170 ft.) wide and 20 metres (65 ft.) high, was recently towed down to Halifax where it is being installed as a permanent fixture.

Company officials at Halifax Industries Ltd. (HIL) have called it "the final cog in the wheel that will make Halifax shipyard into a world-class operation".

A newspaper editorial acclaimed it as "the most positive thing the federal Department of Regional Economic Expansion (DREE) has done for Nova Scotia".

A TV commentator described it as "a massive shot in the arm for those of us who want to spread the gospel of federal commitment to the Atlantic Region".

"It" is the largest floating drydock ever designed and constructed entirely in Canada. Named Panamax because it has the capability of accommodating the largest vessel capable of navigating the Panama Canal in safety, it is — at 257 metres in length, 52 metres in width and 20 metres in height — in fact, able to lift vessels weighing up to 36,000 tonnes and provide full service to ships that are five metres wider than the canal maximum.

Even though the drydock was in two sections when it arrived in Halifax in mid-November, its first section alone — measuring 200 metres in length — pulled crowds of watchers to both Halifax and Dartmouth sides of the harbour as the steel "monster", twice the size of a football field and tall enough to dwarf its stands, floated slowly and majestically behind two of Atlantic Towing Ltd.'s most powerful tugs, with a third steadying the tail.

Work began in September 1981, when tenders from an international call were opened and the contract was placed with a Canadian company, Marine Industries Ltd. (MIL) of Sorel, Quebec.

The engineering design was done by MIL, who employed a numerical computer precise to one-tenth of a millimetre. Numbers fed into the computer enabled it to activate an automatic drafting arm to produce a pattern of the many sections and components of the drydock. A process called "lofting" then multiplied the size of the pattern by 10, and the tape was fed into a second machine which activated automatic welding machines. One-sided welding was used throughout the project.

As each of seven separate pontoons was completed, it was floated from the Sorel shipyard to the junction of the Richelieu and St. Lawrence rivers for final assembly. The welded 200-metre section left for Halifax on November 7, 1982.

When the two sections from Sorel (seven pontoons) and Pictou (two pontoons) are welded together and joined to the required land service facilities and new wharf which awaited their arrival, the project will have cost in excess of $65 million. DREE committed $43.9 million; the provincial government added $21 million. When ready, the drydock will become the property of the Province of Nova Scotia and leased to HIL.

In this age of delayed schedules, it should be recorded that both MIL in Sorel and Ferguson Industries Ltd. (FIL) in Pictou not only completed their construction work on schedule but actually delivered their respective sections to HIL one month ahead of the official delivery date.

The story began just over four years ago, when Hawker Siddeley, then owner of the shipyard, made known its intention to dispose of the aged and ailing operation. To the hundreds of workers who counted on the shipyard for employment, the future looked bleak.

After long hours of hard bargaining by the provincial government, an eleventh-hour reprieve arrived in the shape of a consortium composed of Rijn-Schelde-Verolme, of the Netherlands, Hall Shipping Limited,

of Montreal, and CN Marine. The trio formed the new Halifax Industries Ltd. and undertook the vast job of modernizing and rebuilding the shipyard. (Rijn-Schelde-Verolme withdrew from the company in 1981.)

Even before the consortium came into being, it was apparent that a large floating drydock, capable of providing service to the largest vessels using the port of Halifax — or those passing close to the Nova Scotia coast in major international shipping lanes — was a must if the shipyard was to become a viable and competitive operation. Gerald Regan, then Premier of Nova Scotia, was instrumental in commissioning the first feasibility studies.

Discussions on financing arrangements for the drydock had reached a stalemate between the company and the Nova Scotia government when DREE was brought into the picture. A new look at the situation was taken and, on January 22, 1980, the Panamax Agreement was officially signed.

During the design and tender periods that followed, extensive studies showed that the Panamax potential was even greater than first thought. The Halifax shipyard was shown to be the most strategically located, all-year port for shipping using the North Atlantic Great Circle route.

While waiting for the Panamax to arrive, HIL pressed ahead with a major program of renovation and modernization. The assembly building was renewed. Machine, plate, and pipe shops were upgraded. The shipyard's fabricating shop has expanded its potential to accommodate just about any work the offshore oil and gas operations will need.

Gerald Regan, then federal Minister of Labour, announced, on behalf of DREE, the details of the contract awarded to MIL in Sorel. It specified that 20 per cent of the contract value — in excess of $12 million — must be spent in Nova Scotia. MIL, with existing knowledge of the capability of FIL in Pictou, handed them the plum of providing a 57-metre section of the Panamax.

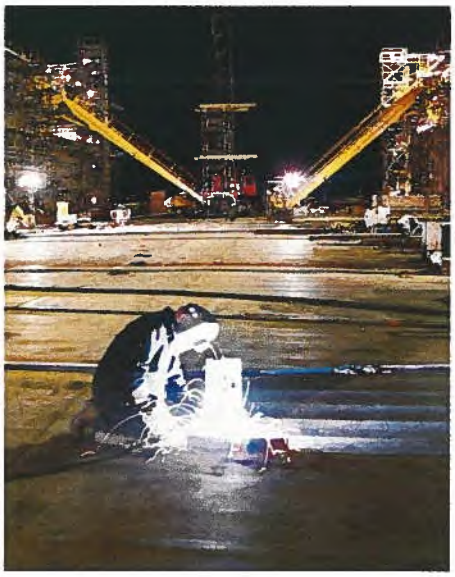
By the time the two sections arrived in Halifax harbour, the MIL and FIL work had been complemented by service connections, access platforms, and mooring facilities provided by HIL. In the 14 months before Panamax arrived, more than 500 jobs had been created.

When fully in operation, the drydock is expected to add 400 permanent jobs at HIL, boosting the economy of the Halifax and Dartmouth area by more than $15 million annually in salaries and purchases of materials.

Seven sections of the PANAMAX drydock were assembled at the Tracey, Sorel, yards and floated down to the junction of the Richelieu and St. Lawrence rivers on its way to Halifax.

Appropriately, it was Gerald Regan — the Premier who first visualized the potential of a Panamax dock, the Minister of Labour who announced DREE's commitment of $43.9 million — who, now as federal Minister of International Trade, represented DREE and Industry, Trade and Commerce Minister Ed Lumley at the arrival ceremonies at the HIL shipyard.

Gerald Regan led the contingent of federal, provincial, and municipal dignitaries, including Premier John Buchanan of Nova Scotia, and the Mayors of Halifax, Ron Wallace, and Dartmouth, Dan Brownlow, who greeted the arriving drydock in the harbour from the deck of a borrowed Department of National Defence ferry.



Like an astronaut working on a space platform, a welder adds a final preparation to the PANAMAX drydock.

Within hours of the two sections being tied up at the HIL wharf, welders were at work joining them together. Hopes are high that the weather will remain warm enough to allow work to continue right through the winter months. If it does, HIL, MIL, FIL, and DREE will have another ceremony in May 1983 to celebrate the first paying customer to be raised on the Panamax. It will be the start of an era of capability and potential for the Halifax shipyard that only four years ago would have been thought impossible.

The fair is over. Now the work begins! Last October in Winnipeg a somewhat unusual exhibition was held to bring representatives of public institutions from across Canada together with Canadian manufacturers and suppliers. Now it is time for contacts made at the fair to be confirmed, for market opportunities to be investigated, for...

Follow-Up on "Fair in Reverse"

Winnipeg's most unusual exhibition in October was a highlight of the new Institutional Market Program designed to awaken in institutional (schools, jails, hospitals, airports, etc.) purchasers an awareness of potential and competitive Canadian sources, and in manufacturers and suppliers an awareness of the needs of the institutions.

The exhibition was a "fair in reverse" in which the institutional purchasers displayed products they obtained at present through imports but which they would consider buying from Canadian suppliers. By visiting these exhibits, manufacturers and suppliers discovered possible markets for products they might be interested in supplying.

The "reverse" nature of the show was that the potential buyers ran the exhibits and the potential suppliers did the visiting and viewing.

The whole Institutional Market Program is the result of the fact that federal government institutions alone, supported by Canadian taxpayers, spend more than $40,000,000,000 annually.

Recent market surveys have indicated six broad categories of goods in which there has been a high degree of import penetration and these are the categories the program is aiming at and which were the main subjects of the Winnipeg fair. There were, of course, other types of products which did not fall within these categories but all of which can be classified as institutional needs.

The six categories are: institutional furniture; laboratory and scientific equipment; audio-visual equipment and supplies; non-print educational supplies; sporting and gymnasium equipment; and fixtures and appliances.

The surveys show that an average of about 65 per cent of these products is imported (e.g. 80 per cent for audio-visual equipment and 50 per cent for non-print educational supplies). This represents about two-thirds of the products and approximately $1.5 billion.

The Institutional Market Program, sponsored by provincial, federal and territorial governments, was designed to help increase domestic purchases and program officials hope to stimulate such an increase by 10 per cent within a year.

How successful has the program been to date? That, officials state, is hard to tell as it is still too soon. In addition, there is a considerable amount of follow-up work that must be done as a result of the "fair in reverse".

For example, a catalogue or reference book is being drawn up from the material gained at the Winnipeg show. When complete, it will be distributed through the 12 umbrella exhibiting organizations (the 10 provinces plus the federal Departments of Supply and Services (DSS) and of Industry, Trade and Commerce and Regional Economic Expansion (IT&C/REE)).

The booklet will contain four sections, each with its own particular function.

The first section contains a listing, alphabetical by province and with full addresses and contacts, of each visitor (i.e. manufacturers or supplier) who reported the products they were interested in supplying, and the exhibitors (i.e. institutional purchasers) they spoke to or visited. Also included in this section is a list of all the visitors who did not submit a report.

The Hon. Muriel Smith, Manitoba Minister of Economic Development and Tourism, addresses delegates to the Winnipeg "reverse fair".

By listing suppliers, the products they are interested in supplying, plus the potential purchasers they contacted, an idea of market potential can be gained. In addition, by studying the list, the exhibiting organizations can co-ordinate potential markets with suppliers who did not attend the show.

The second section is primarily a statistical section listing the visiting suppliers and the number of products they were interested in. Its use would largely be in supplying data for broad and relatively general statistical market projections.

The third section does the opposite to the first. It lists the exhibitors alphabetically by exhibiting organizations with all the visitors that contacted each exhibitor. Like the first section, this gives an important reference for future negotiations and possible sales.

Alex Pursaga, of the Manitoba Department of Economic Development and Tourism, explains one of the displays at the Institutional Market Program "reverse fair" in Winnipeg. Left to right are: Mr. Pursaga; the Hon. Gordon Walker, Ontario Minister of Industry and Trade; the Hon. Muriel Smith, Manitoba Minister of Economic Development and Tourism; John F. Dierckx, Executive Co-ordinator of the Institutional Market Program in Winnipeg; and Laurent Beaudoin, Chairman and Chief Executive Officer of Bombardier Inc., the fair's keynote speaker.

The fourth section lists all the products on display at the fair plus those the suppliers were interested in. By showing what the institutions need, suppliers across Canada can gain some idea of possible commodity market areas. Since it only represents the products referred to at the Winnipeg show, the list is only partial but program officials feel it is a healthy start and, even as it is, is perhaps the only list of its kind in existence.

A project is now in hand to contact the 12 exhibiting organizations to add to the list the product needs of their particular areas which may not have been represented at the fair. In this way, a comprehensive review of Canadian institutional needs can be built up.

Copies of the complete booklet will be sent to the exhibiting organizations. It will be up to these organizations to initiate the follow-up operations, using the information to inform and encourage sales opportunities. Program officials also hope that the book will be made available through the organizations not only to participants at the fair but to other suppliers and possible buyers.

The Institutional Market Program, set up during the past year, has among its objectives: to open the doors more for Canadian manufacturers; to make institutional purchasers more aware of the importance of buying Canadian; and to emphasize the size of the market potential.

It has a two-fold strategy. It will first increase awareness among purchasers and manufacturers of the problem; and then identify the market opportunities for the manufacturers and Canadian sources for the purchaser.

During this past summer, provincial, territorial and federal governments have been carrying out one of the steps of the program — explaining it to institutional buyers and encouraging co-operation in finding Canadian sources for products whose prices and quality are competitive with imports.

