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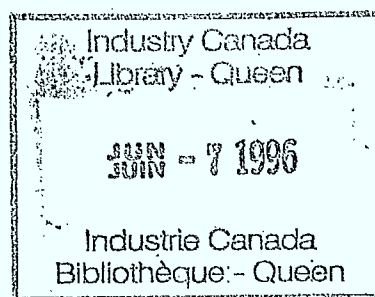


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ISTC'S STRATEGIC DIRECTION

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Policy Sector
October 4, 1991

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I Introduction

Over the next year Canadians will be faced with decisions that will critically affect the future shape and direction of Canada. The autumn will see the beginning of a process that will require governments in Canada and all other stakeholders to make a number of strategic choices about the future of our country.

These choices cannot be made in isolation from the rapid economic changes taking place domestically, which reflect changes at the international level. Tariff walls are coming down and regional trading blocks are emerging. The globalization of the world economy, driven by the proliferation of new technologies, increased capital flows and the integration of markets, has transformed the very nature of competition and the factors on which we compete. A new economic paradigm has emerged, one that demands a new approach on the part of all economic players - business, labour, educators, governments and individual Canadians - if we are to maintain our standard and quality of life.

ISTC is also at a critical stage in its development. Having successfully merged the roles of DRIE and MOSST and the remnants of earlier organizational experiments, we have made substantial progress in developing a new operating ethos that places priority on our intelligence gathering, service offerings, and a major advocacy role within the federal system to build competitiveness and promote scientific excellence. The mandate of the Department was further clarified when responsibilities for Quebec regional development were removed from ISTC and followed Mr. Bouchard in his new portfolio in the recent Cabinet shuffle.

If, however, the department is to establish itself successfully as a catalyst and reasoned advocate within the federal government in pursuit of its long term mandate of advancing international competitiveness and scientific excellence, it must link effectively these objectives to the priorities of the Government stated in the May Speech from the Throne and the February Budget, namely:

- Canadian unity, based on a renewed constitution;
- Prosperity;
- the full participation of Aboriginal people in Canada's economic prosperity and political life;
- fiscal restraint;

- changing the ways governments conduct their affairs and improving organizational effectiveness.

The challenge ISTC faces, therefore, is to focus its efforts in a strategic way on a cluster of government priorities that will enable the Department to pursue its long term mandate:

- *ISTC has a unique contribution to make to the development of the economic agenda that will support national unity*, both directly (e.g. Canada 1995, aboriginal business and economic development program) and indirectly (e.g. advocacy efforts on constitutionally sensitive framework policies, promotion of science and technology networks);
- based on enhanced consultations, *transforming the Agenda for Prosperity* from a set of ideas embraced by the Government as a whole *into a concrete and visible ISTC action agenda* that can be communicated effectively to our clients and upon which we can base our work with private and public sector partners; and,
- *developing a more effective organization* by improving our base of knowledge, improving our marketing efforts, improving the outward orientation of the department to its networks in the private and public sectors, investing in the development of our employees and creating a work environment that fosters creativity and innovation.

II The Strategic Environment

National Unity

National unity will be the paramount focus of the Government's attention over the coming year and all of its activities will be influenced to some degree by the Government's search for creative solutions to the constitutional impasse arising from the failure of the Meech Lake accord.

There has been a major shift in the way in which the national unity question is being cast. While the pre-Meech national unity question historically revolved around Quebec's aspirations and its place in Confederation, the debate has now been broadened, with significant questions being raised about radical, rather than incremental, changes to the character of federal and provincial powers. These questions are arising in the context of a regional dynamic that is immensely more complicated than ever before. While Quebec seeks a radical reduction in federal powers, the Maritimes are calling for the status quo. The realization of Western aspirations for greater influence over federal institutions is being sought through

institutional reforms that may not be palatable to a more populous central Canada. Ontario's traditional leadership role in serving the national cause has lost its focus. These complex issues are further complicated by the fact that the nature, character and quality of aboriginal participation in the Canadian community are now incontrovertible features of the debate.

The scope of the national unity question is, of course, much broader than its core focus on the constitution. Public discontent about the responsiveness of political institutions generally and the emergence of regionally based political groupings have opened up major questions about the credibility, and even the legitimacy, of policies of governments in Canada. These are questions that go well beyond constitutional arrangements. Their resolution will not be found in constitutional deal-making alone.

