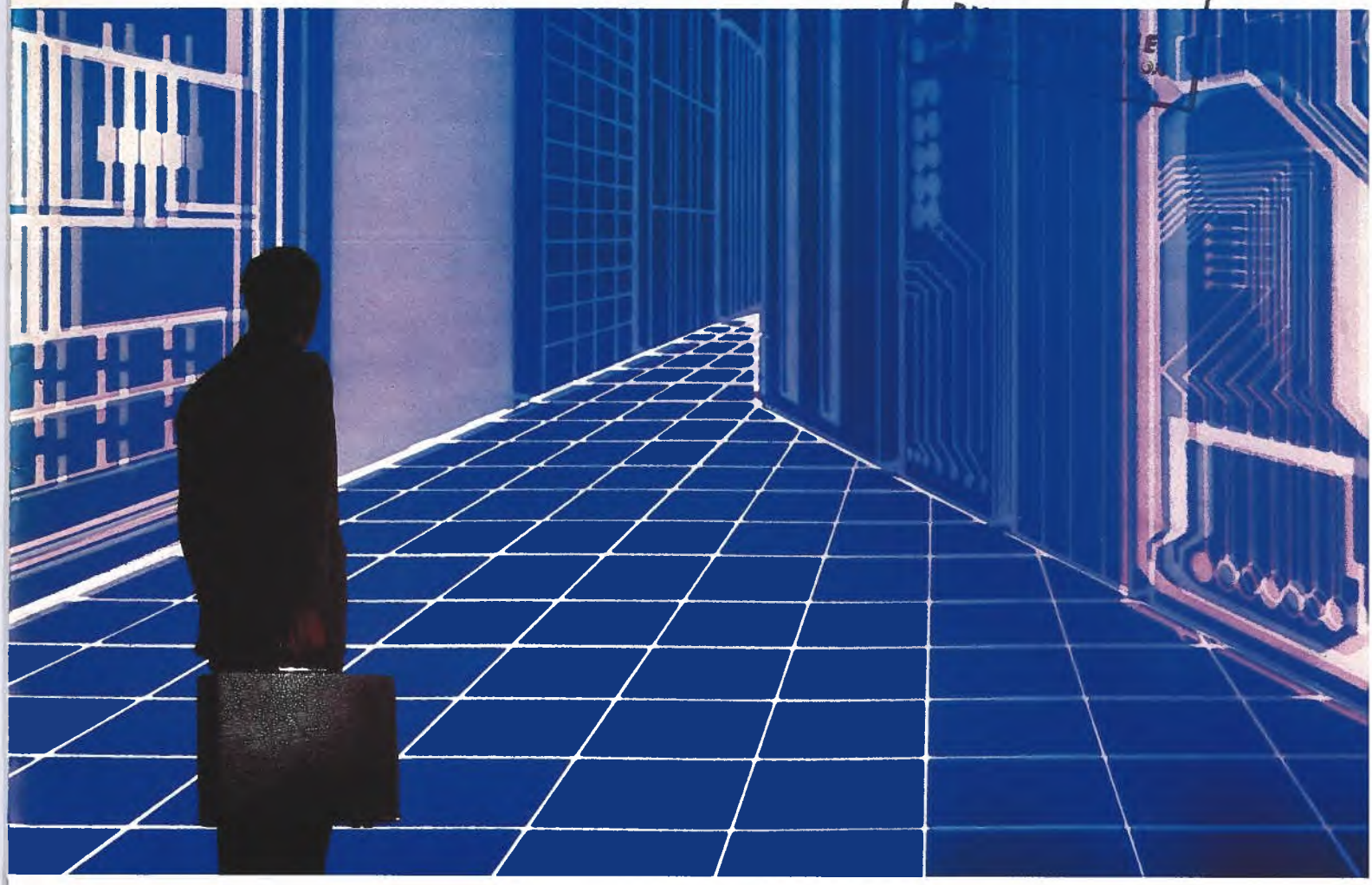
Canada Commerce

October 1984



Canada's North — A Profile Begins

The Department's New Ministers

Innovation

Canada Commerce

The Honourable Sinclair Stevens
Minister of Regional Industrial Expansion

The Honourable Thomas McMillan
Minister of State for Tourism

The Honourable André Bissonnette
Minister of State for Small Business

6
Cover: Competition on world markets must be on the basis of innovation, better quality, and faster turnaround.

12
Across Canada: Daring Canadian helicopter firm goes worldwide with more than 50 bases in dozens of nations.

26
Special Feature: The growing north is the subject of a new series which starts with a celebration in Yellowknife.

Featured This Month:

Regular Features:
Business Review — 2

Canadian Companies & Products — four-page centre spread insert

List of Regional Offices — inside back cover.

OCTOBER IS EXPORT TRADE MONTH

Canada Commerce
October 1984
Published by the Department of Regional Industrial Expansion (Communications Branch)
Established 1904

Correspondence to:
Canada Commerce (BCOM)
Department of Regional Industrial Expansion
Ottawa, Ontario K1A 0H5

Telephone:
(613) 995-8900

Subscription and Distribution:
(613) 995-5771

Please note that Canada Commerce is available in Canada only, free of charge to interested Canadian manufacturers and business persons.

(Également publié en français)

Business Review

Canada Awards for Excellence

In the *Canada Commerce* coverage of the first-ever "Canada Awards for Excellence", we inadvertently overlooked the two winners in the Marketing Category.

Westar Timber Ltd. of Vancouver received the Award of Excellence in this category for its move into the production of customer-specific lumbers for overseas markets, particularly in Japan and Britain. Because of this production — which eliminates the need for foreign importers to regrade lumber after arrival — Westar's overseas sales went from zero in 1981 to 50.2 million board feet in 1983 and will rise to an estimated 120 million board feet this year.

The Award of Merit went to Canada Steamship Lines (CSL) of Montréal for its design of self-unloader bulk carriers used to top off super bulk carriers where they are restricted by draft along the St. Lawrence River and in the Great Lakes. This top-off system has a particular impact on the export of coal and generated $20 million in new revenue for CSL in the last three years as well as $20 million in foreign coal sales for DEVCO in Nova Scotia.

Signs of the Times

Signs have become an important and inescapable fact of life and, according to Statistics Canada's publication *Inklings*, sign-making is a multi-million-dollar industry.

There are nearly 500 sign-making companies in Canada and, in 1982, they shipped more than $270 million worth of signs and displays. Illuminated signs, such as those over grocery stores, are most in demand with just over $46 million shipped in 1982. Neon signs were also popular with nearly $34 million shipped.

The IMF and the Poorest Countries

A new booklet, *The IMF and the Poorest Countries*, from North-South Institute, Ottawa, deals with the performance of least developed countries under International Monetary Fund stand-by arrangements. **It is available for $6 from:** the North-South Institute, 185 Rideau Street, Ottawa, Ontario K1N 5X8 or through booksellers.

Fishing and Marine Directory Available

A new publication, *Canadian Fishing and Marine Directory* is now available, published by the *Canadian Fishing Report* of Gough Communications Ltd., Ottawa.

The directory is a comprehensive guide to hundreds of federal and provincial government agencies and other organizations that affect people involved in the Canadian fishing industry. Listings of names, addresses and phone numbers help the user locate the right person to deal with a specific request and/or problem.

For further information, please contact: Mary McCormack, Marketing Manager, Gough Communications Ltd., P.O. Box 818, Station B, Ottawa, Ontario K1P 5P9; Tel: (613) 232-5204.

New Graphics Standard Now Available

PRIOR Data Science Ltd., of Ottawa, Ontario, experts in real time graphics, is now spearheading the North American distribution of GKS/C, the new standard in computer graphics language. GKS/C is a C language implementation of the Graphic Kernel System which runs on UNIX and UNIX-like systems. Written in the popular C language, it provides all the capabilities essential for a whole spectrum of graphics from simple passive output to highly-interactive applications and will control a wide range of graphics devices.

For further information, contact: PRIOR Data Sciences Ltd., Bell Mews Plaza-Nepean, 39 Highway 7, Ottawa, Ontario K2H 8R2; Tel: (613) 820-7235; Telex: 053-3356.

Free Advertising Available

Normandy Express Enterprises of Willowdale, Ontario, is offering free advertising in its new publication *Canadian Business Opportunities* to Canadian companies, readers of *Canada Commerce*. The company states its usual policy is to grant free advertising to any Canadian company or individuals who send in a $25(US) subscription. However, Normandy Express Enterprises claims it will grant free advertising to readers of *Canada Commerce* who simply mention *Canada Commerce* in a letter to that company.

For further information, please contact: Normandy Express Enterprises, 10, McNicoll Avenue, Willowdale, Ontario M2H 2A7.

New Licensing Bulletin

A new licensing opportunities bulletin is now available from Lomar Associates, worldwide licensing consultants, of Burlington, Ontario. Published three times a year — June, October and February — the bulletin shows products available for manufacturing under licensing agreement.

An annual subscription for $65 may be obtained from: Lomar Associates, 1384 Tyandaga Park Drive, Burlington, Ontario L7P 1N3; Tel: (416) 632-3863; Telex: (FELL-FAB) 061-8673.

Ontario Launches Second Industrial Achievement Awards

The search is on again for Ontario's top industrial achievers. Nominations have opened for the 1985 Province of Ontario Industrial Achievement Awards. Winners are being sought in five categories — Export of Manufactured Goods; Export of Services; Product Development; Managing Technological Change; and Selling in Canada.

Companies performing outstandingly well in these categories are invited to apply to the nearest field office of the Ontario Ministry of Industry and Trade before November 1. Awards winners will be named and honoured at a ceremony in Toronto in early March 1985.

For further information, please contact: Bob Wilson, 900 Bay Street, 9th Floor, Hearst Block, Toronto, Ontario M7A 2E3; Tel: (416) 965-7075.

Conference Round-Up

Junior Chamber of Commerce World Congress

Canada's Junior Chamber of Commerce will be host to the 39th Junior Chamber of Commerce (JCI) World Congress to be held in Montréal, November 11 to 18, and is expected to attract more than 5 000 delegates from at least 50 countries. A two-day trade show is planned for delegates in Montréal's Palais des Congrès, November 13 and 14.

For further information, contact: 39th JCI World Congress, 1179, rue Bleury, bureau 102, Montréal (Québec) H3B 3H9; Tel: (514) 397-9852.

Automated Offices on Display

The largest office show ever held in British Columbia, the Pacific Automated Office Exhibition, will be held in Vancouver's B.C. Place Stadium, November 28 to 30. Product displays include a complete range of office automation equipment from computers, word processors, telecommunications and software to sophisticated copiers, electronic typewriters, printers, furnishings, design, etc.

For further information, contact: Tracon Exhibitions, #202 - 535 West 10th Avenue, Vancouver, British Columbia V5Z 1K9; Tel: (604) 874-5233.

Major Design Event

CANEXUS 85, sponsored by the Canadian Business Equipment Manufacturers Association's Office and Contract Furniture Group, will be held at the Harbour Castle Hilton Hotel in Toronto, April 18, 19 and 20, 1985.

CANEXUS is a major design event attracting architects, buyers, specifiers and designers from across North America to view the latest in office and contract furniture.

For further information, contact: Office and Contract Furniture Group (OCFG), Canadian Business Equipment Manufacturers Association, Suite 212, Yorkdale Place, 1 Yorkdale Road, Toronto, Ontario M6A 3A1; Tel: (416) 789-0508.

Canadian Payments Association

The 1985 Canadian Payments System Conference and Exhibition will be held in Montréal's Palais des Congrès April 14 to 17, 1985. Presented by the Canadian Payments Association, the conference will have as its theme "The Challenge of the Future" and sessions will cover, among other topics, consumer and corporate payment services in Canada and other countries, the roles of telecommunications and of non-financial institutions in the payments system, data security and social issues.

For further information on the conference, contact: John S. Roberts, Canadian Payments Association, Tel: (613) 238-4173, or Monique Greenwood, The Canadian Bankers' Association, Tel: (416) 362-6092. For further information on the exhibition, contact: Paul Day, ECM Exhibition & Conference Management Ltd., Tel: (416) 273-3910.

International Beverage Industry

The 1984 International Beverage Industry Exhibition & Congress (InterBev) will take place in McCormick Place, Chicago, U.S.A., November 12 to 15. InterBev is a worldwide, all-beverage event attracting beverage producers, distributors, wholesalers, retailers and suppliers from around the world.

For further information, contact: InterBev 84, Clapp & Poliak, Cahners Exposition Group, P.O. Box 3833, 999 Summer Street, Stamford, Connecticut CT 06905, U.S.A.; Tel: (203) 964-0000.

CAD/CAM Conference

CAD/CAM (Computer Aided Design and Computer Aided Manufacturing) Association will hold its annual conference/exhibition on November 27, 28 and 29 in Montréal's Palais des Congrès.

The event, the largest of its kind in Canada, will have as theme the application of CAD/CAM in various industry sectors. It is organized in collaboration with a wide range of sectorial groups working in fields as varied as geodesic science, electronics, mines and clothing.

For further information, telephone (514) 879-9049.