The second part of the program has been to contact Canadian manufacturers and help them in selling to the institutional market.

The "reverse fair" brought these elements together and provided the raw material for the catalogue. While representation from across the country was uneven, there were approximately 450 participants (about 150 exhibitors and 300 visitors) with products, both those exhibited and those visitors were interested in selling, covering a wide range.

The whole Institutional Market Program has been described as dealing with "economic realities of both demand and supply . . . to inspire just a little extra effort on the part of both the purchaser and supplier."

With the summer-long activities culminating in the October fair in Winnipeg, the program has been well launched although officials feel it may take a little time to get the message firmly established. Those who attended the fair were interested and some enthusiastic. However, there were many not there who might have found something to interest them. They are among the many at whom part of the program's follow-up will be aimed.

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Ottawa Hosts Hi-Tech Showplace...

The growing importance of Ottawa as the major centre of high technology in Canada was confirmed recently at the first Ottawa High Technology Show. Close to 300 exhibitors displayed their latest "state-of-the-art" technology in telecommunications, office and manufacturing automation, microelectronics and components to a full house of buyers, planners and executives from industry and government.

There are almost 300 firms in the Ottawa area alone involved with the manufacture, service or sales of equipment for office, industrial and consumer communications, computers and related software, avionics, aerospace and defence, and components.

The federal government continues to play an essential role in high technology in Canada and particularly in Ottawa. In addition to its own research activities at the National Research Centre, the Defence Research Centre and the Department of Communications, each year the government spends hundreds of millions of dollars for the purchase of high-tech products, some 20 per cent of it in the Ottawa area.

Because of this concentration of high-tech expertise, many of the largest private R&D facilities in Canada are located here. For example, Bell-Northern Research, Canada's largest independent research enterprise, employs 2,300 people in the Ottawa area. It recently announced that it will spend $37.4 million to establish a new 35,060 m^2 (377,000 sq.ft.) R&D facility alongside its central laboratories in Nepean on Ottawa's outskirts.

At the other end of the spectrum, many small one and two-man consulting shops were at the show offering their services and expertise to an industry plagued by shortages of skilled and knowledgeable personnel.

Supported by two national organizations — the Canadian Advanced Technology Association (CATA) and the Commercial Industrial Development Association (CIDC) — the show also presented a full program of seminars on a wide range of related topics. Included were static control, design parameters and trade offs for membrane panels, the Canada arm, CAD/CAM in the '80s, financial and tax incentives for the high technology industry, coping with stress, benefits from the new Ottawa microelectronics centre (one of five high technology centres sponsored by the Ontario government in various cities across the province), problems and opportunities of marketing in foreign companies.

(Editor's Note: Some of the more general topics will be covered in upcoming issues of Canada Commerce.)

Although sponsored locally, exhibitors and show visitors alike were present from across Canada, the United States, Europe and Japan, anxious to explore the possibilities for business in this rapidly growing market. Present forecasts call for a workforce of 50,000 in Ottawa's high-tech industries by 1985, with the possibility of growing larger than the federal government by the end of the century.

Based on the success of this first endeavour, both from the standpoint of exhibitors and attendance, it is expected the exhibition will become an annual showplace of high technology.

Are Robotics in Your Future???

There may be a niche for you as a manufacturer in the exciting field of industrial robotics — an industry which is predicted to grow into a $5 billion a year business by 1990.

If you are seriously interested in robotics, you should be aware that a group of about 25 French manufacturers will be visiting Canada in mid-April 1983 to explore the possibilities of licence agreements or joint ventures for the manufacture of industrial robots and related components and systems. The visit will include a seminar, following which Canadian manufacturers will be able to meet with their French counterparts for one-on-one interviews.

This incoming mission is an outgrowth of the "Canada-France Working Group on Industry and Agriculture" and follows an earlier Canadian mission to France which included meetings with French robot manufacturers as well as attendance at the 12th International Symposium on Industrial Robots and the International Exhibition of Industrial Robots held in Paris, France, June 9-11, 1982. The Canadian mission was organized to pursue industrial co-operation opportunities with French companies that had expressed interest in working with Canadian companies.

If you are interested in meeting with the French visitors next April, please contact:

A. G. Boles
Machinery Branch (47)
IT&C/DREE
235 Queen Street
Ottawa, Ontario
K1A 0H5
Tel: (613) 995-6441

Towards Improved Productivity

In preceding issues, Canada Commerce has looked at some aspects of productivity improvement and the efforts that are being made towards that goal – in October, we saw the approach of the Canadian Manufacturers Association; in November we examined the Interfirm Comparison Program of this department which is directed towards helping companies improve productivity; this month, we take a look at an awards program sponsored by Canadian Machinery & Metalworking magazine which is making its own positive contribution to this subject, so vital to the good of the Canadian economy.

A Celebration of The Best

Canadian metalworking manufacturers who have improved productivity in their plants will be honored at the National Productivity Awards (NPA) celebration dinner to be held during the 1983 National Industrial Production Show in Toronto, May 9 to 13.

The NPA program, sponsored by Canadian Machinery & Metalworking, is designed to give encouragement and recognition to the Canadian metalworking industry for innovations and improvements in productivity through the development of tools, equipment and systems.

There are three main awards. The first is for the best machinery or equipment that contributes to improving industrial productivity. The second is for the best production system, facility or line. A third award, the Eric Crawford Memorial Award for the best overall productivity improvement, is selected by the judges as the best entry from either of these categories. (Mr. Crawford was editor of Canadian Machinery & Metalworking for more than 25 years and this award honors his contribution to the industry.)

Certificates of excellence for all entries of real merit as selected by the judges, are also awarded.

Each winning firm is allowed to use the National Productivity Award logo on its products and in its promotion to publicize its achievement.

The panel of judges is selected to represent the industry in analyzing and evaluating the entries. It includes prominent experts from the federal government, business, education, finance, manufacturing and the engineering associations.

Chairman of the advisory/judging committee for the 1983 awards is Walter Fell, president of Dominion Engineering Works Ltd. of Montreal.

Other members include John Reny, director general, machinery branch, Industry, Trade and Commerce/Regional Economic Expansion, Ottawa; Dr. Jiri Tlusty, head of mechanical engineering at McMaster University, Hamilton; Ron Hodges, vice-president, Guaranty Trust Co. of Canada, Toronto; Allan Calvert, Cochrane Tool & Design, Markham, Ont., and chapter president of the Society of Manufacturing Engineers; Peter Kondoff, engineer, Willowdale, Ont.; Nelson Lake, industrial consultant; and Bob Shechter, teaching master at Humber College of Applied Arts & Technology, Toronto.

Any firm in the Canadian metalworking industry was eligible to enter the 1983 NPA program.

Entries could have been from a person in a plant who has increased productivity through innovation. They could also have encompassed new systems or an imaginative application of equipment that has significantly improved productivity or reduced costs.

The judges evaluated entries individually, with a consensus of all judges on the selected winner.

Entries are judged for innovation, imagination, and for results in either production improvements or cost reductions. The judging is the responsibility of the judges only, and their decision is final.

The questions that the judges wanted answered included:

- What was the problem/ opportunity?
- What action was taken?
- How did this affect productivity?
- Names and titles of persons or teams responsible for the project.
- Outside resources or companies that assisted in planning or implementing this project.
- A description of about 300-words about the productivity improvement is also required.

Winners of the first awards contest were announced in June '82.

Two of the winning firms in that year were from Quebec. Dominion Engineering of Montreal had completed an aggressive program of acquiring NC, CAD/CAM and CAPP in its hydraulic turbine division. International Cutting Tools in Montreal produces its own Minicut end mills and now exports 80 per cent to the U.S. and Europe.

Empire Sheet Metal Mfg. of Winnipeg won for a crossbrake folder designed for a sheet metal machine.

The two other winners were in Ontario. Selox Manufacturing a custom sheet metal fabricator, has automated its plant from the storage of steel through manufacturing to stacking and packaging.

Bachan Aerospace near Windsor designed CNC multi-station gear grinding machine to reduce the cycle time required to grind a complex seven-tooth pump gear.

The success of the first contest encouraged a more ambitious program for following years.

Further information may be obtained from:
Canadian Machinery & Metalworking
481 University Avenue
Toronto, Ont. M5W 1A7
Tel: (416) 596-5720
Tx. 16-219547

Canadian exports are not limited to products and services — technology has long been an important commodity. Now Canadian engineering techniques and management skills are also being offered, and accepted — as this article shows.

Indonesian Engineers Learn Management "The Canadian Way"

Some 70 engineers and technicians from Indonesia have recently completed an intensive, two-month engineering management skills training course in Canada funded by the World Bank and assisted by the former Department of Industry, Trade and Commerce.

The program, carried out by a Canadian consulting firm, Hickling-A.R.A. International, saw the trainees assigned to one of five subject areas — project management; information systems; traffic engineering; transportation planning; and contract administration.

In the two months of training, the visitors worked toward their objectives of improving their skills and knowledge in their subject areas; improving their English; and broadening their perspectives through their contacts with a developed, industrialized nation.

To achieve these aims, Hickling-A.R.A. International developed a training program that stressed practical learning experiences through firsthand exposure to Canadian skills. It consisted of two weeks of classroom work, five weeks of on-the-job training and a final week of workshops to exchange experiences and prepare final reports.

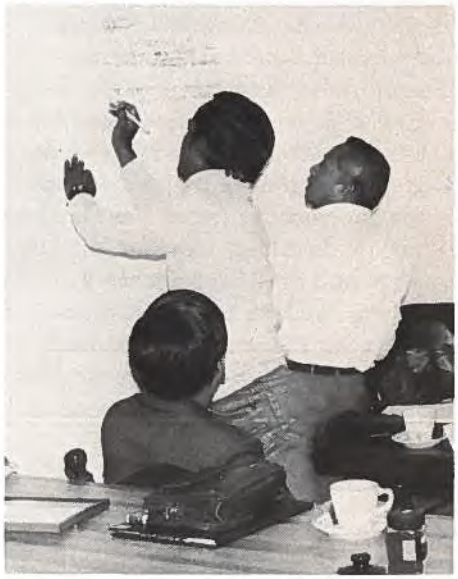
The more strenuous components of the training were relieved by regular tours and outings to show the trainees the cultural and physical distinctions of Canada and to make them feel as welcome as possible.

The Indonesian Embassy was particularly helpful in assisting the host Canadian company in smoothing out the many potential problems which could be expected in settling in Canada for two months 70 people from so distant a country as Indonesia.

Engineering management trainees from Indonesia learn from lectures.

The on-the-job training was made possible by co-operation of more than 30 private and public sector organizations in Toronto, Ottawa and Montreal. These provided the trainees with an opportunity to work in the Canadian environment with Canadian technical experts and to have firsthand exposure and experience in the subject area to which they were assigned.

One of the objectives expressed by the Indonesians for their visit in Canada was to learn more about the range of goods and services available in Canada for export to Indonesia. To meet this objective IT&C assisted Hickling-A.R.A. International in organizing cross-Canada tours to visit selected suppliers of interest to those Indonesians responsible for procurement.



Workshops help co-ordinate the skills and knowledge gained by the Indonesian engineering management trainees.

The project proved an eye-opener in terms of the potential of training projects for increasing Canadian exports. Through hosting the 70 Indonesians for two months in Canada several export marketing goals were achieved. Indonesians were introduced to goods and services which were available for export from Canada. The group were recipients of one of Canada's export products, and had an opportunity to develop a positive assessment of the quality of that export.

Lastly, through interpersonal relations and direct contact with Canadians, a friendly bond and trust between the two countries was created. The training project provides an excellent footing for the Indonesians to go on to deal in more capital-intensive Canadian products such as machinery and vehicles.

This unique training opportunity came about as the result of an initiative by the World Bank and Hickling-A.R.A. International.

Increasingly, international development agencies are recognizing that the transfer of machinery and technology from developed to developing countries must be accompanied by a transfer of skills if long term development goals are to be achieved. Acting on this belief the World Bank made training an integral component of a $150 million "Highway 5 Loan" to be undertaken by the Indonesian Department of Public Works over six years.