The Economy

The general consensus amongst economic forecasters is that Canada is emerging, albeit in an uneven way and pace, from the recent recession. Nevertheless, ongoing public anxiety about the Free Trade Agreement (FTA), a policy which has not been embraced wholeheartedly by the Canadian public, will continue to focus concerns on the extent to which Canada is facing a crisis in its manufacturing base with a concomitant decline in our wealth creating capability. These attitudes are being reinforced by plant closures, major corporate restructurings and the growing importance, in terms of both output and employment, of the services sector, all of which suggest that profound and permanent changes in the character of the Canadian economy are occurring. As the economy emerges from recession, a critical question in the public's mind is whether the expected benefits of the FTA will be realizable with exchange rates stuck at high levels. The dimensions of this rapidly evolving situation are largely unknown; but the changes *are* far-reaching and profound.

Taxes and Government Spending

The implementation of the Goods and Services Tax has fuelled the flames of public discontent to the extent that cross-border shopping has been characterized as a proxy "tax revolt". The federal government, and increasingly provincial governments, will find their fiscal options constrained not only by deficit reduction considerations, but also by severe scrutiny of any new spending initiatives. At the same time, major outstanding commitments by the federal government, some of which have clear links to prosperity/ learning issues (e.g. childcare), have not yet been implemented. New demands on the federal government are likely to emerge from the Prosperity exercise and may involve more than can be accommodated by a re-shuffling of resources.

Internationalization of the Economy and Policy Making

The federal government has to have the ability to act with authority and coherence on the international stage. Three key international factors having significant implications for Canada are that: economic growth is now more than ever trade-intensive; the nature of trade itself is changing; and, international policy is increasingly impinging on domestic issues.

Since World War II, the volume of world trade has grown twice as fast as global output and Canada's reliance on trade has doubled to reach over 30 percent of our gross domestic product. Exporting is one of the main engines of growth and job creation in the Canadian economy.

At the same time, the nature of trade has changed with *international trade in capital and information partly overtaking merchandise trade*. For example, from 1983 to 1989, global flows of foreign direct investment grew at an average annual rate of 34 percent, more than three times the growth rate in merchandise trade. Foreign direct investment is now one of the principal methods for facilitating the flow of technologies and management techniques across national boundaries and has become the main engine of the globalization of the economy.

International forces are increasingly impinging upon many of the policies and activities that were once viewed as the sovereign preserve of national governments. These policies are caught up in a powerful trend toward international regulation and standard-setting. Ironically, while this is a trend that can be, and has been, characterized as a diminution of sovereignty, effective participation on the international stage requires that national governments have the authority to pursue their countries' objectives with clarity of purpose and coherence of action.

The shift from a bi-polar (east-west) international dynamic toward a far more complex environment with a triad of competing players has also been accompanied by what Sylvia Ostry has identified as "system friction". This means that *pressures are growing for the convergence of domestic policies in and between nation states, particularly in areas such as competition policy, intellectual property protection, access to major national or regional research and development (R&D) programs and the technology they generate, inward direct investment and regulations affecting capital markets*. As many of these policies vary considerably from one country to another and are based on very different conceptions of the role of government and the manner in which economies are supposed to function, the pressures for convergence are likely to result in considerable disagreement among the countries involved. In

light of the difficulties encountered in reducing barriers to trade and services external to the borders of nation states, establishing agreements on mechanisms to regulate conduct on the foregoing matters, which are largely internal to the affairs of nation states, will require that unprecedented obstacles be surmounted.

III Rising to the Challenges: The Government's Priorities

ISTC has been highly successful in moving the economic priorities we have been advocating to the centre of the Government's agenda as demonstrated in the latest Budget and Speech from the Throne. Our current challenge is to ensure that our own evolving policy agenda builds, in imaginative and credible ways, upon the privileged position which ISTC has achieved at the centre of the Government's agenda.

The following priorities identified in the Speech from the Throne are particularly relevant to ISTC:

- Canadian unity, based on a renewed constitution, with the Government's proposals for reform being the subject of public consultations by a joint parliamentary committee between September and early in the new year;
- prosperity, based on liberalized trade throughout the world (the multilateral trade negotiations), within North America (FTA and NAFTA), and within Canada (Canada 1995);
- prosperity, based on improved productivity and a skilled and sophisticated human resource base;
- prosperity, based on integrated environmental and economic goals; and,
- the full participation of Canada's aboriginal people in Canada's economic prosperity and political life.