Upcoming U.S. Trade Fairs and Missions

- U.S. buyers to the Toronto Boat Show, Toronto, Ontario, January 1985.
- America East '85, Building Materials Products Exposition, Boston, Massachusetts, January 18 to 20, 1985.
- International Work Boat Show, New Orleans, Louisiana, January 24 to 27, 1985.
- National Association of Home Builders Show, Houston, Texas, January 26 to 29, 1985.
- Uppermidwest Hospitality Show, Minneapolis, Minnesota, February 3 to 6, 1985, food and beverages.
- Seafood '85, Boston, Massachusetts, February 27 and 28, 1985, fish processing.
- New York Pret, Women's Clothing, New York, February 1985.
- Tri-State Solo Contract Furniture Show, Cleveland, Ohio, February-March, 1985.
- National Kids' Fashion Show, New York, March 1985.
- Solo Contract Furniture Show, Boston, Massachusetts, March 1985.
- Minneapolis Solo Food Show, Minneapolis, Minnesota, March 5, 1985.
- National Kitchen and Bath Show, St. Louis, Missouri, March 17 to 19, 1985.

For further information, contact: Department of External Affairs, Trade Information Centre, Tel: 1-800-267-8376 (toll-free, 24-hours), or Department of External Affairs, United States Marketing Division, Tel: (613) 993-5911 or 993-6566.

The Honourable Sinclair McKnight Stevens
Minister of Regional Industrial Expansion

Born February 11, 1927, near Milton, Ontario, Mr. Stevens is a lawyer and former chairman of an investment management company. He currently runs a Hereford cattle operation.

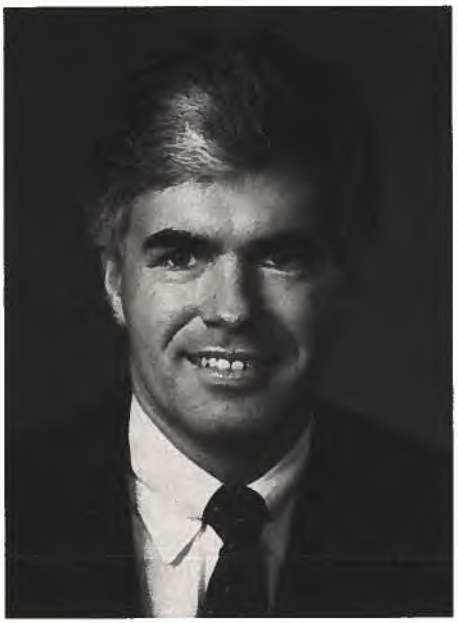
He received his BA in Journalism from the University of Western Ontario and worked as a journalist at the *Toronto Star* while attending Osgoode Hall Law School where he graduated as a barrister-at-law.

First elected to the House of Commons in 1972, he was appointed President of the Treasury Board and chairman of the Cabinet Committee on Economy in Government in 1979.

Mr. Stevens also served as Caucus spokesperson for External Affairs; Industry, Trade and Commerce; Treasury Board; and Finance.

His other Caucus duties have included advisor on economic policy; service on the committee on priorities and planning; chairman of the PC committee on Government Operations.

Mr. Stevens began his law career in Toronto with the firm of Fraser and Beatty and later formed his own firm, now known as Stevens and Stevens. He is also former chairman of York Centre Corporation, an investment management company he organized in 1960.



The Honourable Thomas Michael McMillan
Minister of State (Tourism)

Born October 15, 1945, at Charlottetown, Prince Edward Island, Mr. McMillan is a political scientist.

Mr. McMillan was educated at the University of Prince Edward Island, Queen's University, University of New Brunswick and Trent University.

First elected to the House of Commons in the general election of 1979, Mr. MacMillan was the Deputy House Leader for Question Period.

His committee service has included Communications and Culture, Fisheries and Forestry, and the Special Committee on Acid Rain.

Prior to his election to the House of Commons, Mr. McMillan served as a special assistant to former PC Leader Hon. Robert Stanfield; executive director of the policy advisory committee to Mr. Stanfield; Senior Research Associate of the National Committee on Canadian Studies; executive officer of the Ontario Human Rights Commission; chairman of the Book and Periodical Development Council of Canada; and president of Dundee Realties, Inc. of Charlottetown.

The Honourable André Bissonnette
Minister of State (Small Business)

Mr. Bissonnette, a native of Saint-Jean, Québec, received his secondary education at Saint-Georges d'Iberville school, and then studied business administration. He also studied business management at the European Institute of Business Administration in Fontainebleau, France.

Mr. Bissonnette is in the food wholesale business, specializing in distribution to hotels, restaurants, institutions and food chains. He is the founding director and manager of his firm, and throughout his career he has been involved in companies dealing with processing distribution of poultry products.

Mr. Bissonnette has participated in two trade missions to Nigeria for the Canadian International Development Agency (CIDA), and in a CIDA project in Cairo, Egypt, that involved technological assistance in the area of poultry processing.

The Productivity Disease

An obsession with marginal savings can't beat the Japanese. Only new technology can do that.

I walked into the Dean's office at the Harvard Business School about a year ago and said, "Look, we've got sick industries and a productivity crisis, and meantime here come robots and CAD/CAM and a whole lot of gee-whiz manufacturing technology. I would like a year off from teaching to get out into industry to figure out, if I can, what's going on out there."

The research involved visiting about 12 major U.S. firms, such as General Electric, Westinghouse, TRW Inc., Hewlett-Packard, Bendix, and Lockheed. I asked them, "How are you doing with this new manufacturing technology and what's happening in your facilities?"

I also asked if, in each plant, I could interview about five or six young men or women whom senior management considered to be comers. "I want to talk to your next generation of leaders," I told the companies, because I wanted to see if these people were going to be different from the managers we have had in the past.

I am going to tell you a bit about what I saw and what I learned. I will also share with you some questions that have come out of my observations during the past year.

Production Emphasized

I certainly saw a renewed emphasis on production. Management, after 25 years, finally is getting interested in the function that employs 75 per cent of their employees, and 80 per cent of the company's assets. Companies are turning production people into top management counselors. Production people are getting much more involved; they are being listened to. And, of course, production managers are overjoyed because they are back in the heart of things.

But these managers also are under tremendous pressure from today's tough economics, tough competition, and fast-changing technologies. This pressure is accompanied by shorter product life-cycles, more products, and — driven by the consumer — a very competitive emphasis on quality.

How are these concerns being manifested? By far the most predominant aspect is that renewed focus on productivity. I found productivity czars, productivity committees, productivity staff groups, and productivity labs, not to mention productivity projects and research. Productivity competitions and plant-by-plant comparisons in productivity are common practices, along with new approaches to management, new controls and new performance objectives. I need hardly mention that virtually every management or professional magazine and journal today is full of articles and papers about productivity.

But you might wonder a little, as I do, what all this is really about. To me, it means a return to sweeping the floor and keeping the place clean. It is taking us back to industrial engineering, back to time-and-

motion studies, back to process charts and work simplification — all those great tools of the 1950s.

My question is whether such a preoccupation with productivity really is good. Naturally, the first answer has to be, "Yes." Productivity can't be bad, can it? Surely, you want to get every bit of it possible.

Narrow Focus

But, on the other hand, if focusing on productivity is all you do, and if this narrow focus is the way you try to run your facilities, then you are treating production as a kind of productivity machine. I think this is narrow, one-sided, and obsessive. We often talk about the "British disease", so I think it is fair to talk about the "productivity disease" our corporations seem to have contracted.

The obsession with productivity creates a culture of its own, characterized by personal pressures, cutting, scrimping and saving at the margins. It produces a heavy, no-space feeling in most companies. It creates a working environment that drives away some of the best and most able of our young people. Try to get young people — other than highly technical people — to work in factories. It is tough going. I encounter those attitudes in my own school, the Harvard Business School.

In all honesty, we must get out on the table some concerns about the present generation of production managers who dominate factories. They are too detail oriented, too short-term oriented; they fuss and fuss and fuss about productivity.

Of course, much of this behavior is understandable. You cannot ship the car if it is missing the right-front wheel. The details are important.

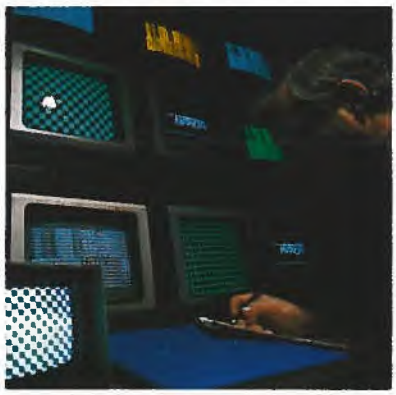
But too many production people are cut off from strategic, competitive and marketing issues. For whatever reason, they live in their own worlds.

A Paradox

The paradox is that professional management started in the factory. Yet the factory is now the least well-managed of any corporate function. The truth is that for a long time production managers were de-emphasized in the corporate environment. Look what happened when we left them in isolation, badly selected, badly trained and badly supervised. They became a kind of lost generation, holding a narrow — almost religious — preoccupation with traditional productivity. And the result was that productivity went down and down and down, and so did quality and housekeeping.

The obsession with productivity creates a culture of its own, a working environment that drives away some of the most able young people.

There is now a new breed of production people coming along, I am glad to report. Those comers I interviewed are not plodding slowly along the old, straight, seniority-based career paths that production people have had to travel. They are coming up from quite a variety of different corporate career paths and different environments.



They are former computer programmers; they have managed experimental human-resource programs; they are systems engineers and design engineers. A lot of them are also coming through the new staff functions in computerized materials, requirements planning, quality control, and so forth. Some are experienced project managers and program managers, and I even ran into a couple of people from the sales department.

These people are agents of change, and they are terrific. They are showing new skills in team building and project management. They are leaders in organizational learning, and they love and encourage new attitudes.

The new breed is not conventional — no longer the good infantry soldiers whom I grew up with in the factory. Nor are they likely to be particularly loyal to your company. They know they have something they can merchandise in a lot of different places. They lack humility, almost to the point of arrogance; they delegate to beat hell; they are very trusting of other people; and they don't necessarily have the rigor and follow-up discipline they should. But they are very, very interested in ideas and changes and new technology; in fact, they are gung-ho for change.

These people are not in power yet. But in five or 10 years they certainly will be, with results that could be tremendously exciting.

I must be careful not to suggest that there is no human innovation going on in factories already. There is, for example, a major corporate re-emphasis on quality.

Product Quality

Although much of this goes back to the old techniques of statistical quality control, there is also a new thing I've never really seen before. In some companies, people are saying, "Look, to get good product quality, we have to have good tooling quality, good product-design quality, good engineering quality, good workmanship quality, good management quality, etc." For these companies, product quality has become the catchword — or, if you will, the preacher's theme — to lift the entire company up to new levels of achievement.

Another important area of activity is the increased emphasis some companies are placing on human relations. I remember in my army career as a buck private that if I had a good corporal — and usually I didn't — things always seemed to work out all right. Today we have companies like General Motors, who are doing a superb job of re-emphasizing good, basic human skills for supervisors. But this is still far too limited and narrowly focused in many firms.

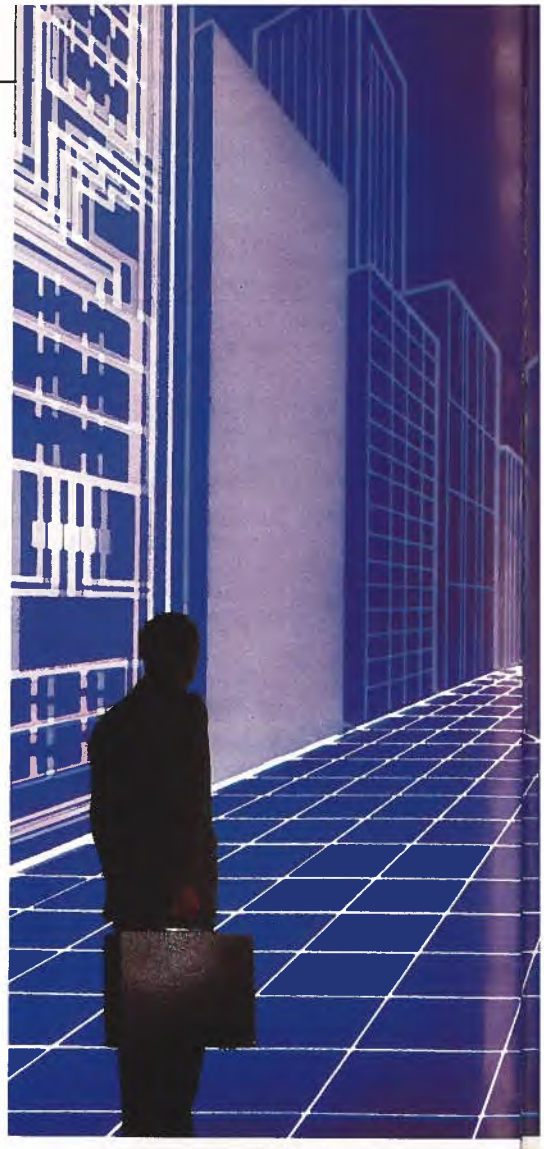
There are over 200 documented human-resource management experiments going on right now and probably 2 000 that aren't documented: unsupervised work groups, job-restructuring, job-enrichment, and so forth. The interesting thing is that they are experiments and are labelled as experiments. There are very few that are applied to an entire facility. However, they usually fail because the old culture takes over once a vigorous new management puts them in place. The pioneers then move off, and the people who take their places drift back to the old ways. We need to do better.