Hickling-A.R.A. International with assistance from IT&C under the PEMD program was on an exploratory marketing mission in Indonesia when they learned about the project and advised on how Canada could fulfill the training requirements. The firm was very soon requested to bid on the project and in subsequent visits to Indonesia, with continued assistance under the PEMD program and with guidance from the Canadian Trade Commission in Jakarta, the international competition for the contract was won by the Canadian firm.

The 70 engineers and technicians were chosen from Public Works offices throughout Indonesia, including offices in islands as remote as Iryan, Java and Madon. After a briefing in Jakarta the group, most of whom had never travelled beyond Indonesia before, were flown to Canada, arriving on July 12, 1982, to start their two-month course.

The Indonesian visitors concluded their stay in Canada with a workshop at Manoir Pinoteau, near Mont Tremblant. The setting was an excellent one to exchange ideas, recap the learning experience, enjoy a farewell banquet and to leave Canada with a positive assessment of the quality of Canadian goods and services and the warmth of the relationship which Canadians want to extend to Indonesia.

Comparing notes, trainees prepare for their final reports.

The Indonesian experience in Canada is reported to have created a bond which will have an effect on future relationships.

Final banquet winds up two-month training project in Canada for 70 Indonesian engineers.

Reports prepared at the workshop were very positive. Trainees responded that the experience had not only improved their technical skills, but had also taught concepts of office management and organizational development which they felt would be of great use to them and to Indonesia. The experience in Canada was also reported to have created a bond between the two countries which would establish the footing for further personal, educational, business and trade relations.

With the recent opening of a Canadian consulate general in Perth, Western Australia, opportunities have opened for Canadian business and industry to expand sales and investment in this growing market. In the following article, specially prepared for Canada Commerce, the area and its opportunities are described and the question answered is...

Why Western Australia?

Because it is there — in a big way! All 2,525,500 km^2 of it! Surrounded by a 12,500 km coastline, it is the largest state in Australia accounting for one-third of the total land mass. If placed over Europe it would cover from Oslo, Norway, to Madrid, Spain, and from the west coast of Eire to Berlin, Germany. All this and a population of only 1,300,000 of which 70 per cent are in Perth.

Western Australia has more than its share of Australia's energy-based resource development enabling its industrial base to expand at a rate 10 times faster than the rest of the country over the past five years.

Although the West has only 8.7 per cent of the national population, it accounts for 25 per cent of the nation's minerals, almost 15 per cent of its primary production and 20 per cent of its export earnings.

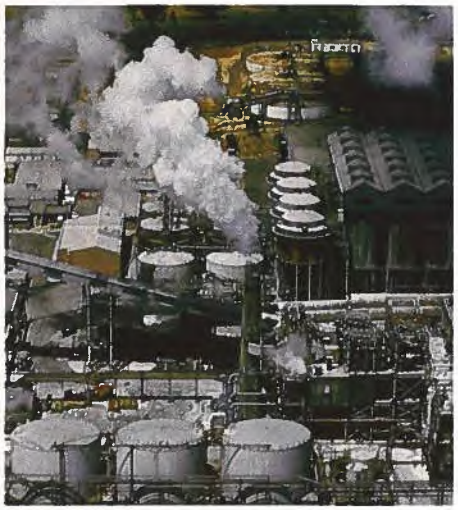
With an established record of industrial, commercial, financial and technological growth and expanding prospects and opportunities for future development, Western Australia presents an attractive environment for Canadian investment.

Large-scale mineral resource development in the 1960s consolidated in the 1970s and, in less than 25 years, the State's population almost doubled with 50 new towns, settlements and suburbs emerging.

People of the West earned a reputation for 'thinking big' . . . . . and have continued to do so. For example, planned investment in resource development projects currently under construction exceeds $13 billion.

The largest of these — the $11 billion North West Shelf natural gas project — will supply more than half the State's non-transport energy (i.e. energy not used for cars, ships, aircraft, etc.). First deliveries are scheduled for 1984 and will be piped 1,500 km to the capital, Perth, and the southwest of the State. Other projects of major importance include two alumina refineries which are expected to grow to a total annual output of 4,000,000 tonnes; an aluminum smelting operation and further expansion of the iron ore production in the Pilbara.

Drilling for natural gas on Australia's North West Shelf.



Developers becoming involved in the Western Australian economy for the first time are consistently surprised at the range and capability of established local industry.

Locally-based industry's share of contracts let so far for four major projects has been:

- North West Shelf: $458,000,000
- Worsley Alumina Refinery: $365,000,000
- Wagerup Alumina Refinery: $245,000,000
- State Energy Commission natural gas pipeline: $108,000,000

The widely diversified response from locally-based industry has ranged from the world's largest undersea plough and longest cable belt installation, to internationally rated pressure vessels, drilling rigs, transportable system-built houses, deep sea fishing and service boats, underground locomotives, computer software, hospital beds of advanced design, and the nation's biggest selling reclining chair.

To meet demands, the number of manufacturing establishments in Western Australia has grown at an annual rate of 3.1 per cent in the past five years. This is 10 times the national average.

However, there is ample room for more enterprise. The West still makes annual purchases from other states of industrial goods worth $2,500,000,000.

Supporting Factors

Although industrial opportunity in Western Australia derives from its resource development, it has the added support of an innovative industrial environment, cost advantages, strategic location to world markets and the support of specific government incentives.

With an enviable growth record and an expanding future, Western Australia is most attractive to Canadian investment.

Oil drilling rig at Woodman Point in Western Australia.

The Alcoa aluminum refinery south of Perth.

Western Australia is strategically located in relation to Southeast Asia, the Middle East and the Western Pacific. Singapore is as close to Perth as Sydney.

Nearly 30 per cent of general cargo tonnage exported from Australia to the ASEAN region moves from Western Australia.

Non-resource companies based in Western Australia are successfully exporting to Britain and Europe, areas around the Indian Ocean, north to Japan and China, east to New Guinea, New Zealand, Canada and the United States.

Some are sending as much as 85 per cent of their output to other states of Australia.

The Western Australian government has an attractive, updated package of incentives to promote diversification of enterprise in the State.

The government offers a free two-year option on industrial land, a guarantee scheme, a capital establishment scheme, a regional industry assistance scheme and a residual indemnity scheme for small industrial undertakings.

Special teams are available to meet the information and negotiation requirements of major developers.

Incentives are offered for industry that is new to the State or a desirable diversification of existing industry. They are open to all comers — local, interstate or overseas enterprises. They support ventures, joint ventures and partnerships.

Lifestyle

The lifestyle of Perth — the business heart of the State — is a bonus for those who for business or personal reasons decide to establish in Western Australia.

Perth enjoys eight hours of sunshine daily, summer and winter. There is ample room for sport, recreation and outdoor life in a

The lifestyle of Perth is a bonus for those businesses or individuals who decide to establish in Western Australia.

Mediterranean-type climate where the average summer temperature is 29 degrees and winter 18 degrees.

The Swan River and its tributary the Canning offer substantially more sailing area than Sydney Harbour; more than 60 km of fine beaches spread north and south along the coastal plain in easy access of the city.

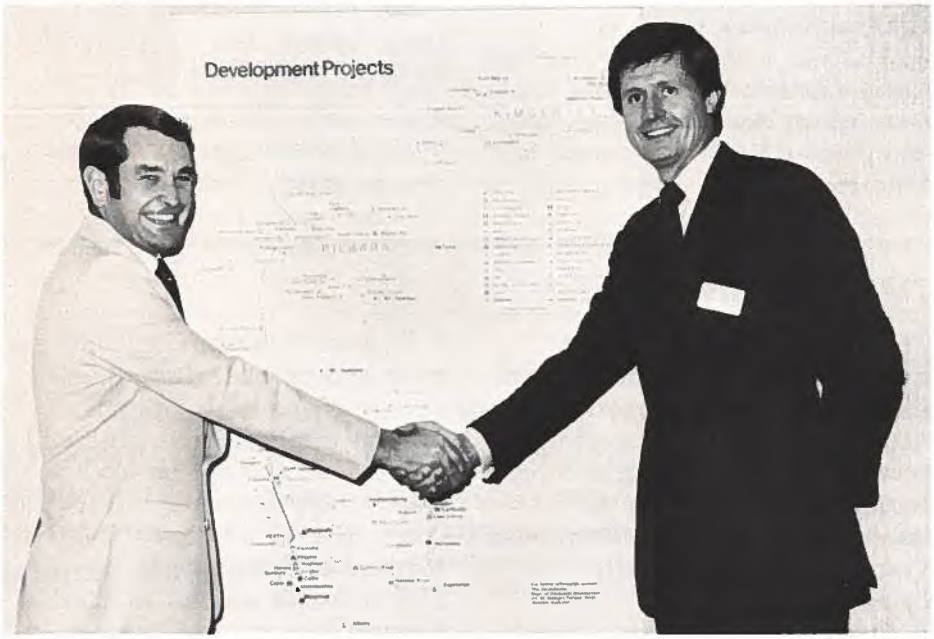
Corridor planning ensures ample open space and major traffic flow arteries, while well-serviced commercial and industrial locations serve the steadily growing suburbs.

Parker Drilling Company, the world's largest land drilling company, services its Southeast Asian operations personnel out of Perth on a two-weeks-on two-weeks-off basis.

Moore-Paragon produces business forms; Symonds manufactures agricultural equipment from Leon's Canada; Banbury Engineering assembles Unit Rig trucks for the mining industry; and J.T. Day Ltd. assembles motor relays from Multilin Canada.

Twenty-four Canadian missions have visited Western Australia in the past three years.

Ontario's Minister for Industry and Tourism, the Hon. Larry Grossman, came in January 1980, followed the same year by the then federal Minister of State (International Trade), the Hon. Ed Lumley, and the Alberta Minister for International Trade Development, the Hon. Horst Schmidt.



Western Australia's Industrial Development Minister, Barry MacKinnon (left) and the Consul General of Canada's newest Consulate General in Perth, Western Australia, Roger Blake, stand in front of a map showing major development projects in the State.

To quote Bob Parker Jnr., president of the company:

"Lower rentals, lower cost of living, reliable education opportunity, sunny climate, pollution-free environment and easy, outdoor lifestyle made it a logical choice . . . . it's just like going home."

Canadian Involvement

There are more than 40 Canadian companies already involved in Western Australian industry and include joint ventures.

The Premier of Ontario, the Hon. William Davis; Senator Sidney Buckwold; the Minister for Energy, Alberta, the Hon. Mervin Leitch; and the Minister for Economic Development, Nova Scotia, the Hon. Roland Thornhill, came in 1981.

Western Australia imported $52 million worth of goods from Canada in 1981/82 compared with $30 million in 1979/80 and $42 million in 1980/81.

Sulphur and fertilizer are the major imports.

Canadian businessmen are advised to treat Western Australia as a separate market from the rest of Australia.

Among other major imports are manufactured and semi-manufactured products including machinery and equipment for resource industries.

Thoughts for Canadian Businessmen

Canadian businessmen should consider a stop-over in Perth if they are visiting Australia as part of their itinerary. A ticket to Perth if part of their international ticket would cost far less than purchasing a return from Melbourne or Sydney once in Australia. Of course, the other consideration is that they make Perth either the entrance or exit to their Australian visit which would allow the Canadian businessman to take advantage of the close proximity to a fast expanding Southeast Asian market.

Western Australia should be treated as a separate market from the rest of Australia. Representatives or agents in the Eastern states do not always do justice to your products in Western Australia. For this reason, it only makes good sense that you should be looking to appoint a representative or partner in Western Australia itself.

Further Facts!

- The Stock Exchange of Perth has become the third largest exchange in Australia behind Sydney and Melbourne.
- Perth is serviced by the Port of Fremantle which is 12 km from the city centre.

In subsequent issues of Canada Commerce, we hope to be able to highlight those areas in which we believe Canadian companies can gain a share of the market.

Solid engineering, a highly skilled work force and innovative design on the part of the company, combined with a little help from federal government programs have made Macro Engineering Co. Ltd. of Mississauga .....

A Winner in Custom Machinery Design

For Mirek Planeta and John Bebok, president and vice-president of Macro Engineering Company Ltd., which they established five years ago, an advanced technological capability and aggressive sales promotion have been the cornerstones of success in the highly competitive business of making extrusion and packaging equipment.