In addition, in the February Budget, the Government committed itself to a number of other priorities which will affect the environment for all government departments, including: legislating mandatory program spending limits, limiting the growth of transfers under Established Programs Financing, and exploring reforms to federal-provincial tax agreements.

The Agenda for Prosperity takes on a profound importance in helping the Government manage a difficult agenda in a challenging context. International competitiveness is an

organizing concept which allows the Government to communicate to Canadians in a clear and understandable way that our future prosperity is at stake as we find ways to come to terms with a diverse range of issues, including national unity, the international agenda, industrial restructuring, and social issues. It shows the importance of addressing these issues simultaneously in a coherent and integrated fashion and of all stakeholders (business, labour, educators and other governments) working together in charting future direction and acting in concert to achieve commonly agreed upon objectives.

Unity

By setting a purposeful direction to allow Canada to rise to the international competitive challenge, Prosperity consultations will play a critical role in shaping and influencing the unity debate. The exercise should provide the federal government with credibility on the economic issues that will form a major element of the constitutional talks. While many Canadians would appear to have reached their saturation level, or feel powerless and frustrated with constitutional issues, a growing number of individuals in every walk of life is concerned viscerally about the nature of the competitive challenge the country faces, something that Canadians understand can affect them directly. What is not clear is whether Canadians at all social levels believe that they are capable of contributing to the solutions.

Canadians must be made aware that, from a competitiveness standpoint, a whole range of tasks need to be undertaken to ensure that Canada has a strong economy. Achieving success on this front will require nation-wide collaborative action on a number of crucial issues, including: training and the development of highly qualified people; investments in R&D and technology adoption/adaptation by the private sector; financing innovation; and, public infrastructure and regulatory improvements. National integrity and the will to work together are essential to our economic well-being.

One of the first challenges facing the Government will be to demonstrate to all Canadians, *the importance of preserving Canada's influence in those key international forums that are shaping the politics and economics of the twenty-first century*. A disunited Canada would be a mere bystander as frameworks are set and decisions taken, whether in the GATT, the Quadrilaterals, (Europe, Japan, the U.S. and Canada), or by the G-7, which shape not only the global trade and economic infrastructure so vital to our economic well-being, but increasingly our domestic economic and social frameworks. Neither can we afford a diminution of our influence in a transformed NATO, in emerging Asia-Pacific coordination, or in new

continental, or even western hemispheric, economic and political arrangements. *An important unity message, therefore, is the need to preserve and develop our domestic frameworks on a credible Canada-wide basis, as the basis for acting with weight and authority in these international forums.*

Prosperity

a) *The International Agenda*

To protect Canada's interests as an international trader and influential middle power, the Government will be strongly motivated to maintain, and improve upon, our stature on the international stage and, over the next several months, will have to address a number of difficult issues:

- the FTA will continue to be a source of debate and friction. Serious issues that still need to be addressed under the FTA include the contentious questions of subsidies and countervail actions and our ability to capitalize effectively on the improved market access offered by the Agreement even though interest and exchange rates are high. In this regard, the challenge for the Government will be to rebalance the debate by presenting a credible accounting of FTA benefits;
- the North American Free Trade Agreement (NAFTA) will continue to preoccupy the Government and will raise difficult policy issues with respect to apprehensions about competition from low cost labour and less stringent environmental standards;
- the current Uruguay Round of multilateral trade negotiations (MTN) - which deals with key areas such as agricultural trade (subsidies), intellectual property and trade related investment and services - is slated to conclude by about the end of the year;
- the restructuring of the Western (Europe 1992) and Eastern European economies and commitments made in the G-7 to the Soviet Union may assume considerable prominence in the short to medium term.

There is also an opportunity for the Government to build on its two-track strategy of multilateralism and bilateral trade and address a new "plurilateral" dimension. As a Pacific rim country with historic ties to Europe and a heterogenous population with roots in all key markets, Canada is well placed

to build bridges between regions (i.e. the trading blocks) and to use our unique experience to influence international relationships and the rules of the game.

b) Industrial Restructuring

The Government also needs to manage its economic agenda in the context of a major industrial restructuring currently underway in the Southern Ontario manufacturing base and our resource processing base (e.g. pulp mills, steel, aerospace, autos) - sectors that have fuelled our past prosperity. These are highly controversial and divisive problems which will augment and exacerbate existing strains on the union, particularly as attempts are made to exploit regional vulnerabilities with calls for adjustment assistance.