In the old days, we thought of the factory as a place where you transformed materials. It was a physical environment where the largest number of people performed with their hands or with machines. Now, only about one-eighth of the people in the factory are directly involved with changing materials. The other seven are handling and processing information.

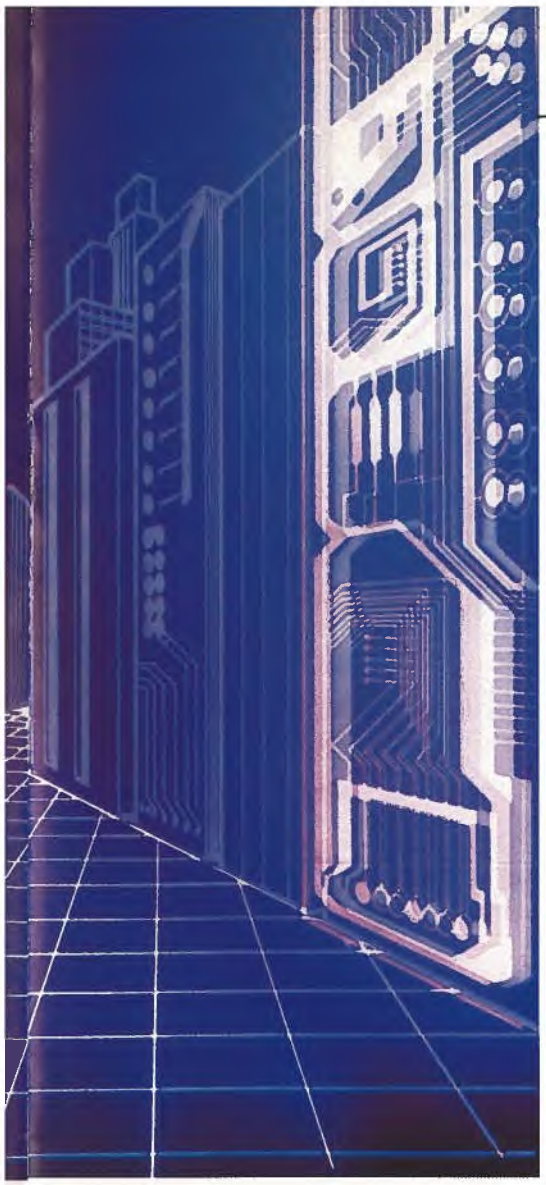
Factory Changing

The factory is going to be a very different place when we finally come to understand and appreciate this fact. While there are risks, there can be even greater strategic advantages in pre-empting your competition by placing a whole new emphasis on production. This is fast becoming the best game in town, and my only unhappiness is that there are as yet so few real converts to this point of view.

There are companies — in particular General Electric, TRW, and Hewlett-Packard — who now see manufacturing in terms of strategy rather than just an operating system. They are trying to put in place a new philosophy that focuses on the manufacturing structure and process as a strategic weapon, rather than just trying to manage it in narrow terms of cost and efficiency.



For example, the notion here would be that a plant or manufacturing production operation — just like an airplane or a boat — can only do certain things well. Therefore, we should design it for what it is going to do well, not design it to be everything to all people. If we make that mistake, we will eventually end up with a plant that, metaphorically speaking, neither sails well nor flies properly.



New technologies such as CAD/CAM do not produce savings; what they do produce is the strategic ability to move quickly in the marketplace.

This brings me to the new manufacturing technology, my main interest when I began my research tour. How is it coming? I am talking here about computer-aided design (CAD), computer-aided manufacturing (CAM), robotics, flexible machining centres, and integrated computerized manufacturing systems.

Things Move Slowly

There is a lot of talk, a lot of literature, and a lot of apparent activity out there in the form of new technology — but very disappointing progress. Things are moving very slowly.

However, that shouldn't surprise us, really. The automobile took about 15 or 20 years before it really got going and drove all over us. Yet it is interesting to see why the new manufacturing technology is slow to take off.

The costs, uncertainties and risks inherent in these new, complicated, totally integrated, microprocessor-based systems are very substantial. They seem to be changing so quickly. In other words, why should any organization want to go first? The capital budgeting system in most companies forces people to justify this huge expenditure on the basis of savings — and these new systems don't produce savings. They really don't. What they do produce is the strategic ability to move quickly in the competitive marketplace.

Even so, most companies have a tough time bringing these new systems into play. Aside from capital budget problems, reward and promotion systems in most companies do not encourage these types of investments. What ambitious, successful plant manager — one who has been promoted or moved every three or four years — is going to propose to the company a very big investment that he or she knows darn well isn't going to pay off for five, six or seven years? Added to this is the knowledge that there could be seven years of misery and struggle to get the bugs worked out. This explains why very few people at the level of plant manager or even manufacturing vice-president are backing the new systems.

I am proud to be a director of Copeland Company, a privately held company that is very strong in compressors. It produces about one-third of the world's refrigeration compressors. Not too long ago the president said that, since the Japanese were active in every other industry, they would probably be in the compressor industry in three or four years too. The competition was getting considerably tougher, and all through the company there were old, worn-out plants.

He decided to gamble on a whole new manufacturing set-up, and he bet $40 million dollars that Copeland didn't have. He has now pre-empted the market; even some of the established firms are moving out of it. It takes a bold, strategic move to bring off such a fine coup.

Flexibility

The great advantages of the new production technology are flexiblity for product change; flexibility for product proliferation; flexiblity for moving with changes in technology; faster delivery; and better and more consistent quality. These are not cost savings. But they can change the whole impact on a market.

Very few companies are doing it. John Deere perhaps is one of the companies I visited that is doing an outstanding job. There again, top management just said, "Well, we've got to do it. If we're there first, its going to give us a big advantage."

It is this kind of thinking that's needed. When you contemplate competing with the Japanese, you don't ask yourself if five or 10 per cent gain at the margin, which you get through productivity, is really going to beat them. Nor is that five or 10 per cent we get back from sweeping the floor going to beat the Japanese, either. We are going to have to beat them by competing on the basis of better quality, faster turnaround times, and so forth. The new technology can do it. But such achievement does seem to be a long way off.

— by Wickham Skinner
James E. Robinson Professor of Business Administration
Harvard Business School

This article appears in The Princeton Papers *and has been reprinted in* Canada Commerce *with the permission of Northern Telecom Limited.*

Catalytic Seed Fund: Stimulation for International Collaboration

It sounds like something out of a farm catalogue but names can be deceiving. The Catalytic Seed Fund (CSF) has nothing to do with seeds. It has a considerable amount to do with encouraging international collaboration in the exchange of science and technology.

Funds available through the CSF act as a catalyst in stimulating the seed of collaboration to grow.

In recent years the federal government has placed increased emphasis on such international collaboration in science and technology with a view to enhancing domestic capabilities. The Catalytic Seed Fund was established in 1982 to ensure the availability of funding and to encourage and stimulate collaborative projects with potential economic benefit for Canada.

The fund supports activities that can benefit from a quick but modest infusion of funds to take advantage of opportunities for international collaboration where existing funding is insufficient.

This does not mean the fund will provide the main means of support but rather it will defray some of the costs related to such activities as:

- Meetings of experts in Canada held for the purpose of identifying and planning international activities in specific sectors with specific target countries;
- Exploratory missions and visits by individuals and small groups of experts for the purpose of initiating international collaboration;
- Travel costs for Canadians participating in meetings in Canada with foreign missions;
- Travel costs of foreign scientists where such travel will clearly contribute to the objectives of the fund;
- Medium-term working visits of up to five months to allow Canadian scientists and technical experts to work at foreign laboratories or research establishments on promising collaborative activities.

Recently the fund has also been used to finance in-depth studies by Canadian experts of areas of foreign technology judged to be of high actual or potential value to Canada.

Fund Priorities

Priority is given to science and technology collaboration with Canada's OECD partners (i.e. Japan, the United States and Western Europe). However, proposals will also be entertained for collaboration with newly industrialized countries (Mexico, Brazil, etc.) if there is sufficient evidence that this will improve Canada's scientific and technological capabilities.

Co-operation with Eastern Bloc countries will also be considered if the proposed co-operation does not have defence implications.

Proposals to the fund may be initiated by individuals from provincial governments, universities or industrial organizations as well as federal science-based departments and agencies.

Non-federal government applicants should first arrange sponsorship of their proposals by a federal department or agency that has an interest in the proposed activity. The federal department or agency then submits the proposal to the Catalytic Seed Fund on the applicant's behalf.

Degree of Commitment

One of the basic principles in evaluating proposals is the degree of commitment to the activity on the part of the participating organizations. Thus a primary criterion for funding is that expenses must be shared between the CSF and the participating organization. The fund usually reimburses travel costs and the participant pays living expenses.

For medium-term missions and visits, the fund helps defray a portion of the living expenses. Salaries and benefits of participating scientists will continue to be paid by the scientists' employers. In the case of federally-initiated activities, the CSF will provide support for both government and non-government participants.

In 1983-84, there were 45 submissions made to the Catalytic Seed Fund of which 22 were supported.

One of the basic principles in evaluating proposals is the degree of commitment to the activity made by the participants.

There are no formal application forms for the Catalytic Seed Fund. **In developing proposals for submission to the fund, the applicants should:**

- state the objectives and nature of the activity;
- identify the Canadian participants — government, industry, university — as well as the foreign participants;
- identify the manager responsible for the activity to be funded;
- identify the total expenditure to be incurred (excluding salaries), the amount to be provided by the CSF and the source of funds for the remaining costs;
- identify the follow-up plan including the sources and amount of funding;
- indicate why the CSF is required and why other formally allocated budgets are not supporting the proposed activity;
- indicate how the proposal relates to the interest of the sponsoring science-based department or agency;
- indicate how the proposal relates to previous or current Canadian activities in the field;
- describe the expected economic and social benefits to Canada and the mechanisms for achieving them;
- describe the expected contribution to Canada's S&T capability.

Proposals and inquiries can be sent to:

The Secretary
Working Group on International Collaboration in Science and Technology
Science, Technology and Communications Division (ETS)
Department of External Affairs
125 Sussex Drive
Ottawa, Ontario
K1A 0G2

Recent examples include:

- A mission to France and Germany by several experts in forestry research to exchange information on monitoring acid rain damage to forests;
- A mission to France by a group of experts in computer-aided learning to investigate collaboration in areas such as electronic imaging and instructional technology;
- A mission to Japan by two individuals from companies involved in the application of biotechnology to food and related products;
- A mission to Britain and Germany by engineers from a research company to investigate collaboration on problems of ice impacts on offshore structures.

The best cones are from the top of the tree — an Okanagan Bell 206 hovers while a forestry office decapitates a spruce tree.

Okanagan Helicopters — A Canadian Success on a World Scale

"A flying craft remains useless unless there also exist other pioneers with courage, foresight and energy who can visualize the usefulness of a flying machine and fulfill the final stage of development of the craft by putting it to work to prove its value and thus assign to it its rightful place in our modern life. Carl Agar, to my mind, is one of the most brilliant and outstanding pioneers of this type." Igor Sikorsky
Carl Agar established Okanagan Helicopters in 1947.

Okanagan, with over 100 helicopters and about 500 employees, is the largest helicopter operation in Canada — and one of the largest in the world. A network of 50 bases reaches from Canada to South America, Europe, India, Southeast Asia, Australia and, most recently, the People's Republic of China. Now in its 37th year, Okanagan has logged well over one million hours total flying time in more than 30 different nations around the world.

A diversified operation, Okanagan supports virtually every industry. The smaller helicopters are flying taxis and airborne laboratories for geophysical surveys, air traffic reports, wildlife studies and environmental control.

The medium and heavy fleet is employed as aerial cranes in the construction and forestry industries; as aerial firefighters and air ambulances; and in resource industry activities where Okanagan helicopters often serve as the sole link to offshore projects, ferrying all staff, supplies and equipment and providing emergency services.

Since oil and gas exploration commenced off Canada's coasts in 1967, Okanagan and its subsidiary companies have participated in the major exploration programs of Amoco, Aquitaine, British Petroleum, Chevron, Dome Petroleum, Esso Resources, Mobil, Shell, Tenneco, Texaco, Total Eastcan, Petrocan, Home Oil, Husky and Bow Valley Industries.

This activity grew to a record level in 1979 when Okanagan simultaneously supported all of the eight drilling vessels operating along Canada's east coast and the three Arctic vessels positioned in the Beaufort Sea. The eastern offshore activity stretched from the Continental Shelf off Nova Scotia and Newfoundland, along the Labrador Coast ("Iceberg Alley") as far as Davis Strait to the east of Baffin Island — a rugged and hostile coastline which presents some of the most challenging flying conditions in the world. The offshore locations extended to distances of 244 nautical miles from the shore. The Arctic projects in the Beaufort Sea included the movement of crew, equipment and supplies in near darkness and sub-zero temperatures.

Carl Agar at the controls of Okanagan's first helicopter (a Bell 47B) in 1947.

Flying in the severe environment associated with all of these projects demands extensive IFR (Instrument Flying Rules) operation and strict adherence to the highest safety standards. To date, Okanagan has flown over 70 000 IFR hours in Canadian offshore operations alone, and this total is rapidly increasing through offshore operations around the world.