New Canadians, Planeta from Czechoslovakia and Bebok from Hungary, they combined solid educational backgrounds in plastic chemistry and mechanical engineering, backed by diversified industrial experience both in Europe and Canada, to build a reputation for the firm both in Canada and abroad.

During its very short term of operation, it has successfully developed 20 different machines for Canadian and foreign packagers. These include a hot knife slitter, fabrene bottomers, automatic feeders and inserting stations for bags, coreless folder winders, and a corner-seal bag machine.

While most of the machinery development costs were absorbed by the company, the federal government shared in the development costs of the corner-seal bag machine through an Enterprise Development Program (EDP) grant of $62,500.

Within 18 months of final approval of the grant, sales had equalled the original three-year projection of $2 million, with exports accounting for a quarter of this amount.

To meet increased demand Macro's staff has doubled from 10 to 20, and the firm has moved to new quarters, two-and-a-half times the size of its original location.

But perhaps the most telling fact in today's business climate is the bottom line. For their first full-year operation in 1978, sales amounted to $287,000: by their fourth year this had climbed to $1.25 million, and sales for the year 1982 are expected to double again based on early returns. For example, sales for May 1982 reached $1.4 million compared to the previous year's total for the same month of $494,000.

Major customers in Canada stretch from Montreal to Vancouver and in the U.S. from Cleveland to Houston.

By the number of inquiries received as a result of their participation at the Chicago National Plastics Exposition, with the aid of a Program for Export Market Development (PEMD) grant, it is evident that the company will continue to grow in this sector.

Macro developments, such as a special sizing cage for bags, are protected by patents, but the company principals have been happy to extend their operations into the consulting field. Now, companies in the same business are beating a path to the Macro door looking for methods to up-grade their machines, using custom-engineered components developed by the Mississauga firm.

For Mirek Planeta and John Bebok, the application of their own initiative and skills, plus their use of available government programs, are paying dividends!

EDP Objective

The overall objective of the Enterprise Development Program (EDP) is to help the growth of the manufacturing and processing sectors of the Canadian economy by providing assistance to selected firms to make them more viable and internationally competitive.

The thrust of the program is to foster innovation in the design and development of new or improved products or processes and to assist adjustment to changing competitive circumstances.

The focus is on promising small and medium-sized firms prepared to undertake relatively high risk projects which are viable and promise attractive rates of return.

Who is Eligible

- Small and medium-sized firms engaged in manufacturing or processing activities. Also, under limited circumstances, firms in the services sector.
- Applicants for product development and product design assistance must be incorporated.
- Firms applying for adjustment assistance need not be incorporated to be eligible.

Method of Support

EDP provides support to eligible firms by:

- Sharing project costs. For the typical shared cost project, the EDP can make a contribution of up to 75 per cent of the eligible costs.
- Providing insurance on a term loan to finance the project. Loan insurance, which helps to facilitate the availability of funds on reasonable terms and conditions, can be provided for 90 per cent of a term loan from conventional lenders for a 1 per cent annual fee.

For further information on EDP and PEMD grants contact your nearest Regional Office.

Small Business Week is a co-operative effort of the Canadian Chambers of Commerce and the Federal Business Development Bank. The local chambers in hundreds of towns and cities throughout Canada were responsible for promoting a wide range of activities including those sponsored by the Bank.

Seminars Highlight Small Business Week

A workshop entitled "Managing in Turbulent Times", developed by the Federal Business Development Bank (FBDB) in response to a survey of some 4,000 small business people and presented during Small Business Week, has proved so popular that it will probably become part of the FBDB's on-going seminar or workshop series.

The workshop was introduced by the Bank as one of a wide variety of activities during Small Business Week in October. In Quebec it was developed in co-operation with the Ordre des comptables agréés du Québec.

The over-all theme for the week was the same as the title of the workshop, the purpose of which was to provide small business owners and managers with an opportunity to meet with others in similar circumstances to discuss common problems and offer solutions.

Highly popular "Managing in Turbulent Times" seminar and workshop, part of "Small Business Week", is to become part of the FBDB's on-going seminar series.

More than 70 of the workshops were presented. Each was of three hours duration and was free-of-charge during Small Business Week. An average of 30-35 people attended each session.

FBDB organizers said that the title and contents of the workshop were chosen to show small business managers how to face the challenges of the current difficult economic period and to prepare them to adapt quickly to changing times in order that their businesses are ready to meet the recovery period when it comes.

Though recognizing that these are difficult times, with the bankruptcy rate rising, they went on to say that business failures are still less than one per cent of the total number of small and medium-sized businesses in Canada.

A recent survey of business bankruptcies carried out by Dun and Bradstreet concluded that the overwhelming majority of these were due to poor management.

The workshop was planned as a Small Business Week activity because it was felt small business owners/managers could benefit from participating in a workshop session, and through discussions and exercises could learn new ways to deal with their problems.

In order to bring the different aspects of running a small business out in discussion, the workshop began with a questionnaire, which asked participants to select major problem areas each was experiencing in his business and to rank the top six in order of importance. An overview of the present business climate and a discussion of the results of the questionnaire followed. In this way, each workshop was tailored to suit the particular concerns and needs of its participants.

The questionnaire contained 26 questions and was the same as that which had been used by the Bank in its recent survey of 4,000 small businesses across Canada.

Results — both of the larger survey and among the groups in the workshop sessions — were surprisingly similar.

According to the survey, the main problem faced by small business owners is in the area of finance, divided among financial difficulties, high interest rates, cash flow, forecasting, bookkeeping and cost controls.

Marketing was ranked as the next largest problem area, with this broken out further into: promotion and advertising; sales; pricing policy; and market surveys.

The production and operations category came next, and comprised time management; inventory control; purchasing; and business evaluation. The personnel category was last and was led by staff motivation; hiring and selecting personnel; delegation; personnel relations; and business organization.

Following the questionnaire, a case study of an electronics manufacturing and distribution firm in difficulty was presented.

A 24-page workbook was provided, and participants listed and discussed problems in the case in the areas of finance, marketing, human resources, product/service and planning.

A broad discussion of important factors to consider in each of these areas followed, with a "personal checklist" at the end of each section which posed questions about the participants' own businesses, relating the problems and solutions of the firm in the case study to possible problems they might be experiencing in their own operation.

While final attendance totals at the workshops were not available when this article was written, they exceeded all expections with the activity being rated a "tremendous success" by both organizers and participants.

The Bank is now planning to incorporate "Managing in Turbulent Times" into its on-going series of seminars or workshops for small business owners and operators.

Seventeen full or half-day seminars on a broad range of topics from financial analysis and taxation to marketing and personnel administration are available at a nominal cost in towns and cities across Canada.

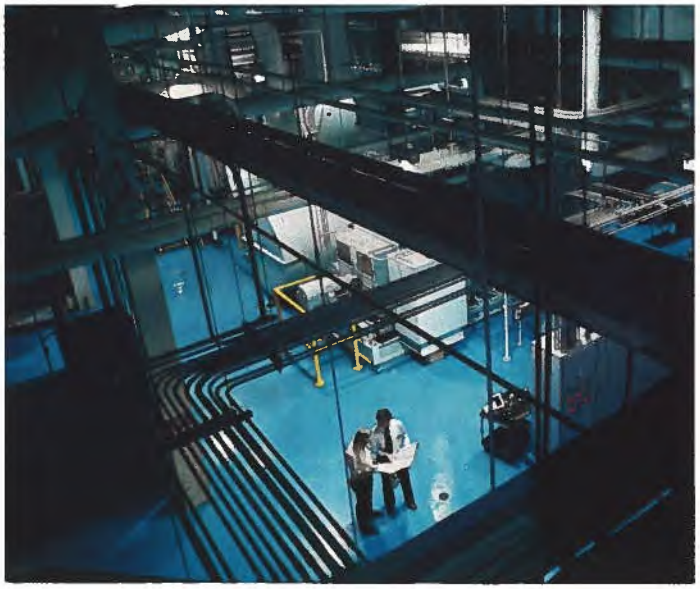
The seminars are popular with more than 32,000 people attending during the Bank's last fiscal year.

Many Canadian firms are benefitting from the acquisition of industrial licences and arranging manufacturing joint ventures. Canadian firms have obtained new products to manufacture, new industrial processes and valuable technical and marketing expertise through these arrangements. New employment opportunities, an increase in Canada's new technological base, increased use of Canadian resources and increased exports result from licence and joint venture arrangements and benefit local and regional economies.

How to Locate Industrial Licence and Joint Venture Opportunities

It's a big, exciting high-tech world! And in every corner of our globe creative individuals and firms have developed a cornucopia of commercially proven products and processes. These inventors, scientists and manufacturers are busy searching for firms in countries outside their own that are interested in acquiring the rights to manufacture and distribute these products, or to use the new industrial processes.

Where do interested Canadian firms find out about these or joint opportunities?



New Products Bulletin

In 1946 the Industrial Promotion Branch of the old Department of Trade and Commerce began the publication in English and French of a technology transfer bulletin, now the "New Products Bulletin". Only one other foreign publisher also initiated publication of a "licensing" brochure at that time.

The New Products Bulletin was an entirely new method of bringing to the attention of Canadian manufacturers opportunities to legally use, exclusively or non-exclusively, manufacture and sell new ideas for products, processes, methods or a combination of these, on which industrial property protection had been obtained.

In addition to entirely new concepts, the United States and European nations, in particular, had developed and commercially proved products and processes for which there was a need in Canada, an expanding market and the ready resources to be taken advantage of in forming commercial affiliations. Foreign manufacturers who could not service Canada's market were anxious to establish connections on this side of the ocean and mainly approached Canada's Trade Commissioners abroad for assistance in finding a licensee or joint venture partner here.

Thus, with the dissemination of such information through the New Products Bulletin, Canadian industry, investors and entrepreneurs nationwide were given an opportunity to use the most advanced developments of the day and a more efficient means was established to contact potential affiliates over the previous one-to-one method.

The publication of technology transfer bulletins has now become a recognized business. Large companies and most governments, both East and West, have entered into this function on their own behalf and licensing consultation has become a widespread profession. As well, many publications have been born and the dissemination of information has reached the electronic media.

The following are examples:

(1) Licenses sought
(2) Licenses offered

(1) **American Bulletin of International**
(2) **Technology Transfer**
International Advancement
P.O. Box 75537
Los Angeles, California 90075

(1) **Austrian Economic Bulletin**
(2) **The Austrian Trade Commission**
2 Bloor Street, East
Suite 3330
Toronto, Ontario M4W 1A8
or
736 Granville Street, Suite 1220
Vancouver, B.C. V6Z 1J2

(2) **Bulletin of the National Research Development Corporation**
N.R.D.C.
P.O. Box 326
Kingsgate House
66-74 Victoria Street
London, SW1E 6SL, England

(1) **Business America**
(2) **U.S. Department of Commerce**
14th Street & Constitution Avenue, N.W.
Washington, D.C. 20230
(Forms for submitting proposals for inclusion in Business America may be had from the U.S. Consulates General in Canada.)

(1) **CATECH Catalogue**
(2) **Louis Chalanset, Président**
INNOVATION 128
38, rue des Mathurins
75008 Paris (France)

(2) **Centre de Recherche Industrielle du Québec**
245, boulevard Hymus
C.P. 570, Pointe-Claire/Dorval
Pointe-Claire (Québec) H9R 4S6

(1) **Centre for Industrial Services TNO**
(2) **P.O. Box 94**
2600 AB Delft
The Netherlands

(2) **Czechoslovak Foreign Trade**
The Journal of the Chamber of Commerce and Industry
Rapid Czechoslovak Advertising Agency
11279 Praha 1, UL. 28,
Rijna 13, Czechoslovakia
(Licensing offers from POLYTECHNA, Foreign Trade Corporation Technical Cooperation Agency are carried as an irregular feature.)