Okanagan has pioneered major advances in helicopter applications to the construction industry. The company's first powerline construction job, in 1959, was completed with a piston-engined Sikorsky S58 and a "bellyman" engineer lying on the floor of the helicopter, peering through the open door and relaying instructions to the pilot. Today, portable radios and vertical reference techniques have replaced the bellyman — much to his relief. Turbine-powered helicopters, twin engines and stabilizing systems now enable Okanagan to survey and construct powerlines as a matter of routine.

The building industry is making increasing use of the unique aerial crane capability of the helicopter. The placement of roof trusses and the installation of roof-mounted heating and air conditioning units is becoming commonplace. Modular building units are increasing in popularity because of the significant economies that can be achieved with assembly in the factory and shipment by helicopter to virtually any location.

When conventional building methods cannot handle the job, the chances are that Okanagan has an answer; for example, Okanagan pilots recently erected a giant oil field flare stack in Drayton Valley, Alberta, using a Sikorsky S61 to set a height record.

Innovation is also the key to forestry operations. A co-operative effort with the British Columbia Forest Service resulted in the development of the Helicopter Hydraulic Pruner, a harness-equipped craft which enables the operator to hand-clip the scions and seed material which are found at the top of genetically superior trees.

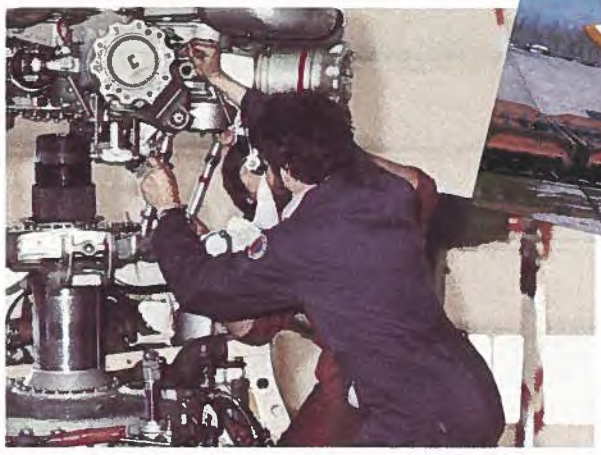
Okanagan technicians designed the Aluma Gel Heli Drip Torch in response to the need for aerial ignition for logging slash abatement, silvicultural site preparation, and backburning for wildfire control. When fires need to be suppressed, the Okanagan-developed Monsoon Bucket is used.

Engaged in helicopter medical evacuation for many years, Okanagan joined a formal air ambulance team in 1977. Ontario's Ministry of Health launched a pilot project aimed at providing an evacuation system with support capabilities to transport critically ill patients to a hospital in Metropolitan Toronto. The project soon demonstrated its value and, in 1981, a specially-outfitted Sikorsky S76, designated "Bandage 3", was sent into action on a permanent basis.

Based in Thunder Bay, Ontario, Bandage 3 covers more than 50 per cent of Ontario with a service to outlying communities. In addition, the craft responds to emergency calls from regional hospitals, highway or industrial accident sites, forestry camps, railway stations and a variety of tourist and outfitter locations. Ontario's experiments will likely become a model for air ambulance services in communities across the world.

The helicopter's versatility extends well beyond the scope of the major industries. For example, Okanagan conducted a salvage operation to rescue 136 new automobiles when the Van Lene freighter was grounded and sinking off Vancouver Island. The ski industry is also making increasing use of the helicopter to air lift skiers to slopes inaccessible by other means.

Some of Okanagan's operations are one-of-a-kind. In 1977, fishermen discovered a killer whale dying of gunshot wounds on a Vancouver Island beach.



Okanagan engineers install an S61 rotor head.

To be on site, on time, Okanagan ships some helicopters (like this S76 bound for Australia) via Hercules transport.

Conventional transportation methods would keep the whale out of the water too long for it to survive and Okanagan was called for an air lift to Victoria's Sealand. It took the helicopter crew just six minutes to move "Miracle" to her new home.

Okanagan's first international exposure was in the 1950s through its Mountain Flying School which continues to offer highly specialized training to pilots from many nations. Overseas operations in Pakistan and Greenland led to a major overseas expansion program starting in 1974, prompted by the necessity to achieve maximum flexibility for a growing and diverse helicopter fleet.

Okanagan has now completed contracts in:

- Australia, New Zealand and Papua New Guinea
- Southeast Asia (Burma, Malaysia, Thailand and the Philippines)
- India, Bangladesh and Sri Lanka
- Middle East (Abu Dhabi, Egypt and Oman)
- Africa (Gabon, Mauritania, Morocco, Senegal and Zaire)
- Europe (Portugal, Ireland and Scotland)
- South America (Brazil, Guyana, Peru, Surinam and Venezuela)
- Central America (Nicaragua and Panama)
- United States of America
- Greenland
- Peoples Republic of China

A joint venture with Brambles Industries in 1974 established Okanagan Helicopters Australia Pty Ltd. with its head office in Perth, Australia. Today, Okanagan has a firmly-established position in the world market and has demonstrated the ability to perform in harsh extremes of climate and terrain. Crews and equipment can be mobilized rapidly, utilizing extensive experience in travel logistics, communications, customs regulations, engineering support, local conditions and on-site control to ensure that budgets and deadlines are met to the satisfaction of the customer.

An efficient and competitive helicopter operation is not possible without the "backroom boys" in engineering and maintenance. Two maintenance shops — a head office at Vancouver International Airport and a 2 400 square metre (26 000-square foot) facility at nearby Richmond — house equipment, parts and accessories. Field maintenance personnel provide on-site engineering support around the world. Computer systems control a $25 million inventory, ensuring that necessary parts are available and can be promptly delivered. (Downtime for a helicopter is expensive when hourly rates are measured in thousands of dollars.)

Okanagan's S76 ambulance is almost a flying hospital.

Airframe modifications can be carried out and Okanagan is one of the few helicopter operations to have its own comprehensive engine repair and overhaul facilities. Keeping complex avionics systems functioning requires Okanagan's experts to be mobile and to have the ability to design and install equipment, often at short notice, to meet unique customer requirements. Okanagan's complete range of in-house maintenance services is available to other helicopter operators.

The head office of Okanagan Helicopters Ltd. is located at 4391 Agar Drive, Richmond, British Columbia V7B 1A5; Tel: (604) 278-5502; Telex: 04-355594.

— by S.B. Shaw
Electronics and Aerospace Branch
DRIE

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Jardim Guanabara
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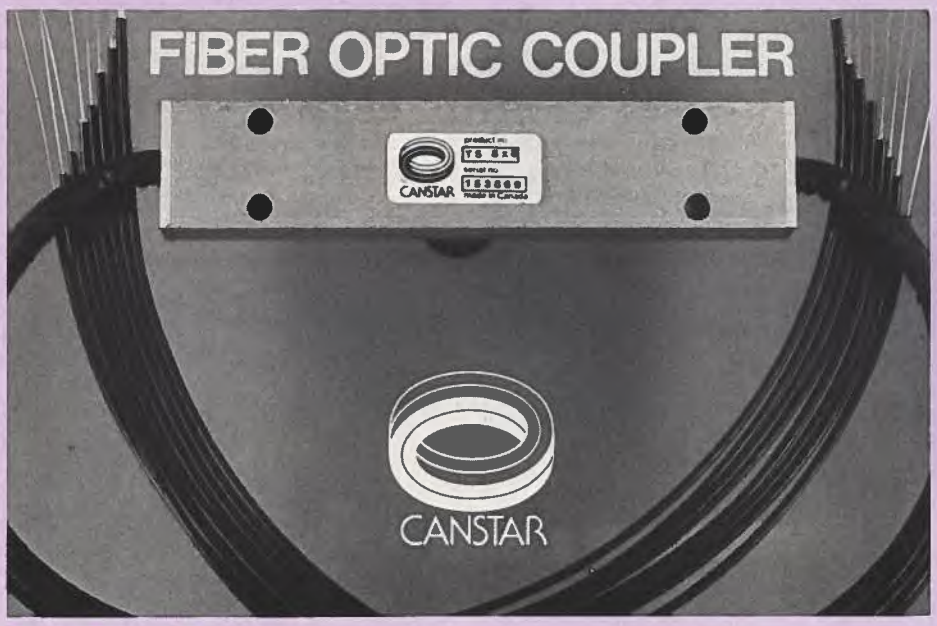
Telex: 38-2121416
— Orley M. Seixas

CANADIAN COMPANIES & PRODUCTS

Companies wishing to take advantage of this feature may do so without charge simply by sending sufficient material on product or service for no more than 100 words and a glossy black and white photograph to Canadian Companies & Products, ***Canadian Commerce*** (BCOM), Department of Regional Industrial Expansion, Ottawa, Ontario K1A 0H5. As ***Canada Commerce*** is produced in both official languages, please send material in both languages if it is available.

Protection for Bomb Disposal Experts
The Safeco body armour bomb disposal suit from Safety Supply Canada of Toronto, Ontario, is designed to provide bomb technicians and investigators with ballistic and impact protection against the hazards of fragmentation and blast effects when dealing with explosive ordnance emergency situations. Complete, the Safeco suit consists of jacket, pants, neck collar, breast panel, groin panel, helmet and visor assembly, carrying bag for suit, carrying bag for helmet and an instruction brochure for donning the suit components. The Safeco bomb disposal suit and its components have been tested and evaluated in accordance to NATO STANAG-2920 specifications.

Forest Penetrating Radar
F.P. Radar Limited of Ottawa, Ontario, presents its forest penetrating radar for temperate zones (FPR I) and tropical zones (FPR II). Both are lightweight and easily installed in aircraft. The altimeter in both gives an accurate reading of the distance between an aircraft and the ground unaffected by intervening foliage. The FPR I records ground profile in feet or metres while the FPR II will also profile the top of the foliage in tropical rain forests in feet or metres. By means of the secondary optics of the camera, the height reading appears on the edge of each photograph as it is exposed. The FPR I is available for sale but the FPR II is only available through a full forest profiling service provided by F.P. Radars Limited.



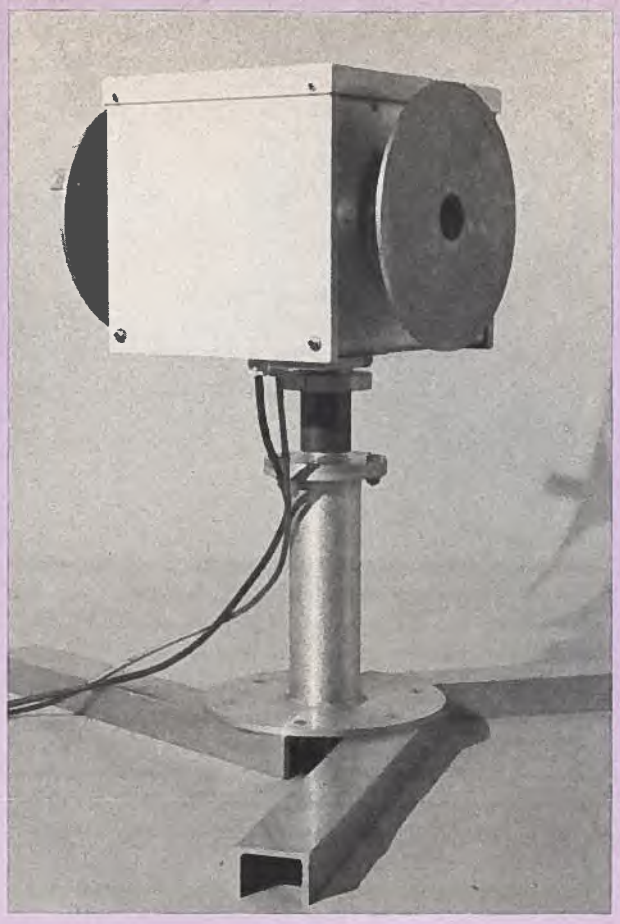
Fibre Optical Couplers
Canstar Communications of Scarborough, Ontario, presents its CANSTAR three and four-port couplers designed as splitters, combiners and taps in test equipment and optical networks. Optimum performance and operation under adverse environmental conditions are achieved through a proprietary refinement of the fused biconical taper technique combined with rigid quality control and testing on all couplers. Features include: small, rugged package, completely non-metallic; PC board mountable; bi-directional; low insertion loss; high directivity; step or graded index glass fibres; broad range of coupling ratios; jacketed or bare fibre pigtails; optional connectorized pigtails.

FX-9 — Cleaning Up the Market
The product of four years of intensive research and development by Athans Chemicals of Ottawa, Ontario, FX-9^{R} is a non-flammable, non-toxic, non-caustic, non-corrosive and totally bio-degradable cleaner for industrial, automotive, institutional and household markets. This advanced and highly effective cleaner is also petroleum-free and completely soluble in water. FX-9^{R} disintegrates and disperses on contact grease, oil, grime, wax and adhesives. It removes organic and inorganic stains, rust, ink, crayon marks, scuffs, etc., from virtually any surface. As a degreaser rather than a petroleum-based solvent, FX-9^{R} does not create health or fire hazards. The cleaner has been tested by the Canadian Department of National Defence and has received approval for use by NATO forces and Transport Canada.

Tracking the Sun

Sci-Tec Instruments Inc. of Saskatoon, Saskatchewan, manufactures the Cosmos Tracker, a microcomputer-controlled positioning system which provides precise sun tracking for instruments, mounted on the positioning pedestal. The Cosmos Tracker gives both azimuth and elevation correction for a given latitude, longitude, date, time of day and also provides a correction for atmospheric refraction.

The company also produces the Brewer Ozone Spectrophotometer that measures ozone and sulphur dioxide by measuring light intensity in ultraviolet wavelengths. Portable and weatherproof, it is microcomputer-controlled for automated measurement and data storage.



Innovation in Transportation for Disabled

A. Girardin Inc. of Cambridge, Ontario, has become an innovator of transportation for the disabled in Canada and has developed a vehicle that meets most needs of the physically disabled. The vehicle not only meets but exceeds the standard set by the Canadian Standards Association (CSA Standard D-409 — Motor Vehicles for the Transportation of Physically Disabled Persons). It is built on a van chassis to give a smoother ride than most similar vehicles combined with the maneuverability and economy of a van.

A feature is the "Q-Straint", a wheel chair and occupant restraint system developed by Queen's University and marketed by Girardin.

Electronic Monitoring of Transportation Fleets

Public transportation is going electronic with the assistance of NIACAD Ltd. of Nepean, Ontario. NIACAD's specialized knowledge of computerized mobile radio systems provides the expert backing for transportation companies, large and small, to equip their fleets with automatic monitoring equipment to control, monitor and assess the performance of their systems on line. NIACAD will define a customer's requirements, design the system and assist the customer in obtaining the desired system.

With the company's aid, each vehicle of a customer's fleet is equipped with a microprocessor-based data unit which collects information on accumulated mileage, passenger loadings, vehicle position and driver requests. This information is transmitted to the central despatch by a mobile radio network where it is processed by computers, presented to despatchers and used to update public information systems.

For further information about the companies, products and services listed, please contact:

Safety Supply Canada
214 King Street East
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M5A 1J8
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Telex: 065-24390

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K1G 1R7
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Canstar Communications
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Telex: 065-25403

Athans Chemicals
1659 Kilborn Avenue
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Sci-Tec Instruments Inc.
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A. Girardin Inc.
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Tel: (519) 622-0666
Telex: 069-59404

NIACAD Ltd.
27 Robertson Road
Nepean, Ontario
K2H 5Y7
Tel: (613) 726-0367

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LOOK for the symbol!

Canada

Government of Canada
Regional Industrial Expansion

Gouvernement du Canada
Expansion industrielle régionale

Canada Month in Hong Kong

Canada was in high profile in Hong Kong during a recent month-long promotion there.

All over Hong Kong the evidence of "Canada Month" was clearly visible in terms of activity and advertising whether on the right-of-way of Hong Kong Tramways, the China Resources Hong Kong Exhibition Centre, Nathan Road, the Furama Hotel or the Star Ferry Terminal.

Some 150 Canadian businessmen came to Hong Kong during the month and, before they left, had sold $5 million worth of products on site with a further $25 million in sales expected during the next year.

The Royal Canadian Mounted Police, Les Grands Ballets canadiens, Shui Hing department store, the Furama Hotel, the Canadian University Association — all combined to project the image of Canada as a vital and growing trade partner on the Pacific Rim.

"Canada Month" in Hong Kong was: two Mounties in scarlet tunics; 50 ballet dancers; Canadexpo '84; a parliamentary secretary; the premier of British Columbia; ministers from the British Columbia, Alberta and Manitoba governments; a "Canadian" tram; a seminar on "Canada in the 80s"; a show of Canadian ladies' fashions; a fiddler; two pianists; and a conference of Canadian Trade Commissioners from the Asia-Pacific Region.

Canadexpo '84 itself attracted more than 13 500 visitors in the four-and-a-half days it was in operation.

The show was the largest held by any country in Hong Kong and the third largest Canada has held anywhere. The 85 Canadian companies exhibiting products were concentrated into a number of industry sectors of importance to this market and to markets in Asia in general.

Of the Canadian participants, 30 per cent came from the high technology computer software/hardware and telecommunications industries. Significant sales were achieved at the show by a number of newcomers to the Asian market and those already with product in place gained a wider exposure to the Hong Kong and Asian marketplaces.

The "Canadian tram" was a highly visible piece of promotion for "Canada Month" in Hong Kong.

As a manufacturing and trading centre, Hong Kong continues to boom. It is the second largest import market in Asia after Japan. In 1983, Hong Kong's total imports from all sources exceeded $30 billion plus $10 billion in re-exported products — more than Australia, China, Venezuela, Mexico or many others of Canada's more widely known trading partners.

For the first four months of 1984, the value of Hong Kong's exports rose 40 per cent to $6.4 billion when compared to the corresponding period in 1983. Re-exports amounted to $4 billion, a 49 per cent increase. Imports rose strongly during the January-to-April period, increasing by 35 per cent to $11.2 billion.

Two-way trade between Canada and Hong Kong in 1983 exceeded $1 billion while Canadian imports from Hong Kong for the first four months of 1984 increased by 19 per cent to $270 million. During the same period, Canadian exports to Hong Kong reached $62 million, an increase of eight per cent.

Canadexpo '84 was a horizontal show offering market opportunities for a broad range of Canadian products.

- A jade manufacturer from B.C. created interest in his product;
- A sawdust shipper from Québec improved his market share by expanding his customer base in the local fur garment industry;
- Shoe production equipment from Bata and tube forming equipment by SPIR-O-LOK attracted attention from buyers of many countries;
- Controlled Environment of Winnipeg brought its agents from all over Southeast Asia and the Pacific to Hong Kong for a technical demonstration of a new product range and to give them an opportunity to pick up new lines from among the Canadian exhibitors seeking agents beyond the Hong Kong market.

Four missions visited the show from The People's Republic of China and, in response to an invitation from the Canadian government, buying missions came from Korea, the Philippines, Singapore, Malaysia, Indonesia, Thailand and Pakistan.

The Canadian government was represented at the show by MP Rod Blaker, parliamentary secretary to the then Minister for International Trade, while the Canadian Chamber of Commerce was represented by its president, Bob Wyman.

The idea for Canadexpo '84 which grew into such a major promotion, came from the Canadian University Association of Hong Kong. The association also arranged for students, home from studying in Canada, to work with exhibitors in their booths providing translation and other necessary support.

The role of the Canadian University Association volunteers was described as symbolizing "more than anything else the close relationship that exists at a personal level between Hong Kong and Canada".

Hong Kong's support for Canadexpo '84 was given further emphasis by the fact that it was inaugurated by Hong Kong's acting governor, Sir Philip Haddon-Cave, while assistance provided by local trade associations was instrumental in achieving the success recorded.

Success or Failure of a New Product Can Be Predicted, Study Finds

New product success is predictable! There are a number of key factors which consistently separate successful products from failures.

In an ongoing Canadian study — *Project NewProd* — 195 new product cases were studied and, in 84 per cent, success or failure was predicted accurately, based on the answers to 48 key questions. Also, a number of additional features of these projects were identified (methods, approaches, activities, etc.) that further enhanced the likelihood of new product success.

Funded by a grant from the federal Department of Regional Industrial Expansion, Project NewProd has as its prime objective to probe the secrets of new product success and to identify what separates winners from losers.

Facing slow growth markets, a portfolio of mature products and increasing competition from home and abroad, more Canadian firms are looking to new products as the route to corporate growth and prosperity. The most recent research study shows that, on average, 36 per cent of a sample of industrial firms' sales are from new products introduced in the last five years.

But new product launch is also a high risk endeavour! According to a recent U.S. study, approximately 46 per cent of the resources that industry devotes to product innovation is spent on products that fail or are cancelled. And for every seven new product projects that enter development, only one becomes a commercial success.

The improvement of the effectiveness and efficiency of the new product process becomes a paramount goal to the business strategist. But what is it that separates the winners from the losers in new products?

The study set out to gather evidence to help answer this critical question by observing what actually happened in a large number of new product projects. A total of 102 Canadian industrial product firms agreed to participate in the study and supplied data on 195 projects — half of them commercial successes and the other half clear-cut failures.

The Winning Product Strategy

The most important key to new product success lies in the product strategy itself. Having a unique, superior product was the one theme that most often separated the winners from the losers.

The 20 per cent of the product cases that were the most unique and superior had an astounding 82 per cent success rate. In contrast, the 20 per cent at the other end — the "me too" products — suffered a failure rate of 78 per cent. (The success rate of the sample product cases was just better than 50:50 because of the way the cases were selected.)

Operationally, what does launching a "unique, superior product" really mean? As a new product strategy, it means seeking one's differential advantage through product design and product features rather than through some other element of the marketing mix.

A number of characteristics must be built into a product if it is to be unique and superior and these should logically become part of a differential advantage strategy built on product. In descending order of importance, these critical characteristics are:

- A product that meets customers' needs better than competing products;
- A product that, relative to competing products, offers unique features or attributes to the customer;
- A higher quality product than competitive products (one that has tighter specifications or is stronger or lasts longer or is more reliable, etc.);
- A product that does a unique task or job for the customer, something that cannot be done with existing products;
- A product that is highly innovative, totally new to the market;
- A product that permits the customer to reduce his costs.

Care must be taken not to interpret these results to mean that product newness is the key to new product success. In fact, three separate factors of newness, all independent of each other, were uncovered by the NewProd study.

A product can be "new" in the sense that: it is new to the firm, taking it into new markets, new technologies, new production methods, etc.; it is new to the market, the first of its kind, what

some call an "innovation"; it is new in that it is better for the customer, that the product's uniqueness and innovation yield a net benefit to the customer.

Only the last factor — better for the customer — had a positive impact on product outcomes, the NewProd study showed. Newness is not an end in itself; nor is brilliant technology or clever engineering. Rather, the product must be unique and superior in the eyes of the customer.

Seeking a differential advantage through product design or features is an obvious factor in success. Or is it?

What is surprising is the number of firms that appear to have forgotten this basic premise of successful new product development. On a zero to 10 scale, the study's product cases scored, on average, below five on five of the six ingredients for uniqueness. And the sample of products chosen was fairly representative of these industrial firms' new product programs.

The overall message to new product managers is clear.

First, the product itself should be the core or central strategy in the new product launch; the firm should seek its differential advantage first with a product that is superior and unique for the customer. "Me too" products, lacking that quality, face a much tougher road to success.

Second, the general tendency is for firms to develop products that are not unique or superior. "Me too-ism" is a common disease that plagues too many firms' new product programs.

Finally, newness alone is not the answer. The technical side of product design and engineering must be carefully married to the intricacies of the marketplace — customer needs, preferences, use patterns, and so on — to ensure that the resulting new product does indeed deliver unique benefits to the customer.

Newness in new product projects is not an end in itself; the product must be unique and superior in the eyes of the potential customer as well.

Plan for a Market Orientation

The marketplace is the battleground for new products. It is where the ultimate victors are decided. Having strong knowledge and strategy for this battleground was the next most important key to new product success.

Those 20 per cent of the cases that showed the strongest market orientation achieved a 79.5 per cent success rate. The least market-oriented products fared much worse, with a high 72 per cent failure rate.

With this market orientation factor plus product uniqueness and superiority, the study was able to predict product outcomes in 77 per cent of the cases.

The term "a market orientation" is a common one in strategy guides. But what does it mean in practice to the new product manager? The study's research identified many facets of a strong market orientation and their relative importance to new product managers.

Critical marketing activities were, in descending order of importance:

- The proficient undertaking of a detailed market study or marketing research; a thorough study of market potential, customer preferences, purchase process, etc., prior to product development;
- Having a strong, well-targeted sales force and/or distribution effort at the launch;
- Performing a good preliminary market assessment early in the product project;
- Executing the market launch well;
- Undertaking a test market or trial sell prior to launch.

Having a strong market orientation involved market knowledge as well as those activities listed above. Knowledge in each of the following areas proved critical:

- The customer's purchase decision — the "who, what, when, where and how" of his purchase behavior;
- The size of the potential market for the product;
- The competition situation — competitors' products, pricing, strategy and strengths;
- How much the customer would pay for the product — his price sensitivity;
- Potential customers' needs, wants and specification for the product.

A provocative result of the research is that a strong market orientation goes far beyond a massive advertising, promotion and selling effort behind the new product. The magnitude of the advertising and promotion does not even enter the picture in determining the success of these industrial products. Similarly, the scale of the sales force effort was a relatively minor ingredient.

Analysis shows that most of the important facets of a strong market orientation are informational, not selling or promotional.

For example, the quality of market information and the activities aimed at obtaining market information or testing the market viability of the product stood out as important ingredients of market orientation. The "up front" activities that preceded the usual selling and launch efforts have a vital role to play.

A strong market orientation as the basis of corporate success is a fundamental tenet of the popular marketing concept. And a market orientation should be an obvious part of a firm's new product program.

However, the study's research showed that there was much lacking in market orientation in many firms' new product activities, the most critical of which were undertaken, for a typical new product, in a mediocre fashion.

Equally alarming was how deficient the market information was for the majority of new product cases. Knowledge of customer needs and preferences, customer price sensitivity, the competitive situation, buyer behavior and market size was so limited that a serious weakness was suspected in firms' new product processes.

The requirement for a strong market orientation parallels closely the first key to success — the need for a unique, superior product — and these are the two main pillars of success.