(1) **Dr. Dvorkovitz and Associates**
(2) **P.O. Box 1748**
Ormond Beach, Florida 32074

(2) **Electric Power Research Institute**
Patent Administration and Licensing
EPRI
3412 Hillview Avenue
Palo Alto, California 94303

(2) **ERDA Inventions Available for Licensing**
Technical Information Center
P.O. Box 62
Oak Ridge, Tennessee 37830

(2) **The Foundation of Osaka Science and Technology Centre**
Technical Exchange Bulletin
The Office of International Affairs
1-8-4 Utsubo Hommachi, Nishi-ku
Osaka, Japan

(2) **Government Inventions for Licensing Weekly Government Abstracts**
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22161

(1) **I.D. Conseil**
(2) **12, bis rue Jean Jaurès**
92807 Puteaux, France

(1) **IIL Monthly Review**
(2) **Institute for International Licensing**
P.O. Box 1144
2109 Rijswijk (The Hague)
Oranjelaan 47, Holland

(2) **INDUSTRIAL TECHNOLOGY Available from Japan**
Research Development Corporation of Japan
Science Building No. 2
2-5 Nagata-Cho, Chiyada-ku
Tokyo 100, Japan

(1) **The Innovation Centre**
Enterprise House
Plassey Technological Park
Limerick, Ireland

(1) **International Business Proposals**
(2) **Hazen International**
38, rue Moscou
75008 Paris, France

(1) **International Licensing**
(2) **Circulation Manager**
92 Cannon Lane
Pinner, Middlesex HA5 1HT, England

(1) **International New Products Newsletter**
(2) **Transcommunications International Inc.**
Box 191
390 Stuart Street
Boston, Massachusetts 02177

(2) **Inventions Catalog**
Canadian Patents and Developments Ltd.
275 Slater Street
Ottawa, Ontario K1A 0R3

(2) **Inventions Licensing Marketing Agency**
P.O. Box 251
Tarzana, California 91356

(2) **Japanese Breakthroughs 1980**
Prestwick International Inc.
P.O. Box 205, Dept. 157
Burnt Hills, N.Y. 12027

(1) **Le Marché de l'Innovation**
(2) **A.N.V.A.R.**
13, rue Madeleine Michelis
92522 Neuilly-sur-Seine, France

(2) **Licensintorg Bulletin of Technical Information**
Assistant Trade Commissioner
Union of Soviet Socialist Republic
Trade Mission in Canada
95 Wurtemburg Street
Ottawa, Ontario K1N 8Z7

(1) **Licensing, Joint Ventures and Other**
(2) **Business Opportunities in Connecticut**
State of Connecticut Department of Economic Development
International Division
210 Washington Street
Hartford, Connecticut 06106

(1) **Machinery Lloyd International**
(2) **Information Services Department**
30A York Street
Twickenham TW1 3LJ, England

(1) **Made in Europe**
(2) **Technical Equipment Catalog**
21-29 Unterlindau
D-6 Frankfurt 1, Germany

(2) **The Market Place**
Supervisor, Industry Support Services
Division of Industry
Hearst Block, Queen's Park
Toronto, Ontario M7A 2E4

(2) **New Products and Processes**
Newsweek Building
444 Madison Avenue
New York, N.Y. 10022

(1) **J.G. Smith**
North East Lancashire Development Association
79-81 Church Street
Burnley
Lancashire BB11 2RS, England

(1) **ONTAP Overseas New Technology and Products**
Department of Economic Development
44 Pirie Street
Adelaide, South Australia 5001
(Available only to South Australian industry.)

(1) **Refac**
(2) **Refac Technology Development Corporation**
122 East 42nd Street
New York, N.Y. 10017
(High level industrial technology — no software nor consumer products.)

(2) **Selected Business Ventures**
Mr. Robert A. Roy
General Electric Company
Technology Marketing Operation
120 Erie Boulevard
Schenectady, N.Y. 12305

(2) **Significant NASA Inventions Available for Licensing**
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

(1) **TechTrade**
(2) **R.G.F. de Groot, Publisher**
VNU Data Publishing International bv
Post Office Box 71952
1008 ED Amsterdam
The Netherlands

(1) **TechTrade Europe**
(2)
(To be published in 1982. Contact the publishers of CATECH or TECHTRADE.)

(1) Technology of Know-How Available for License in Israel
Mr. Moshe Nahum, Director
Manufacturers Association of Israel
P.O. Box 29116
Tel Aviv, Israel
(R&D bulletin published in Hebrew.)

(1) World Technology
(2) Patent Licensing Gazette
Techni Research Associates Inc.
Room 1
Professional Center Bldg.
Willow Grove, Pennsylvania 19090

(1) Worldtech Newsline
(2) Control Data Worldtech. Inc.
7600 France Avenue S.
Edina, Minnesota 55435

Subscription prices for any of these technology transfer services may be obtained from the publishers.

From its sporadic publication of an average of 17 to 25 opportunities, the bilingual New Products Bulletin now includes 100 to 200 manufacturing opportunities each month and is distributed to more than 9,000 prospective or established Canadian manufacturers and industrial development practitioners. Its purpose is still to promote additional manufacturing in Canada, expand Canada's technological base and thereby increase the use of our resources and improve our competitive position in export markets.

Submissions for inclusion in the bulletin are sought by the Licensing Opportunities Section of the Business Centre, Department of Industry, Trade and Commerce and Regional Economic Expansion. This is done through contacts established with domestic and foreign inventors and their associations, research and development organizations, government research and industrial development departments, owners of industrial property rights from small to large high-tech companies, companies having new or advanced commercially proven products in other than Canadian markets, licensing intermediary professionals and publishers, government and university laboratories, etc.

Offers are submitted to the department here and abroad and new developments of which the section becomes aware are pursued to suggest production in Canada.

When competing for new technology or know-how and as a guide to attracting the interest of the licensor, remember to:

• **Investigate Leads Promptly**. Delay gives an edge to your competitors. If reasonably complete details cannot be provided immediately, a brief cable or a telephone call is an effective way to let the licensor know of your interest. Full details can then be provided by letter.

• **Follow-Up**. If you do not receive a reply within one month, it is recommended that you follow-up with a second letter and enclose a copy of your initial letter.

• **Reference Your Source of Information**. Inform the potential licensor that you learned of his offer through information obtained in the New Products Bulletin and copy the Canadian embassy or consulate identified in the lead.

• **Create an Impression of Personal and Exclusive Interest**. Letters should be typed individually. Keep correspondence friendly and interesting but avoid using slang.

• **Introduce Your Firm**. Establish it as a reliable affiliate. Furnish bank and trade references, pertinent company history, an annual sales report and relevant manufacturing experience.

• **Supply Complete Current Production Information**. Mention your production and distribution facilities. Descriptive and illustrative literature should be included but not relied on to do the whole selling job.

• **Use the Submittor's System of Measurement**. Imperial measurements have little meaning in many countries overseas.

• **Ask Specific Questions to Pinpoint Your Needs**. Foreign firms are increasingly ignoring correspondence from Canadian organizations that does not positively relate to their interests.

• **Send All Correspondence by International Mail**. Otherwise it will be delayed by weeks or months. Be sure you use the correct amount of postage and mark "VIA AIR MAIL" on the envelope.

You may also attend technology transfer, invention and new product shows. These are ideal meeting places for businesspersons interested in selling technology and know-how or in looking for inventions and new products to manufacture. Parties interested in investigating participation or attendance at any current or future show should obtain additional information from the exhibition sponsor. Dates are not available for shows held in alternating years.

Additional information can be obtained from the regional office of the Department of Industry, Trade and Commerce and Regional Economic Expansion located in your area. These offices can provide guidance, explain the advantages of attending trade fairs and the possibility of financial assistance through the PEMD program.

The following are the main invention and technology transfer exhibitions scheduled for 1983 and 1984:

EXHIBITION	CONTACT
11th ANNUAL WORLD FAIR FOR TECHNOLOGY EXCHANGE **TECHEX '83 EUROPA** Foire Internationale de Lyon Lyon, France April 26 to 29, 1983 **11th ANNUAL WORLD FAIR FOR TECHNOLOGY EXCHANGE** **TECHEX '83 AMERICAS** Ormond Beach, Florida March 22 to 25, 1983	Canadian Agent Mr. J. L. Eckebrecht Lomar Trading Company Ltd. 1384 Tyandaga Park Drive Burlington, Ontario L7P 1N3 Tel: (416) 632-3863 Telex: L0M 061-8673 for Dr. Dvorkovitz & Associates P.O. Box 1748 Ormond Beach, Florida 32074 U.S.A. Tel: (904) 677-7033 Telex: 810-832-6299
12th INTERNATIONAL EXHIBITION OF INVENTIONS AND NEW TECHNIQUES OF GENEVA Palais des Expositions Geneva, Switzerland March 23 to April 1, 1984	**Secrétariat, Salon International des Inventions** 8, rue du 31-Décembre CH-1207, Genève, Suisse Tel: (022) 36 59 49 Telex: 28 808
INOVA 83 **6th INTERNATIONAL INNOVATION WEEK** Porte Maillot Paris, France April 11 to 16, 1983	**TECHNOEXPO** 8, rue de la Michodière 75002 Paris, France Tel: (1) 742.92.56 Telex: 211897 F TECEXPO
CAN-TEC SPACE '83 Port-of-Spain, Trinidad April 19 to 21, 1983 (This is a transfer of technology exhibition, one of a series of such exhibitions sponsored by the Canadian International Development Agency.)	**Industrial Cooperation Division CIDA** Place du Centre 200, promenade du Portage Hull (Québec) K1A 0G4 Tel: (819) 997-7901
TECHNOLOGY/INVENTION NEW PRODUCT EXPO Greater Pittsburgh Expo Mart Pittsburgh, Pennsylvania May 17 to 20, 1983	**Gary F. Brown** **Director** **TECHNOLOGY/INPEX** 701 Smithfield Street Suite 400 Pittsburgh, Penn. 15222 U.S.A. Tel: (412) 288-1344
INVEX '84 **8th INTERNATIONAL EXHIBITION OF INVENTIONS AND NOVEL FEATURES** Fair Grounds Brno, Czechoslovakia October 1984	**Manager** **Brno Trade Fairs and Exhibitions** Vystaviste 602 00 Brno, Czechoslovakia Tel: 314 2942 Telex: 062 294

EXHIBITION	CONTACT
IETT '83 **INTERNATIONAL EXPOSITION FOR TECHNOLOGY TRANSFER** Market Hall Dallas, Texas October 11 to 13, 1983	**R. J. Manders** **Control Data** P.O. Box 0 — HQV005 Minneapolis, Minn. 55440 Tel: (612) 853-5643
IETT '84 **INTERNATIONAL EXPOSITION FOR TECHNOLOGY TRANSFER** New York Convention Center New York City, New York October 2 to 4, 1984	**R. J. Manders** **Control Data** P.O. Box 0 — HQV005 Minneapolis, Minn. 55440 U.S.A. Tel: (612) 853-5643
SITEF **SALON INTERNATIONAL DES TECHNOLOGIES ET ENERGIES DU FUTUR** Parc des Expositions de Toulouse Toulouse, France October 18 to 23, 1983	**Commissariat général du SITEF** **Chambre de Commerce et d'Industrie de Toulouse** 2, rue Alsace-Lorraine B.P. 1506 31002 Toulouse Cedex, France Tel: (61) 25.21.00 Telex: Chamcom 5318 77 F
IENA '83 Nuernberg Fairground Messezentrum Nuernberg Federal Republic of Germany November 2 to 6, 1983	**Frau Zetel** **AFAG-Ausstellungsleitung** Messezentrum Nuernberg D 8500 Nuernberg Bundesrepublik Deutschland
TECHNO 83 **6th INTERNATIONAL LICENSING AND JOINT VENTURE EXPO** Science and Technology Centre Chiyoda-ku, Tokyo, Japan November 8 to 12, 1983	**Techno Tokyo Executive Office** **The Nihon Kogyo Shimbun** **(The Japan Industrial Daily News)** Sankei Building, 7-2, Ohtemachi 1-chome Chiyoda-ku, Tokyo 100, Japan Tel: (03) 231-7111 Telex: J22235
EUREKA 32nd WORLD INVENTIONS EXHIBITION Expo Rogier Center Brussels, Belgium December 1983	**Secretariat** **SOGESTOR S.A.** rue Duquesnoy, 14 1000 Brussels, Belgium Tel: (02) 512.21.87 513.16.07 Telex: 62052 sofair

In April 1982 a seminar was held in Windsor, Ontario, on licensing, joint ventures and government aid to manufacturers. It was jointly sponsored by the Department of Industry, Trade and Commerce/Regional Economic Expansion (IT&C/REE), the Ontario Ministry of Industry and Trade and the Windsor-Essex County Development Commission. More such seminars may be hosted across Canada by IT&C/REE in response to local demand.