Technological and Production Strength

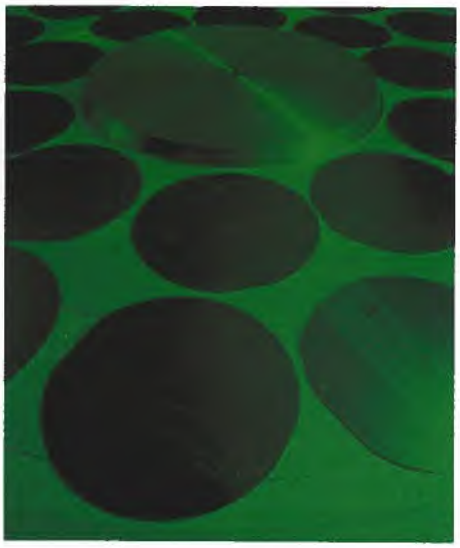
The third major component of the new product process is technological — a synergy between the new product and the company in the area of technology and production; and ensuring proficiency in such activities.

This technological factor had a weaker impact on product outcomes. The 20 per cent of projects highest on technological strength scored a 64 per cent success rate; the 20 per cent weakest fared badly with a 69 per cent failure rate.

Technological strength, in practice, meant having a strong technological and production synergy between project and firm. There was a good fit between the engineering and design skills of the firm and the requirements of the project. Also, the firm possessed the needed production facilities.

Virtually all the technology and production activities were proficiently undertaken; know-how was strong; there were no "design bugs" in the product; production facilities were available and ready for the new product launch.

The study analyzed the individual impacts of each of the technological and production facets together with the profile of the typical product project. One result was that the serious weaknesses found in the product and market factors were not quite as prevalent in technological and production. The technological activities, information and synergy were far from perfect but there were fewer problems.



The importance of technological and production resources, skills and knowledge to the new product process has long been taken for granted. The emphasis placed on technology and research and development spending by individual firms and by public policymakers underscores the central role accorded them. Similarly, R&D spending is often used as a proxy for new product prowess or strategies.

Predicting Success

As has been stated earlier, the futures of new products are fairly predictable. The three factors already described — a unique, superior product; a market orientation and marketing proficiency; technological synergy and proficiency — accounted for success or failure in almost 80 per cent of the cases studied. Another eight factors were linked to product outcomes but in a weaker fashion.

The obvious question now is: "If success/failure is so predictable, then why not develop a predictive 'model' that could be used to screen or select winning new product projects?" That is exactly what Project NewProd did.

The NewProd screening model is designed for use at the idea and early evaluation stages of a new product project when relatively little is known about the project in terms of expected sales, costs and profits. Thus, management must turn to other criteria to evaluate the project, the project's profile.

The model uses 48 key variables or measures identified in the study and closely tied to success or failure. Management simply completes a questionnaire (48 questions per project); up to 10 evaluations can be used per project.

The analysis of the ratings is performed by computer for a project profile, the identification of its strengths and weaknesses, an impact table and commercial impact.

This validated screening model yields GO/KILL decisions with an 84 per cent accuracy. ◘

Model details and analysis are available from:
The Industrial Innovation Centre/ Montréal
P.O. Box 6079, Station A
Montréal (Québec)
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Tel: (514) 344-4282

— by Robert G. Cooper
Director of Research
Canadian Industrial Innovation Centre, Waterloo
Professor of Marketing
Faculty of Business
McMaster University

The NewProd screening model is designed specifically for use in evaluating a new product project at the idea and early evaluation stages.

Gradual Recovery for Automotive Industry

As the effects of the depressed conditions of 1980 and 1982 eased, the year 1983 saw a gradual recovery in the Canadian automotive industry, according to the recently released 1983 Automotive Report.

There was a welcome return to profitability during the year which strengthened the financial position of each of the major vehicle manufacturers.

- In the parts sector, the value of shipments increased to over $6.5 billion as the effects of increased North American vehicle production were felt.
- Automotive dealerships continued to adapt to changed market conditions during 1983 and, while the market improvement came too late for some, others were able to recoup losses sustained over the previous two years.
- Labour market conditions improved for all sectors of the industry, with total employment rising from 98 900 in 1982 to 115 000 in 1983.

The automotive industry's performance during the year demonstrated its basic strength. Yet, because changes in the industry's business environment were continuing to take place, many questions remained as to the measures industry, labour and governments should take to assure the industry's future.

Throughout the year, and in a variety of forums, government, industry and labour explored possible answers to these questions. An advanced manufacturing seminar was sponsored by the federal government and the Automotive Parts Manufacturers' Association to allow for the dissemination of knowledge and experience in the introduction of new technology and managerial techniques.

The Government of Ontario's Centre for Automotive Parts Technology, which came into full operation during 1983, provided another site for the discussion of issues relating to improving the industry's productivity.

An especially valuable contribution to improving the industry's competitive position was made during the year by the Federal Task Force on the Canadian Motor Vehicle and Automotive Parts Industries. This private sector task force submitted its final report in May of 1983.

Changes over the past five years have made it impossible to assess the performance of the Canadian automotive industry except from a worldwide perspective. No single group was left untouched by the internationalization of the industry, the major downturn in the world economy or the broader automotive market developments.

To assure their own futures within the industry's new global context, the vehicle manufacturers undertook record setting investments in their assembly plants so that new generation front wheel drive vehicles, incorporating the latest product technology, could be produced.

These expenditures were made in spite of the downturn in vehicle sales and the deterioration in the ability of the assemblers to finance investment from internal sources.

The assemblers also made major adjustments in their organizations and operational procedures in order to improve their competitive position within a domestic market increasingly subject to import penetration.

The adjustments made by the assemblers, especially with respect to production scheduling practices and inventory and quality control procedures, resulted in significant changes to the traditional relationship between the assemblers and their suppliers. In addition to adjusting to this new relationship, companies in the parts sector had to define their own role in the new world order of international sourcing.

These challenges occurred at the very moment when the parts sector was feeling the impact of declining vehicle production in Canada and the United States.

The automotive industry's labour force was also affected by the deterioration in automotive market conditions and the structural changes in the industry. Widespread layoffs took place when the demand for automotive products fell off after 1978.

As the industry responded to the new competitive conditions through the adoption of new processes and technologies, the labour force faced new skill requirements and hence retraining needs. Organized labour and management addressed these problems through the collective bargaining process and agreements were negotiated which broke with patterns established in the past.

The International Environment

The performance of the Canadian automotive industry in the recent past suggests that the industry's fortunes are increasingly tied to economic and political events taking place outside the nation's boundaries.

It is evident that, since 1973, the structure of automotive demand and supply worldwide has been altered and automotive production, consumption and capital investment have been diffused. The events which brought about the changes included the oil crises of 1973 and 1979, the consequent rise in gasoline, material and vehicle prices, the increasing significance of world automotive trade to major producing nations and the erection of trade barriers by industrialized and developing countries.

These events resulted in a shift in consumer demand, a sharp decline in total world auto sales and the creation of excess vehicle production capacity. The industry responded by viewing its corporate activities and future prospects in global terms.

Despite the uncertainties which surround forecasts of growth in new vehicle demand during the remainder of this century, it appears that growth rates will be highest outside the developed markets of North America, Europe and Japan. The shift in sales to the developing nations will be accompanied by further change in the global industrial structure of the automotive industry.

The traditional distribution of power among the world's automotive producers will tend to move towards greater equality, thereby creating new incentives for co-operative manufacturing efforts between companies.

Prospects in the 1980s

The 1983 report shows the growth in vehicle sales in Canada has historically been highly correlated with growth in GNP, employment and the labour force. During the recovery or downturn phases of the business cycles the response of the vehicle market to the changes in these broad economic aggregates will depend on a variety of other economic variables.

These include: changes in interest rates, income, price levels, incentives and fiscal stimulae, consumer perceptions and consumer confidence, and several other non-quantifiable factors.

A key factor which influences vehicle sales is affordability and as the question of affordability becomes more central to the decision to purchase a new vehicle, the consumer is tending to drive his car for a longer time than he did in the past. The frequency of vehicle trade-ins has declined while spending on repair and maintenance has increased.

Due to these trends, the average length of car ownership for new car buyers is estimated to increase from three years in 1979 to between five and six years by 1990. The average life for new cars is expected to increase from 11 years in 1979 to 14 years by 1990. Again, these factors will affect the growth of the existing stock because of their impact on the sales of new vehicles.

The passenger car market in Canada can be expected to continue to recover slowly during 1984-1985. Total sales, however, may continue to come under downward pressure as a result of high new car prices relative to income growth. In addition, high unemployment rates and slow growth in GNP and the labour force, could continue to depress the automotive market and thus prevent it from reaching full potential.

Car sales beyond 1986 are expected to slow down to an annual average growth rate of between one and two per cent. This low rate will occur as the current replacement cycle is completed by 1985 and market saturation effects become more predominant. Therefore, the period between 1983 and 1985 should be understood as simply a replacement cycle and not as a representative of long-term growth trends for the automotive industry.

All forecasts are subject to major risks. A number of negative developments continue to dominate the national and international economic and political scene. As the North American economy recovers, the question of its on-going strength remains.

Interest rates are of particular concern in this regard, as rising interest rates could choke off the recovery, and interest sensitive purchases, such as consumer durables, would decline swiftly.

Another major risk is from any possible energy price run-up or supply shortage resulting from political developments abroad. The experience of the past decade warns that energy price and supply shocks can unfold quickly and with little advance warning.

The strong recovery in sales in 1983, accompanied by substantial productivity improvements, has greatly enhanced the profitability of the Canadian vehicle manufacturers.

It is generally believed that breakeven for the domestic manufacturers in North America as a whole has dropped from 12.2 million units to about 9.1 million units over the past three years. The return to profitability should provide Canadian vehicle manufacturers with the financial strength necessary to maintain their current investment programs.

The existing product strategies being pursued by the vehicle manufacturers have placed them in a somewhat better position to take up the challenges posed by increased import penetration over the past four years.

The manufacturers have invested heavily in new product and process technologies and have adopted new managerial techniques and organizational forms which will aid in bringing their manufacturing costs down.

The restructuring of the North American automotive industry has placed significant pressure on the Canadian parts suppliers as well as providing new opportunities for them to participate in an internationalized industry.

The shift by the assemblers towards purchasing rather than making parts is expected to continue as they make further efforts to lower operating costs. This shift offers outside suppliers a chance to expand their own operations and realize some of the economies associated with large scale production.

New markets are opening up for the Canadian parts sector in the United States and overseas, due to the rapid internationalization of the automotive industry. However, suppliers must be prepared to meet the rigid quality standards set by the vehicle manufacturers and must make further efforts to improve their international competitiveness if they wish to continue to avail themselves of these opportunities.

In the past, Canada has been fortunate to have a skilled and imaginative labour force. If these characteristics are to be brought out in the future, then a commitment to advanced human resource planning must be made by unions, management and governments.

As this report was being completed it was learned that major Canadian and Japanese automotive companies had announced investments of over $2 billion in Canadian assembly and parts manufacturing facilities. The three major investments include $1 billion by GM Canada Ltd.; $746 million by American Motors Canada Ltd.; and $100 million by Honda Canada Inc. These new investment commitments indicate that the Government's belief that Canada has a major role to play in the world automotive industry, today and in the future, is well founded.

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Standards — Past, Present, Future

Whether it's housing, transportation, energy, manufacturing, textiles, food processing, construction — whatever the industry — it depends on standards.

Society runs by standards. In Canada they are the voluntary regulations that mean quality, precision, size, workmanship, are the same from one end of the country to the other.

Voluntary standards, produced by agreement among all sectors of a nation's economy, "become a uniting rather than a divisive factor in the country," according to Paul-André Massé, former parliamentary secretary to the federal Minister of Supply and Services.

"They support our social and economic goals such as increasing Canadian content in government purchases; broadening the base of supply; promoting energy conservation; promoting trade; and improving the access of small business to government purchasing contracts."

Mr. Massé was speaking at celebrations marking the 50th anniversary of the Canadian General Standards Board (CGSB), an organization which sets the standards by which Canadian products and services are governed.

"Over the centuries we have seen the problems that arise when a 'big brother' government tries to regulate every minute detail of life," Mr. Massé continued. Some countries are still doing it today. Huge bureaucracies administer a mountain of regulations that effectively stifle all initiative and creativity.

"Here in Canada we think we have found the right way to make and enforce standards and regulations.

"The government doesn't hand down edicts from above. We get the manufacturers and the consumers and the federal and provincial agencies together and try to come up with a consensus on what the standard should be and how it should be enforced.

"In fact," he said, "ever since the CGSB was formed in 1934, its specifications and standards development work has been carried out by consensus. Standards committees, consisting of representatives of government, industry, consumers and labour interests, with help from technical and research organizations, develop standards through a consensus process which includes a formal voting by letter-ballot."

Standards by Consensus

CGSB operates by consensus both in the conduct of its standards committee and in formal letter-ballots. Consensus requires that the opinions of all interested parties (users, producers and general interests) be considered and weighed and that the final decision reflects the will of a substantial majority of those entitled to vote.

Great advances have been made in writing standards over the past 50 years and, as a result, the market is more orderly today.

Mr. Massé believes that Canada pioneered a new era of industry-government co-operation. "None of us likes to be saddled with regulations that we feel are not necessary, but we all want some assurance that commonsense rules apply equally to our competitors."

Great Advances

Great advances have been made in writing standards over the past 50 years and the market is a more orderly place today as a result. Yet fresh concerns are always arising. Back 50 years ago there was a concern over the size of children's clothing. Today that no longer disturbs us but safety seats for children in automobiles or pesticide residues in food do.

The role of the CGSB has been described as "to provide standards and, where necessary, certification listing of products and services meeting these standards for both the public and private sectors for procurement, consumer requirements, legislation, technical practices, test procedures, and to support international standardization".

In CGSB's management of the voluntary development of standards, the process begins when there is sufficient need for a standard for CGSB to obtain commitments on participation and financial support.

A standards committee is established with a CGSB officer as secretary and care is taken to ensure a balanced representation and that the consensus process is followed. The committee consists of representatives of government, industry, consumer and labour interests and technical or research organizations.

A draft standard is prepared and subject to technical review by the committee. After consensus has been reached, the standard will be processed either as a CGSB standard through the Policy Board or as a national standard through the Standards Review Board.

(The Policy Board advises the Minister on CGSB policies and programs and provides a second-level review of non-national standards. The Standards Review Board provides a second-level review of standards proposed as a National Standards of Canada and reviews and comments on CGSB policies and procedures.)

The appropriate board reviews the procedures followed in developing the standard to ensure conformance with CGSB policy. Once ratified, the standard is published either as a CGSB standard or a national standard, depending on the reviewing board.

Considering the broad input into the standard from the beginning of its development, CGSB believes that the result will be technically competent and have a high credibility when critically examined.

Standards are meant to be used as a basis for commercial and government

actions and as a substitute for, or in support of, regulation. While CGSB reviews and approves the process by which the standards are developed, it does not endorse or approve products and has no authority to enforce compliance with the standards. It leaves this to the regulatory authorities at the three levels of government.

Certification Listing

As a result of needs expressed by industry and the three levels of government, CGSB developed policies and processes for certification listing programs. By these, manufacturers and service companies are able to demonstrate to purchasers, through the use of an independent third party, that their products or services meet the requirements of a referenced standard on a continuous basis.

If an application is approved, the manufacturer or contractor is offered a licence agreement which authorizes the use of the CGSB logo on products, contracts and general marketing material. The logo gives immediate recognition to the purchaser of products or services that can be expected to meet the standard. This is coupled with a certification statement by manufacturers and contractors accepting of a high degree of accountability for their products.

50th Anniversary

The Canadian General Standards Board's 50th anniversary was marked by celebrations attended by high level industrialists, officials of standards setting and testing organizations and federal and provincial government representatives from across Canada and the United States.

As part of the celebrations, a panel discussed *Standards and Trade — Now and in the Future* under moderator, A.R. Bailey, assistant deputy minister, supply, of Supply and Services Canada. Panelists were William Cavanaugh, president of the American Society for Testing and Materials (ASTM); Jean Roy, president of the Standards Council of Canada (SCC); D.G. Skaling, provincial deputy minister of tourism for New Brunswick; and Philip Nance, president of the Canadian Carpet Institute.

Lead-off speaker was ASTM President Cavanaugh who said that in the standards business, the way you do it is the key to success. "We live in an atmosphere of co-operative antagonism. ASTM standards are an agreed upon way of doing something — and the key is to agree. The standards are agreed to of convenience, not compulsion."

Looking at the question of standards in international trade, Mr. Cavanaugh asked whether voluntary international standards are important, really influential in trade or just documents of convenience. His answer was an emphatic "yes" and he pointed out that multinationals have a decisive role to play in the use of voluntary standards. The General Agreement on Tariffs and Trade (GATT) itself studied them in relation to non-tariff barriers.

One aspect, he added, is that government regulations have a great impact on national and international trade but no voluntary standard, as a voluntary standard, has been used as a non-tariff trade barrier.

A major rationale for voluntary standards is that they provide a vehicle for enhancing Canada's viability as a trading nation.

Standards Improve Trade

The major rationale for CGSB voluntary standards is that they provide a vehicle for reinforcing and improving Canada's viability as a trading nation, according to Jean Roy, Standards Council of Canada president.

The Standards Council was created in 1970 to strengthen Canada's voluntary standards on a national level and secure greater recognition on an international level. "Increasing trade and competition is a portent of the future," he said, "and the standards mark 'Canadian' makes our products competitive."

Accreditation of certification and testing organizations can affect credibility abroad and is an assurance of quality facilitating entry into new markets. International standardization is commonly accepted, he added.

The years ahead will be ones of transition and Canada must strengthen its standards to meet the growing competition with superior excellence and world-class quality.

D.G. Skaling, New Brunswick's deputy minister of tourism, believed that tourism is an important contributor to the economy of the country as an import-export industry (tourist to Canada — imports; Canadians touring abroad — exports).

Tourism is a business with many standards of performance for its people perform services rather than create products. Canada has a long history of strong dependence on international markets; 50 per cent of New Brunswick's industrial output is exported.

It's a tough game and protectionism is often sought but, Mr. Skaling warned, protectionism is a losers' game. "The marketplace must become more and more open."

He felt it is important not to become caught up in the enthusiasm of the standards process while forgetting the industry of the nation — the small businesses and their capacity to understand and participate in what is going on and how best to make the information available to them.

Industry Perspective

As representative of an industry organization, the Canadian Carpet Institute, Philip Nance gave an industry's perspective of trade and standards.

Selection is an important aspect of trade and manufacturers need their own standards for quality control, etc., to compete in that selection process on both national and international markets.

Trade, he said, depended on two elements: comparative advantage. "Competing on world markets is competing with the very best in the world."

Standards can be a major criterion of purchase but Canada is not a leader in the adoption of the International Standards Organization's standards and test methods. Mr. Nance recommended strongly that Canadians develop the mechanisms to encourage people to look outward and adopt such standards.

"World trade and world standards are a state of the mind," he said. "We have a share of world markets but we need a share of the world mind."

by John Hughson
Canada Commerce

Piller Sausages — The Fine Flavour of Nostalgia

For most people, memories of fragrant, sizzling sausages consumed around the kitchen table, provide one of the more satisfying recollections of childhood. It is said that the particular local sausages eaten in one's youth remain favourites for ever and the smell of cooking sausages can transport even the most sophisticated gourmet back to the simple delights of childhood.

If that is, in fact, the case, Wilhelm, Heinrich and Edward Huber are probably responsible for inducing more than their fair share of happy nostalgia. The three brothers operate Piller Sausages & Delicatessens Limited — Makers of Finest Quality European Smoked Meat and Sausages — manufacturing a full range of meat products to tempt the palates of hungry Canadians.

Established in the Kitchener/ Waterloo area as a two-man operation in 1957 by Wilhelm Huber, the current president, the company has developed and expanded into a thriving business employing 100 people.

In 1959, Wilhelm was joined by brothers Heinrich (now secretary-treasurer) and Edward (vice-president). At that time the only outlets for their products were a few local grocery stores and, of course, the Kitchener Market. Gradually the territory was expanded to include delicatessens and supermarkets in the Toronto, Hamilton and London areas.

In 1967 the company applied for registration under the Meat Inspection Act and Regulations. A Certificate of Registration was issued and Piller's plant capability was expanded to allow the firm to promote its product line in chainstores over a much larger area.

While recipes from all around the world are used in the preparation of Piller's meat products, the company specializes in European-style cooked meats, salami and sausages. The current product line covers a wide range of products in seven different groups:

- Eighteen different types of smoked dry salami;
- Seventeen European-style, specialty luncheon meat products;
- Nine sorts of liverspread and paté;
- Ten varieties of cooked and smoked ham products;
- Eight kinds of smoked, cooked and fresh sausages;
- Miscellaneous items which include beef, turkey and chicken products;
- Thirty different types of vacuum-packed, self-serve, sliced meat products.

Company president Wilhelm Huber credits Piller's success not only to catering to the consumer's demand for a wide variety of choice, but also to unceasing dedication to maintaining the high quality of the product. That such high standards have been achieved was demonstrated by the award to Piller Sausages of the prestigious and much-coveted silver and bronze medals at the International European Food Fair.

New recipes are constantly being developed and tested in an effort to provide delicacies for every occcasion and taste. The challenge is to reproduce the old-fashioned flavour and goodness associated with the traditional charcuterie and sausage kitchens of Europe in the highly efficient, scrupulously hygenic conditions necessary to meet today's standards of food preparation. It is interesting to note that Piller's exceeds government regulations for cleanliness!

Time and patience are costly but essential ingredients of the manufacturing operation. After federally inspected meat is cut and well trimmed by Piller's own butchers, a highly trained team of experts nurtures the slow and complex processes of aging, curing and smoking the meats. This phase cannot be hurried without running the risk of compromising the quality of the finished product. A continual inspection program ensures that the highest possible standards are met and maintained.

When the processing of the meats has been completed to the satisfaction of all concerned, it is packaged under the same stringently controlled and inspected conditions and identified with attractive, multi-coloured labels. Piller's believes that, as well as offering a good product, you need a catchy label to entice the customer.

A full colour brochure is available, on demand, showing the complete range of Piller meat products.

The administrative and sales offices are just as modern and efficient as the rest of the plant. A quick response is essential in today's marketplace to ensure that shipments reach their destinations at precisely the right time and in good order. Piller's office and sales staff, with the aid of the latest computers and automated office equipment, are ready, willing and able

Piller's success is due to meeting the consumer's need for variety plus unceasing dedication to maintaining quality.

to serve the needs of every customer.

The bulk of the company's sales (75 per cent) are made in Ontario. The remaining 25 per cent in locations throughout the rest of Canada. At this time Piller Sausages does not export it products.

At least 70 per cent of Piller's customers are located in Southern Ontario. They are serviced by visiting salesmen and the merchandise is delivered weekly by the company's own fleet of 10 refrigerated trucks. The remaining 30 per cent of the firm's clients are serviced by telephone and deliveries are handled by outside transportation companies.

Piller is by no means resting on its success. It has recently applied for and been granted an interest-free loan of $750 000 under the Industry and Labour Adjustment Program (ILAP) to build a 1 390 m^2 (15 000 sq. ft.) facility to house a canning operation. Over a period of three years this operation should generate 30 new jobs.

This venture also involves the introduction of a line of 16 new cooked meat products to be sold in supermarkets and delicatessens throughout Canada. And, for the first time, Piller also plans to export its products. Within the next five years 30 per cent of total sales are expected to result from the export of new products.

Within the short term Piller Sausages and Delicatessens Limited is confidentially predicting a 30 per cent to 35 per cent sales increase in the next year.

Sausages and delicatessen meats may not conform to today's trend for cuisine minceur, but for the three brothers from Germany, their employees and many satisfied customers, they are indeed, the staff of life.

For further information, contact:
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A Celebration of Canada's North

Last summer, Canada Commerce *writer Ron Johnson spent a month travelling more than 16 000 kilometres (10 000 miles) through Canada's north researching material for a series of comprehensive articles on the economies and business opportunities in the two northern territories.*

Johnson, a former newspaperman, was based out of Yellowknife for six years as public affairs manager for the Department of Indian Affairs and Northern Development and, since returning south in 1977, has maintained close ties with that area.

The following article is an introduction to the series of Canada Commerce *articles which will start with the Northwest Territories and continue with the Yukon.*

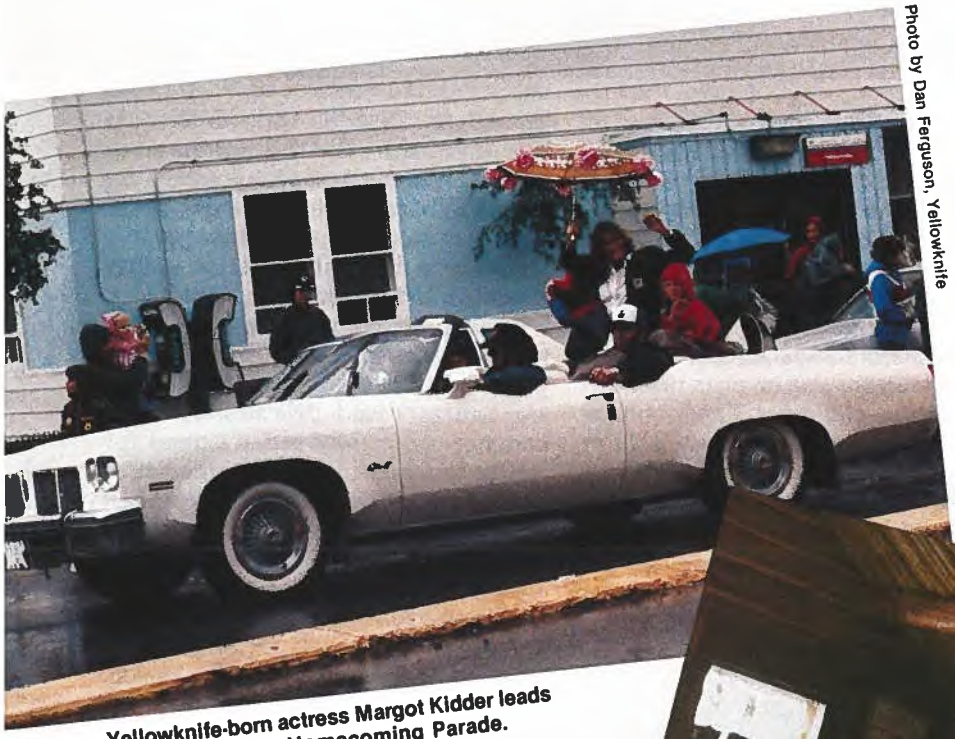


Photo by Dan Ferguson, Yellowknife

Yellowknife-born actress Margot Kidder leads 50th anniversary Homecoming Parade.