A subsequent Canada Commerce article will amplify other federal government aid to Canadian manufacturers in licensing and joint ventures through technology transfer.

For further information, contact:

Licensing Opportunities Section
Business Centre
Department of Industry, Trade and Commerce and Regional Economic Expansion
235 Queen Street
Ottawa, Ontario
K1A 0H5

Firms Taking Advantage of Licensing and Joint Venture Opportunities

Two firms have taken advantage of product licensing and joint venture opportunities in the Windsor, Ontario, area. They are Intercane Systems Inc. and Valient-Saimp Inc. The former acquired licences and the latter entered into the joint venture with an Italian firm.

Intercane Systems decided that new products were required to reduce the dependence of the company on the automotive industry for which it had supplied complex custom machinery for some years. A search of available opportunities led to the company obtaining licences and technical consulting expertise from five separate West German companies.

This allowed Intercane to build complete, highly automated turnkey plants to manufacture building panels from wood or other materials such as sugar cane stalks. The first such plant was built in the Philippines. Intercane subsequently developed technical improvements which were licensed back to the foreign firms on a revenue-producing basis.

Says Fedor Rajic of Intercane Systems, "We couldn't possibly have made the move to manufacture our own new product line without the technology we acquired under licence. It would have taken too long and too much money."

Mike Solcz of Valient-Saimp, long-time supplier of custom toolings to the automotive industry, is enthusiastic about the technical "show-how" and marketing support he is receiving from his new Italian partner.

"We flew some of our people over to Italy to train in their plant," he said, "and they moved an executive and his family over to Windsor to work right with us."

The result is a line of sophisticated grinding machines being manufactured in Windsor.

The Hon. Jean-Luc Pepin, Minister of Transport, examines some of the high technology equipment at NABU Manufacturing Corporation. On behalf of the Hon. Ed. Lumley, Minister of Industry, Trade and Commerce and Regional Economic Expansion, Mr. Pepin announced that NABU had been awarded $8,970,000 under the Support for Technology Enhanced Productivity (STEP) program of Mr. Lumley's department. The announcement was made at a special ceremony in the company's plant early in December. The money will assist NABU in carrying out massive research and development into cable television and microcomputers. With Mr. Pepin is John B. Kelly, chairman and chief executive officer of NABU (left), and John L. Hughes, NABU vice-president, consumer and education, planning and marketing (right).

A year in Review for the Export Development Board

The relative stability of Canada's export trade has been regarded as one of the few bright spots on the country's economic front over the past year. It was against this background that the Export Trade Development Board recently released its first annual report.

While the board hastened to disclaim credit for this situation, it does indicate the increasing interest that Canadians have in international trade, the major focus of the board.

Among the recommendations which the board, in its capacity as advisor to the Minister of State for International Trade, studied and passed on to the minister was the scrapping of plans to set up a national trading corporation pointing out that there were other priorities more urgently needed by the export community. These included improvements to Canada's export financing, the re-orientation of foreign aid to fewer selected countries and the development of export taxation policies based on international competitiveness rather than equity within Canada's borders.

On the broader front, the board hopes to make international competitiveness a household term in Canada and a central theme of economic policy. It feels that a great deal needs to be done to build up and maintain the level of public and government awareness of the importance of export growth to Canada's economic health.

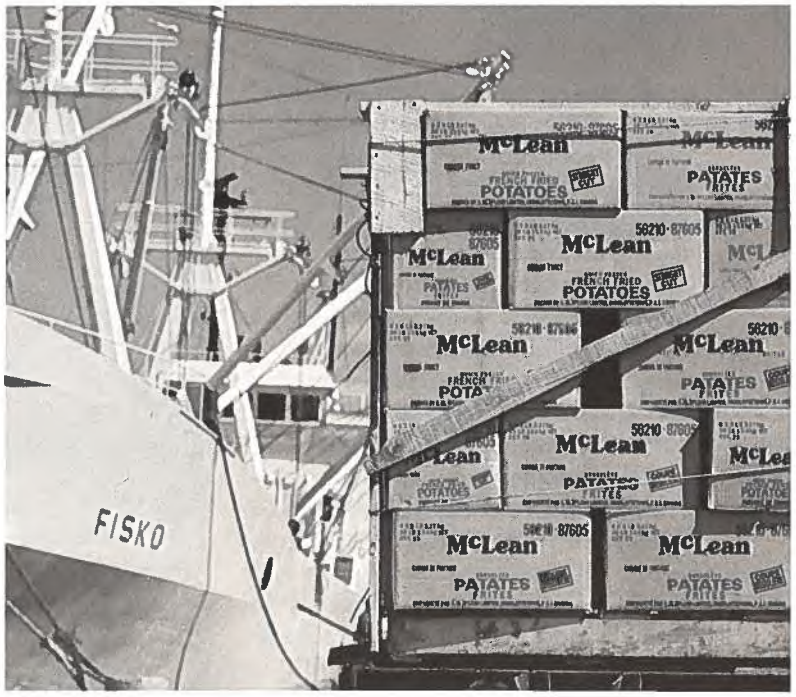
One method studied was the establishment of an outstanding export achievement award. While details of the program are still being worked out, it is planned to be launched early in 1983.

Consisting of senior executives from industry, labour and the public sector, the board was set up in 1981 by the then Minister of State for International Trade, Ed Lumley, on the recommendation of the Export Review Committee (Hatch Report).

In its first year of operation, the board met seven times in different parts of the country. The original criteria for meetings called for the board to hold half its meetings in Ottawa and the other half in various provincial centres. Using this format, meetings were held in Montreal, Toronto, Vancouver and Winnipeg. For the year 1982/83, Halifax, Edmonton, Fredericton and Regina will be on the agenda.

While international trade is constitutionally a federal responsibility, provincial governments have a keen interest in the issues being studied by the board and holding the meeting in different locations gives them the opportunity to establish an ongoing relationship with the board. It also assists the board in establishing contact with Canadian exporters, particularly the small, innovative firms which are just starting into the export market and would have difficulty travelling long distances to express their views to the board.

While there are many items on the immediate agenda of the board to be considered through its second year of operation, the central focus remains to make specific recommendations to the government on objectives and priorities for overall export policy.



Economists' Corner

Sectoral Prospects in Manufacturing

Canadian manufacturing industries have been hit hard by the recession over the past year or so although forecasters generally expect the alleviation of some of the problems in the near future. However, the road to recovery is all uphill and improvement is forecast to be comparatively slow.

The extent of the decline to date is captured in the accompanying table which indicates that the level of real output in manufacturing declined 14.0 per cent between the second quarter of 1981 and the second quarter of 1982. Similarly, manufacturing employment decreased by 9.4 per cent, or by about 158,000 jobs. At the same time, the rate of capacity utilization dropped from 85.6 per cent in the second quarter of 1981 to 71.3 per cent a year later, or by 14.3 percentage points! Therefore, within a year, the recession cut a deep, sharp trough in Canadian industrial activity which accounts for almost a quarter of total Gross Domestic Product.

In the current circumstances it is of interest to know which industrial sectors have carried the burden of sharply reduced activity and where temporary and permanent layoffs have resulted in diminished employment and considerably lower rates of capacity utilization. Also, it is of general interest and importance to the Canadian community of business, government and labour to know when and how the recovery in industrial activity will start and how it could be shared by the sectors affected. This article will attempt to deal briefly with these topics.

Real Output

As indicated, manufacturing output slumped badly from the second quarter of a year ago. The accompanying table ranks the contributions to the decline by the major manufacturing sectors. It is clear that the most affected sectors are clustered at the bottom in durable goods manufacturing. This corresponds to the nature of the recession which was brought about by reduced demand, at home and in external markets, in consumer expenditures on durable goods and, more recently, by the weak investment climate. High interest rates combined with weak real incomes undermined major purchases of durable goods thus curtailing their production.

As indicated by the table, primary metals, metal fabricating, wood products, machinery and electrical products together account for about half of the overall decline. By extending this group to include non-metallic mineral products, transportation equipment and furniture we reach approximately two-thirds of the decline in real output. In addition to the cyclical weakness evident in most of the sectors of durable goods manufacturing, it should be noted that structural adjustments in several sectors (transportation equipment, primary metals) are also underway and thus reinforce the decline.

Those sectors of manufacturing most sheltered from the recession appear in non-durable goods manufacturing at the top of the table. The first seven contributed only about one-tenth of the overall decline. Textiles, the sector in this category most affected by the recession, contributed less than 7 per cent to the overall drop.

Employment

The employment effects of the recession in manufacturing run a very close parallel to real output. The durable goods sectors accumulate the majority of the job losses and only slightly less relative to their share of lost output. This discrepancy is explained by the higher labour intensity of non-durable manufacturing and can be easily depicted from the table in the examples of clothing, textiles and others.

Capacity Utilization
The drop in capacity utilization is again very apparent among the durable goods producing sectors. The sharp drops in textiles and rubber and plastics are directly related to the decline in the transportation equipment sector (cars) which consumes a large proportion of their output (automotive fabrics, tires, etc.). The non-durable goods sectors, especially those at the top of the rank, realized declines in the rates of capacity utilization which are much smaller in magnitude and much closer to the average rates of operation.

The Outlook
Available private forecasts place the beginning of the recovery for consumer expenditures at the earliest in the fourth quarter of 1982 but with a greater probability in the early months of 1983. Merchandise exports are also expected to give some increased support to Canadian production of manufactured goods. However, the indicated rates of increase are not strong and are still subject to uncertainty about the mood of the consumer and developments in our major markets.

Nevertheless, some signs of optimism are beginning to appear in the generally depressed climate including the recent decline in interest rates and the modest upturn in export activity. Furthermore it is believed that the inventory cycle is close to coming to an end.

Sectorally, the recovery will likely be reflected first and foremost in those same sectors that experienced the deepest declines, i.e. the durable goods sectors. The forecasts suggest that growth will begin with increased activity in transportation equipment (cars), wood products and to a lesser extent in electrical and electronic products and primary metals. The machinery industry, however, is not anticipated to recover until late 1983 or early 1984 since investment normally lags the recovery generally.

Non-durable goods industries are also expected to share in the recovery. It appears that food and beverages, paper and allied, printing and publishing and rubber and plastics have the best chance of emerging first from the recession.

MANUFACTURING
CHANGES IN OUTPUT, EMPLOYMENT AND CAPACITY UTILIZATION
(2 Quarter 1981 — 2 Quarter 1982)

	Real Output (%)	Employment (%)	Capacity Utilization (% points)
MANUFACTURING	−14.0	−9.4	−14.3
	Contribution to Growth or Decline (−)		
Manufacturing total	−100.0	−100.0	
Tobacco Products	0.1	−0.1	−0.1
Knitting Mills	−0.7	−1.5	−7.8
Leather Products	−1.1	−1.8	−19.1
Petroleum & Coal Products	−1.1	0.8	−11.3
Miscellaneous Manufacturing	−2.3	−4.3	−12.2
Printing	−2.7	−0.6	−9.4
Food and Beverages	−3.0	−4.1	−5.2
Furniture	−3.4	−4.8	−25.2
Rubber & Plastics	−3.7	−1.0	−16.2
Clothing	−3.7	−8.2	−17.2
Chemicals	−4.7	−1.4	−11.7
Transportation Equipment	−6.2	−11.0	−7.3
Non-Metallic Mineral Products	−6.4	−4.2	−21.0
Paper & Allied Products	−6.5	−5.3	−11.7
Textiles	−6.7	−7.6	−28.0
Electrical Products	−6.9	−5.1	−13.8
Machinery	−7.0	−4.2	−18.2
Wood Products	−7.6	−14.0	−23.7
Metal Fabricating	−11.8	−11.1	−18.7
Primary Metals	−14.6	−10.7	−24.7

The anticipated employment effects of the recovery, however, are not as promising, especially in its early stages. Manufacturing industries are expected to stress productivity and cost cutting in the near term; therefore, in order to restore their eroded profits and competitive position they will be much slower in rehiring and/or increasing their payroll levels.