There she was, the star of Superman films and *Playboy* Magazine, waving to the crowds from the back of the convertible, shielded from the teeming rain by an umbrella, leading the 50th Anniversary Homecoming Parade.

Margot Kidder was back in the city of her birth — Yellowknife, Northwest Territories.

She was just one — albeit the most glamorous — of an estimated 2 500 ex-Yellowknifers who made the trek down north in the summer of 1984 to help the capital of the N.W.T. celebrate its "Home for Gold" celebrations.

Jarring Experience

For many of them it was a jarring experience. This sleek, sophisticated city of 10 000 people with its office towers, high-rise apartments and shopping malls was a startling contrast to their memories of a rugged settlement of tents and cabins where fresh water came not from pipes but from holes chopped through two metres (six feet) of Great Slave Lake ice.

True, some traces of those early days still remain in "Old Town" and on Latham Island (named for bush pilot Gordon Latham). The log-walled Wildcat Cafe once again dishes out caribou stew and bannock, Weaver and

Caribou stew and bannock attracts diners to historic Wildcat Cafe.

An old headframe on the rich Con Mine property where Yellowknife's first gold ingot was poured in 1938.

Devore's general store still provides prospectors' grubstakes and the names of other old-timers live on in street and highway signs.

Founded on Gold

It was the discovery of gold that brought that first rush of prospectors and speculators and speculators to the shores of Yellowknife bay in 1934 — although the city is named not for the ore but for the local indian band that fashioned utensils from copper.

Within a couple of years, headframes sprouted willy-nilly among the rocky outcrops and in 1938 Yellowknife's first gold brick was poured at the still-operating Con Mine on the southeastern edge of the present city.

After an enforced time-out for World War II, Yellowknife prospered and grew, moving across the narrow channel from Latham Island, through Old Town and Peace River Flats uphill to the city's present mainland site where paved streets and traffic lights have replaced the bush trails of '34.

Nostalgia

For many of this year's returning visitors, a trip to the city's popular Hoist Room cocktail and dining lounge could provide nostalgia enow. Sipping their drinks and munching on escargots, steaks, Arctic char or Great Slave Lake whitefish, they could gaze along the walls at the framed stock certificates of dozens of failed gold-mining dreams.

Cameron Falls, a short drive east of Yellowknife.

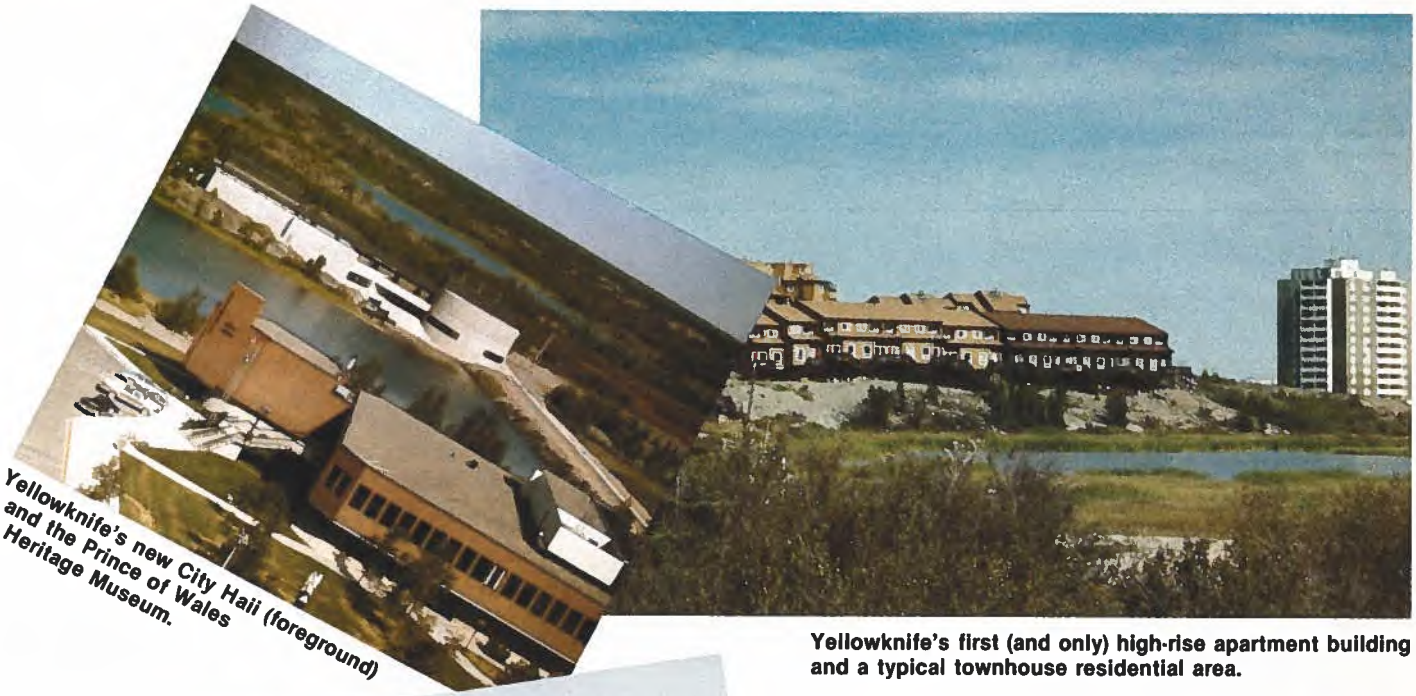
More tellingly, the rocks of the room's impressive fireplace bear brass plaques attesting to their origins — the mines that made rich men of their discoverers: Con, North Star, Tundra, Camlaren, Eldorado and the still active Giant Yellowknife just to the north across Back Bay.

Original Headframe

A mile to the south, the original headframe of the Con Mine is now overshadowed by the towering, 76-metre high headframe for the Gordon Robertson shaft which plunges 1 900 metres, tunneling out below the city and Great Slave Lake to reach new ore reserves.

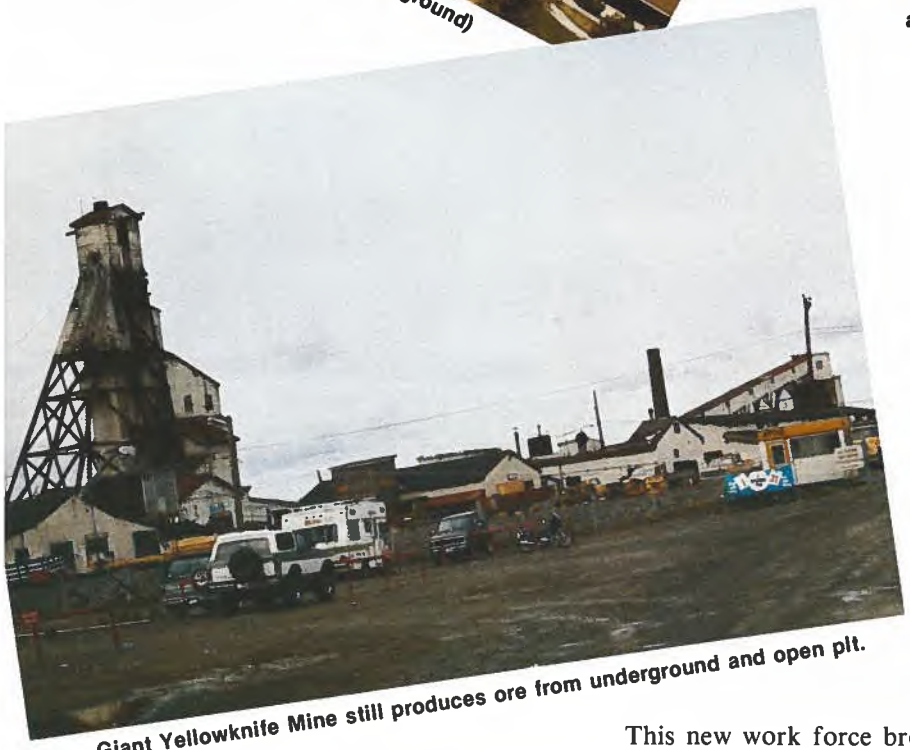
Fueled by the mines, Yellowknife grew steadily during the late 1940s and 1950s becoming the economic hub of the N.W.T. and the logical choice, in 1967, to replace Fort Smith as the territorial capital.

Memorial to Canada's bush pilots thrusts skyward from an Old Town hilltop.



Yellowknife's new City Hall (foreground) and the Prince of Wales Heritage Museum.

Yellowknife's first (and only) high-rise apartment building and a typical townhouse residential area.



Giant Yellowknife Mine still produces ore from underground and open pit.

Thanks to a decision to switch the administration of the N.W.T. from Ottawa to the new capital — a decision heatedly pushed by then-Commissioner Stuart Hodgson — Yellowknife was in for its second, and more permanent, boom.

Largest Employer

As Ottawa relinquished more and more power to the Territorial Government, it grew in both size and economic influence until it is now by far the largest employer in the city.

This new work force brought the city both a fresh source of spending and a demand for goods and services more compatible with those of southern Canada. Suburban developments appeared on the permafrost and acres of bush were levelled to accommodate further housing, schools, hospitals, shops and utilities.

Today's Yellowknife is a heady amalgam of frontier and fashion — a city where suited civil servants brush elbows with bush-clad prospectors in the Miners' Mess coffee shop and the elegant, wood-panelled Our Place cocktail lounge.

Yellowknife Praised

In his latest book, *Home Sweet Home*, a bemused Mordechai Richler's paean to the city concludes: "Wonderful, demented Yellowknife has more spirit than any other town I know of in Canada."

It is this spirit that carries Yellowknifers through the long, dark winters when temperatures can sink to 50 below for days on end. And it is their streak of zaniness that brings swarms of Yellowknifers out for the annual Midnight Sun 24-hour golf tournament where players tee off along sandy fairways, where the hazards are the frequent rock outcrops, where you putt out on oiled sand greens, and where players get a free drop whenever a raven steals the golf ball.

Thanks to a fund-raising drive headed up by *The Globe and Mail*, Yellowknife this year saw an old high school gym transformed into a glittering arts and cultural centre. And, thanks to the persistence of Stu Hodgson the city now boasts of the ultra-modern Prince of Wales Northern Heritage Centre.

It is, in every respect, a thoroughly cosmopolitan city. Yet it is also a city which is still in touch with its heritage of gold from the workings which underlie it.

In the words of northern composer Robin Beaumont, "There's no place like Yellowknife. . .where the gold is paved with streets."

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The Department of Regional Industrial Expansion maintains regional and local offices in each province for your convenience:

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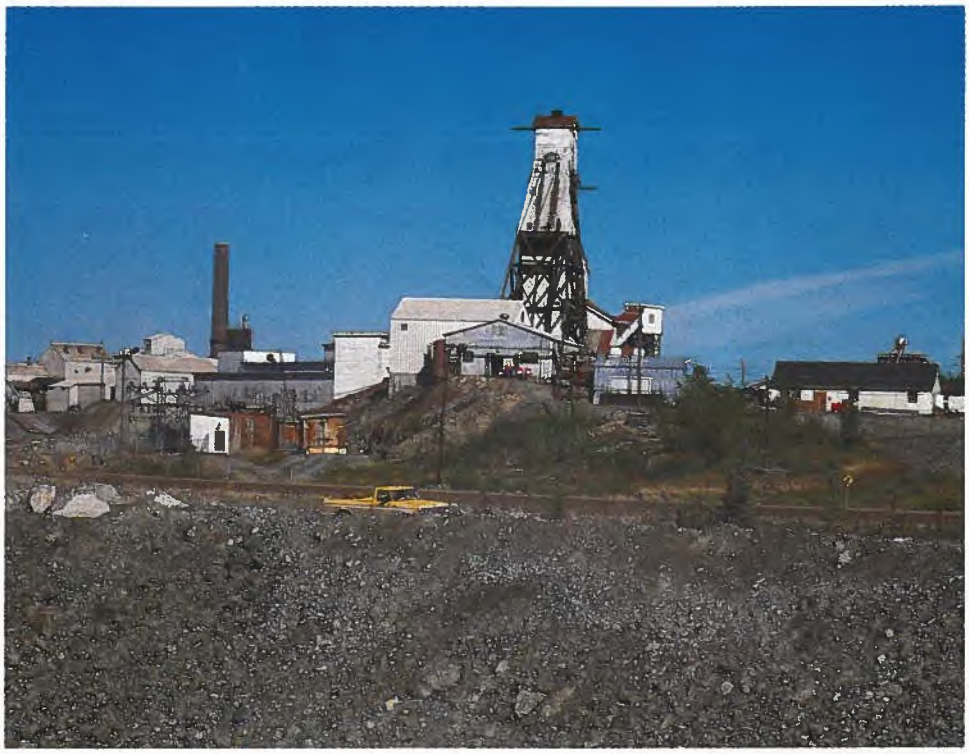

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