R.J. Konecny
Economic Intelligence Directorate
Office of Policy Analysis
Industry, Trade and Commerce/
Regional Economic Expansion
Ottawa, Ontario K1A 0H5
Tel: (613) 995-6384

Promotional Projects Program 1982/83

The following list covers the confirmed and proposed 1982/83 promotional projects for the European, Pacific, Asian, African and Middle Eastern areas as well as the United States, Latin America and the Caribbean. Since some of these events are subject to change, subsequent CANADA COMMERCE editions will carry updated lists so that those planning to attend can adjust their schedules.

EUROPEAN AREA
(613) 996-5555

TRADE FAIRS AND INFORMATION BOOTHS

Project No.	Event	Date	Project Manager
82/47518	HEIMTEXTIL '83 — International Trade Fairs for Home Textiles Frankfurt, West Germany	Jan. 13-17, 1983	W. Roberts
82/47537	International Spring Fair 1983 Birmingham, England	Feb. 6-10, 1983	J. Harman
82/47535	ISPO '83 (Spring) — 18th International Sports Equipment Exhibition Munich, West Germany	Feb. 24-27, 1983	L.V. Ford
82/47538	Domotecnica '83 — International Fair for Household Appliances, Fittings and Components Cologne, West Germany	Feb. 9-12, 1983	L. Sarda
82/47536	Frankfurt Music Fair Frankfurt, West Germany	Feb. 5-9, 1983	H. Schroeter
82/47557	International Food Exhibition London, England	Feb. 28 - Mar. 4, 1983	W. Roberts
82/47556	Batibouw '83 — International Building and Decorating Show Brussels, Belgium (Information Booth)	Feb. 25 - Mar. 6, 1983	J. Harman
82/47540	SIMA '83 — 54th International Exhibition of Farm Machinery Paris, France	Mar. 7-14, 1983	L.V. Ford
82/47541	SIA — International Agricultural Show Paris, France	Mar. 7-14, 1983	L.V. Ford
82/47558	EQUITANA '83 — Horse Show Essen, West Germany (Information Booth)	Mar. 2-7, 1983	J. Harman
82/47560	21st Children's Book Fair Bologna, Italy	Mar. 3-6, 1983	J. Harman
82/47545	Leipzig International Spring Fair Leipzig, East Germany (Information Booth)	Mar. 13-19, 1983	J. Quarrington

TRADE MISSIONS

Project No.	Event	Date	Project Manager
82/48517	Coal Mission to Scandinavia	Mar. 1-15, 1983	H. Schroeter

PACIFIC, ASIAN, AFRICAN AND MIDDLE EASTERN AREA
(613) 593-6301

TRADE FAIRS AND INFORMATION BOOTHS

Project No.	Event	Date	Project Manager
82/47616	Sporting Goods and Sportwear Show at CTC Tokyo, Japan	Jan. 18-20, 1983	D. Ladouceur
82/47633	Middle East Electricity and Electronics Show Jeddah (Information Booth)	Feb. 5-9, 1983	R. Doré
82/47629	Middle East Communications Show (MECOM) Bahrain (Information Booth)	Feb. 7-10, 1983	R. Doré
82/47634	Saudi Food Show Riyadh (Information Booth)	Feb. 13-17, 1983	R. Doré
82/47619	Canadian Electronics Show at CTC Tokyo, Japan	March 1983	D. Ladouceur
82/47606	Foodex Japan '83 — The 8th International Food Exhibition Tokyo, Japan	Mar. 14-18, 1983	G. Richens
82/47605	In-store Restaurant Fish Products Promotion in Japan	Mar. 7-18, 1983	T. Gervais
82/47609	Catalogue Shows — Newsletter and Direct Mailing Campaign New Zealand	March 1983	K.J. Tyrrell
82/47625	Manufactured Wood Products Show at CTC Tokyo, Japan	Mar. 15-17, 1983	D. Ladouceur
82/47630	Middle East Oil Show Bahrain (Information Booth)	Mar. 7-10, 1983	R. Doré
82/47636	Cairo International Trade Fair Cairo, Egypt	March 1983	
82/47604	In-Store Food and Beverage Promotions In Japan	All year	D. Ladouceur
82/47608	Canada Trade Centre Shows Tokyo, Japan	All year	D. Ladouceur

TRADE MISSIONS

Project No.	Event	Date	Project Manager
82/48673	Industrial Process Control and Instrumentation Mission to Saudi Arabia and the Gulf States	Jan. 3-10, 1983	T. Gervais
82/48647	Fish Products Mission to Nigeria and Egypt	February 1983	T. Gervais
82/48611	Packaging and Printing Machinery Mission to Australia and New Zealand	Feb. 7-18, 1983	G. Richens
82/48680	Computer Technology Mission to Saudi Arabia and Kuwait	Feb. 1-10, 1983	B. Brusenbauch
82/48654	Sawmill and Forest Harvesting Equipment Mission to Australia	Feb. 14-25, 1983	G. Richens

TRADE MISSIONS

Project No.	Event	Date	Project Manager
82/48508	Buyers Mission from Australia to the Canadian Hardware Show — Toronto	Feb. 20-27, 1983	G. Richens
82/48635	Gas and Oil Processing and Services Mission to Saudi Arabia	February 1983	T. Gervais
82/48614	Jewellery/Silverware Products Mission to Australia and New Zealand	February 1983	D. Ladouceur
82/48630	Primary Wood Products Mission to China	March 1983	D. Ladouceur
82/48606	Heavy Electrical Equipment Mission to Australia	Mar. 13-26, 1983	G. Richens
82/48678	Canola Oil Mission to Morocco	Mar. 1-15, 1983	T. Gervais
82/48503	Trading House Mission to India, Thailand, Singapore and Australia	Mar. 7-24, 1983	G. Richens
82/48642	Canola Oil Seminars in Saudi Arabia and Algeria	Mar. 15-20, 1983	T. Gervais

UNITED STATES AREA
(613) 593-5467

TRADE FAIRS AND INFORMATION BOOTHS

Project No.	Event	Date	Project Manager
82/47718	AFCEA — Armed Forces Communications and Electronics Association Exposition San Francisco, California	Jan. 4-6, 1983	J. Butcher
82/47713	America East '83 — Building Materials Show Boston, Mass.	Jan. 7-9, 1983	M. Samson
82/47714	National Housewares Show Chicago, Illinois	Jan. 16-20, 1983	K. Munro
82/47724	NAMM — National Association of Music Merchants, Music Exposition Anaheim, California	Jan. 21-24, 1983	M. Samson
82/47719	Interpipe '83 — Oil and Gas Pipeline Show Houston, Texas (Information Booth)	Feb. 1-3, 1983	J. Butcher
82/47726	Upper Mid West Hospitality Show Minneapolis, Minnesota	Feb. 6-8, 1983	
82/47723	PAS '83 — Pacific Automotive Show Reno, Nevada	Feb. 1-3, 1983	K. Munro
82/47715	Snow Show Las Vegas, Nevada	March 1983	J. Butcher
82/47725	Mini-Food Show Minneapolis, Minnesota	March 1983	K. Munro

TRADE MISSIONS

Project No.	Event	Date	Project Manager
82/48504	U.S. Marine Buyer Mission to Toronto International Boat Show	Jan. 10-16, 1983	T.E. Matthews
82/48709	Health Care Products Mission to Philadelphia, Penn.	February 1983	J. Butcher

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TRADE FAIRS AND INFORMATION BOOTHS

Project No.	Event	Date	Project Manager
82/47814	Canadian Automotive Aftermarket Show Mexico City, Mexico	Feb. 28 - Mar. 4, 1983	S. Courtney
82/47811	Aqua Expo '83 — International Water Technology Exposition and Conference, Acapulco, Mexico	Mar. 1-4, 1983	M. Leigh
82/47812	Canadian Building Products and Hardware Show Port of Spain, Trinidad	Mar. 6-12, 1983	P. Schutte

TRADE MISSIONS

Project No.	Event	Date	Project Manager
82/48809	Alternative Energy (Mini-Hydro) Mission and Seminar in Mexico	Feb. 1983	P. Schutte
82/48510	Mission to Canadian Hardware Show from Barbados, Trinidad, Cuba, Mexico, Venezuela and Argentina	February 1983	E. Kelso
82/48808	Ocean Industry (Oil & Gas Developments) Mission to Brazil	March 1983	S. Courtney
82/48505	Airport Vehicles Mission to Latin America	Mar. 7-19, 1983	M. Leigh

Multilateral Project Opportunities

The following list of multilateral project opportunities has been prepared to inform Canadian companies of the projects being considered or already approved for financing by the international financing institutions such as the World Bank, the Asian Development Bank and the Inter-American Development Bank.

In order to capitalize on these export opportunities, experience has shown that getting in on the ground floor by advance marketing activities or use of local agents increases the probability of success. Smaller companies may wish to consider participating as sub-suppliers or as part of a consortium bidding on equipment packages.

PLEASE NOTE that further information is available on approved projects only and may be obtained from the contacts listed for each country. These officers are prepared to assist companies in formulating their bids, and to suggest the appropriate contacts for companies interested in obtaining insurance, bonds and performance guarantees which are often required as part of tender specifications.

In addition, Canadian Trade Commissioners abroad are ready to assist you in pursuing business, such as arranging meetings with personnel at the executing agencies.

Also, liaison officers in Washington and Manila are prepared to undertake enquiries on your behalf. However, we recommend that you initially contact the officer listed for each country.

Due to a reorganization in the department, certain names and telephone numbers are subject to change. Sorry for any convenience this may cause.

The Canadian Commercial Corporation, through the Export Supply Centre, can assist suppliers with bids on Canadian equipment packages for multilateral projects when required by the private sector. For further information, please call Bob Burwash (819) 997-5715.

KEY:

ASDB — Asian Development Bank
IADB — Inter-American Development Bank
WB (IBRD) — World Bank (International Bank for Reconstruction and Development)
WB (IDA) — World Bank (International Development Agency)

AFRICA
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	UNDER CONSIDERATION	APPROVED
Cameroun **Contact:** J. Desjardins	Second Special Rural Development Fund (FSAR II) WB (IBRD) — $40.0 M	
Egypt, Arab Republic of **Contact:** E. Gorn	Education V WB — to be determined	
Ethiopia **Contact:** M. MacNeil	Agricultural Services WB (IDA) — $10.0 M	
Malawi **Contact:** D. Wynne		Lilongwe water supply engineering project WB (IDA) — $4.0 M
Mauritania **Contact:** J. Desjardins		Technical assistant for managing economy WB (IDA) — $4.6 M
Rwanda **Contact:** R. Bélanger	Rural Development Research WB (IDA) — $15.0 M Health/Population WB (IDA) — $15.0 M	
Sudan **Contact:** J. Arsenault	Cotton Marketing WB (IDA) — to be determined Education III WB (IDA) — to be determined	
Togo **Contact:** J. Desjardins		Provide technical assistance WB (IDA) — $3.5 M
Tunisia **Contact:** J. Arsenault		Project preparation WB — $4.5 M
Upper Volta **Contact:** J. Desjardins	Fertilizer Credit WB (IDA) — $8.0 M	Two agricultural development projects WB (IDA) — $11.5 M Pilot Project — Agricultural Development WB (IDA) — $7.0 M

AFRICA
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	UNDER CONSIDERATION	APPROVED
Zaire **Contact:** R. Bélanger	Petroleum Exploration WB (IDA) — $5.0 M Petroleum WB (IDA) — $10.0 M	Road maintenance and rehabilitation program WB (IDA) — $43.5 M Sixth Credit — development finance company WB (IDA) — $21.5 M
Zimbabwe **Contact:** D. Wynne		Small farm credit project WB (IDA) — $30.4 M

ASIA
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	UNDER CONSIDERATION	APPROVED
Bangladesh **Contact:** S. Beck		Second deep tubewells WB (IDA) — $68.0 M
Burma **Contact:** S. Beck	Rangoon General Hospital Consultants will be required. $30.0 M (approximately) Transport/Distribution WB (IDA) — $20.0 M Seeds WB (IDA) — $15.0 M	
India **Contact:** M. Vandenhoff		Irrigation project WB (IDA) — $31.0 M Support large scale irrigation system WB — $127.0 M First irrigation project WB (IDA) — $80.3 M Social forestry project WB — $33.0 M
Sri Lanka **Contact:** S. Beck		Diesel power project WB — $42.7 M

SOUTH EAST ASIA
(613) 996-8661

	UNDER CONSIDERATION	APPROVED
Indonesia **Contact:** J. Brenchley	Urban Development Sector Profile Consultant will be recruited by the Bank. ASDB — to be determined	Develop pulp and paper project WB — $5.5 M
Philippines **Contact:** J. MacLeod	Cagayan River Hydropower Development (3). Consultants will be required. ASDB — to be determined Power VIII WB — $150.0 M	Vocational training WB — $24.4 M
Thailand **Contact:** C. Latour		Land reform WB — $17.0 M

JAPAN AND SOUTH PACIFIC
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	UNDER CONSIDERATION	APPROVED
Solomon Islands **Contact:** R.J. Rutherford	Energy Sector Study Consultants will be required. ASDB — to be determined	

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	UNDER CONSIDERATION	APPROVED
People's Democratic Republic of Yemen **Contact:** P. Furesz	Rural Water Supply WB (IDA) — to be determined Urban II WB (IDA) — to be determined	Third fisheries project WB (IDA) — $6.0 M

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	UNDER CONSIDERATION	APPROVED
Argentina **Contact:** J.G. Carson	Hidroelectrica Norpatagonica, S.A. (HIDRONOR) Piedra del Aguila hydroelectric project IADB — U.S. $1.8 billion	
Bolivia **Contact:** Cynthia Hartman	Republic of Bolivia (Empresa Nacional de Electricidad — ENDE) Rural electrification IADB — U.S. $15.0 M Total cost — U.S. $21.0 M Republic of Bolivia (Instituto Nacional de Preinversion — INALPRE) IADB — U.S. $19.0 M Total cost — U.S. $12.5 M Republic of Bolivia (Corporacion Regional de Desarrollo de Tarija — CODETAR) IADB — U.S. $8.0 M Total cost — U.S. $11.0 M Republic of Bolivia (Yacimientos Petroliferos Fiscales Bolivianos — YPFB) Exploitation and exploration of oil fields. IADB — U.S. $100.0 M Total cost — U.S. $180.0 M	
Brazil **Contact:** G. Wright	Transmission Lines Project. Expansion of transmission system of Companhia Hidro Electrica do Sao Francisco. IADB — U.S. $100.0 M Total cost — U.S. $380.0 M Republic of Brazil (Companhia Brasileira de Amazenagem — CIBRAZEM) Construction of grain storage facilities. IADB — U.S. $40.0 M Republic of Brazil (Companhia Estadual de Energia Eletrica) Expansion of electrical services. IADB — U.S. $37.5 M Total cost — U.S. $135.0 M	Carajas Iron Ore Project Companhia Vale de Rio Doce (CVRD) CVRD will purchase 32,500 metric tons of rails, type TR-68 through international competitive bidding. WB (IBRD) — to be determined Integrated Rural Development Project Federative Republic of Brazil IADB — U.S. $36.8 M
Chile **Contact:** J.G. Carson	Republic of Chile (Corporacion de Fomento de la Produccion — CORFO) Global Infrastructure Investments in rural electrification and water supply and in urban transportation and sanitation. IADB — U.S. $180.0 M	Global Multisectoral Credit Program. Corporacion de Fomento de la Produccion (CORFO) Expand sectors: agriculture, mining industry, fisheries, tourism. IDB — U.S. $180.0 M

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	UNDER CONSIDERATION	APPROVED
Colombia **Contact:** J. Prevost	Republic of Colombia (Corporacion Financiera de Fomento Agropecuario y Exportaciones — COFIAGRO) Construction of storage facilities IADB — U.S. $17.8 M Total cost — U.S. $38.0 M Republic of Colombia (Fondo Nacional de Proyectos de Desarrollo — FONADE) Stage IV of national preinvestment program. IADB — U.S. $30.0 M Total cost — U.S. $60.0 M Republic of Colombia (Corporacion Electrica de la Costa Atlantica) Construction of two hydroelectric plants on the Sinu River. IADB — U.S. $150.0 M Republic of Colombia (Empresa Nacional de Telecommunicaciones — TELECOM) Second stage of rural telephone system. IADB — U.S. $70.0 M Instituto Colombiano de Electricidad (ICEL) Construction of six plants in first stage of small-scale hydroelectric program. IADB — U.S. $10.0 M Empresa de Acueductos de Santa Marta Construction of water and sewage facilities. IADB — U.S. $25.0 M Instituto Colombiano de Fomento a la Educacion Superior University development IADB — U.S. $45.0 M Total cost — U.S. $110.0 M	Subsector Project for Rural Basic Education Procurement of goods and services. IBRD — U.S. $15.0 M Mesitas Hydroelectric Project Design, manufacture, test and supply auxiliary equipment. IBRD — To be determined Preinvestment Studies IDB — U.S. $30.0 M
Ecuador **Contact:** Cynthia Hartman	Republic of Ecuador (Empresa Municipal de Agua Potable — EMAP) Quito Potable Water System IADB — U.S. $34.0 M Total cost — U.S. $60.0 M Republic of Ecuador (Instituto Ecuatoriano de Electrificacion — INECEL) Prefeasibility and feasibility studies of hydroelectric projects and non-conventional sources of energy. IADB — U.S. $20.0 M Total cost — U.S. $30.0 M Republic of Ecuador (Escuela Politecnica del Litoral — ESPOL) Expansion of school for training technicians. IADB — U.S. $28.5 M Total cost — U.S. $40.0 M Republic of Ecuador (Ministerio de Obras Publicas y Comunicaciones) Construction of rural roads. IADB — U.S. $25.0 M Total cost — U.S. $35.0 M	Vocational Training Project Expansion of Training Service (SECAP) WB (IBRD) — U.S. $16.0 M

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	UNDER CONSIDERATION	APPROVED
Paraguay **Contact:** J.G. Carson	Administracion Nacional de Electricidad — ANDE Expansion and improvement of electricity network. IADB — U.S. $21.0 M Health Project Expand coverage of health services to rural and urban areas. IADB — U.S. $18.2 M Total cost — U.S. $24.2 M	Republic of Paraguay Eje Norte Rural Development Project WB (IBRD) — U.S. $22.4 M
Peru **Contact:** Cynthia Hartman	Artisanal Fishery Infrastructure Program IADB — U.S. $14.5 M Total cost — U.S. $28.0 M Rehabilitation Project Improve potable water services, education, health, transportation, etc. IADB — U.S. $11.2 M Total cost — U.S. $16 M Republic of Peru (Ministerio de Salud) Stage IV of rural potable water program. IADB — U.S. $10.0 M Republic of Peru (Electricidad del Peru) 600,000 kw hydroelectric project on Mantaro River. IADB — U.S. $150.0 M Government of Peru Primary Health Project Construction of health services, provision of medical and maintenance equipment, vehicles and supplies. WB (IBRD) — U.S. $28.0 M	Rehabilitation of Flood-damaged Regions Emergency program to restore and expand coverage of sanitation, education, etc. IADB — U.S. $11.2 M Seventh Power Project Expand power distribution facilities in Lima. IBRD — U.S. $81.2 M Total cost — U.S. $265.6 M Higher Agricultural Education Project Rehabilitation and expansion of facilities of the National Agrarian University (NAU). WB (IBRD) — U.S. $17.0 M
Uruguay **Contact:** J.G. Carson	Scientific and Technological Research for Fisheries Development Instituto Nacional de Pesca — INAPE IADB — U.S. $10.0 M Total cost — U.S. $13.0 M Republic of Uruguay (Cooperative Nacional de Productores de Leche — CONAPROLE) Modernization of dairy products. IADB — U.S. $41.0 M Republic of Uruguay (Instituto Nacional de Pesca — INAPE) Fishery development. IADB — U.S. $10.0 M Total cost — U.S. $13.5 M	

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	UNDER CONSIDERATION	APPROVED
Bahamas **Contact:** Jackie Snyder		Vocational Training and Technical Education Provision of equipment, furniture, etc. WB (IBRD) — U.S. $7.0 M
Barbados **Contact:** Jackie Snyder		Wind Power Generation Studies IBD — U.S. $1.5 M

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	UNDER CONSIDERATION	APPROVED
Costa Rica **Contact:** F.R. Harris	Project for Municipal Development Instituto de Fomento y Asesoria Municipal — IFAM Improve rural living standards. IADB — U.S. $9.75 M Total cost — U.S. $15 M Republic of Costa Rica (Corporacion Zona Franca de Exportacion) Construction of infrastructure of two industrial parks. IADB — U.S. $11.0 M Republic of Costa Rica (Ministerio de Agricultura y Ganaderia — MAG) Integrated agricultural production project. IADB — U.S. $40.0 M Ministerio de Obras Publicas y Transportes Integrated information system IADB — U.S. $408,580	
Dominican Republic **Contact:** M. Belanger	Corporacion Autonoma del Acueducto de Santo Domingo (CAASD) Second state potable water system IADB — U.S. $150.0 M Total cost — U.S. $260.0 M	
El Salvador **Contact:** F.R. Harris	Republic of El Salvador (Banco Central de Reserva — BCR) Global loan for industry IADB — U.S. $40.0 M Total cost — U.S. $50.0 M Republic of El Salvador (Ministerio de Planificacion) Comprehensive development of Northwest IADB — U.S. $600,000 Total cost — U.S. $850,000	
Guyana **Contact:** Jackie Snyder		Dairy Development Study Ministry of Agriculture IADB — U.S. $370,000 Republic of Guyana Health-Care Delivery System Project Construction of health care facilities. IADB — U.S. $8.8 m
Haiti **Contact:** M. Belanger	Republic of Haiti (Institut de Developpement Agricole et Industriel) Credit program IADB — U.S. $20.0 M Republic of Haiti (Artibonite Valley Development Authority) Construction of irrigation systems. IADB — U.S. $17.6 M Total cost — U.S. $22.1 M	

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	UNDER CONSIDERATION	APPROVED
Mexico **Contact:** R. Brooks	San Fernando Rainfed Agricultural Development Project Land clearing; construction of roads, etc. WB (IBRD) — U.S. $138.4 M Total cost — U.S. $350.7 M Medium-Size Cities and Sinaloa State Water Project Improve water supply facilities. WB (IBRD) — U.S. $200.0 M Banco Nacional de Obras Y Servicios Publicos, S.A. (Fondo Fiduciario de Fomento Municipal) Global credit program for municipal development. IADB — U.S. $80.0 M Total cost — U.S. $80.0 M	
Nicaragua **Contact:** F.R. Harris	Republic of Nicaragua (Instituto Nicaraguense de Acueductos y Alcantarillados — INAA) Improve water supply. IADB — U.S. $20.1 M Republic of Nicaragua (Direccion General de Vialidad — DGV) Construction or improvement of feeder roads. IADB — U.S. $30.0 M	Asturias Hydroelectric Project Republic of Nicaragua Increase amount of water to two existing hydroelectric plants. IADB — U.S. $34.4 M Total cost — U.S. $49.2 M
Panama **Contact:** F.R. Harris	Second Water Supply and Sewerage Project Construction and improvement of water supply, etc., systems. WB (IBRD) — U.S. $21.6 M Total cost — U.S. $40.0 M Republic of Panama (Instituto de Recursos Hidraulicos y Electrificacion) Studies for Phase I of Changuinola Hydroelectric Project IADB — U.S. $27.0 M Total cost — U.S. $46.0 M	Second Port Project Republic of Panama WB (IBRD) — U.S. $24.4 M Republic of Panama (Ministerio de Obras Publicas) Improvement of Highway IADB — U.S. $18.1 M Total cost — U.S. $32.9 M
Regional	Union de Exportadores del Banano Study on utillzation of banana waste for energy. IADB — U.S. $322,000	Development of Caribbean Export Industries IADB — U.S. $600,000

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