Not only will fiscal constraints limit the Government's options when addressing restructuring issues, but providing assistance to failing businesses is increasingly unacceptable under international trade rules, and undermines our basic competitiveness by propping up uncompetitive industries. Focusing on short term pressures would also detract from the need to address the changes that are required for Canada to respond positively to a fast changing world environment. Most analysts agree that profound and permanent changes in the character of the Canadian economy are taking place, driven in large part by:

- the decreasing significance of national boundaries, in terms of trading opportunities, with the implementation of the Free Trade Agreement (FTA), the proposed North American Free Trade Agreement (NAFTA), the European integration in 1992, the multilateral trade negotiations (MTN), and the opening up of Eastern Europe;
- the globalization of the world economy with the integration of markets and capital flows accounting for an increasing share of trade flows; and,
- the growing importance of knowledge in the production of goods and services and the erosion of the distinction between goods and services themselves. Specialized knowledge (whether it be technical, engineering, scientific, management, financial, marketing) is accounting for a larger share of revenues of both mature and high-tech industries because of its contribution to the production and provision of those kinds of goods and services that meet sophisticated customer needs and, more importantly,

that cannot be easily duplicated by low-cost, low-skill, competitors.

In this new environment, our economic success will increasingly depend on the skills and insight of all Canadians and on our ability to link these skills to the world economy. Robert Reich has argued that, in this context, the role of government is to build the human capital and essential infrastructure (e.g. transportation, telecommunications) that make a nation uniquely attractive in the new world economy.

The challenges the Government faces, therefore, is to:

- establish a clear and shared vision of long term national goals along the lines envisioned in the Prosperity initiative, without short term pressures deflecting energy and attention from that effort; and,
- energize all players in the economy so that they can act together to build the human capital and the infrastructure to attract and sustain knowledge-intensive, high value added economic activity.

c) The Social Agenda

Economic developments and the discussions generated by the Prosperity exercise will also draw attention to the social policy agenda. Industrial restructuring is leading to concerns about the condition of the social safety net and the federal commitment to major programs such as the Canada Assistance Plan. The growth in nonstandard employment (e.g. part time, short term and temporary work) has given rise to concerns that social programs and labour market policies (e.g. public pension plans, workers compensation and UI), that were designed around traditional employment norms, no longer respond to the needs of an increasing proportion of workers. Similarly, the focus on learning in the context of the Prosperity exercise will certainly bring the issue of federal support for education and training to the fore and will likely raise the profile of existing commitments for a national system of childcare. The Government's social agenda is, thus, closely bound up with its economic agenda. Social safety nets are critical to providing support for adjustment and to avoiding social conflict and there is a need to get all partners involved in concerted action on human resources development. *The social agenda cannot be treated as separate or as an afterthought to the economic agenda.*

d) *The Green Plan*

The convergence of Green Plan implementation and the Agenda for Prosperity presents the Government with an important opportunity to forge links between economic and environmental goals so that they complement, rather than compete with, one another. The challenge is to encourage the development of a new ethos among environmentalists and industrialists that would stress the competitive advantages to be gained from environmentally friendly industrial processes. Efficiency is critical to competitiveness and its virtues are generally well understood by the business community. There is a need, however, to enhance industry's understanding of the efficiency gains that are possible through improvements that minimize environmental degradation. Improved production processes and new equipment and technological processes recover waste products with marketable value, and use inputs more efficiently. They can also create new market opportunities, at home and abroad, for environmental products and services.

An Integrated Perspective

The challenges outlined above cannot be dealt with successfully on an individual basis - there are important linkages between them. The key from the Government's perspective will be the articulation of a vision of Canada's future that allows these issues to be addressed in a mutually reinforcing, rather than a competing manner.

The Prosperity Agenda will provide an important unifying theme. It offers a way of thinking about issues in an integrative way. For example, human resource development is a critical factor for Canadian competitiveness and future prosperity in an increasingly knowledge intensive world economy. From a constitutional perspective, however, the federal role in human resource development could be seen as an intrusion in the area of education even though it represents a significant cost to the federal government (at \$11 billion annually). In light of the Government's proposal to recognize in the Constitution that labour market training is an area of exclusive provincial jurisdiction, addressing the issue of human resource development from the competitiveness perspective will encourage consideration of the issue from a national standpoint - how all Canadians can deal with the problem. The focus of the debate should then be moved from intractable issues of jurisdictional entitlement and the division of powers, to practical discussions about what needs to be done and who is best able to do it.

There is another sense in which the Agenda for Prosperity is important. One of the ironies of the current national unity debate is that while Canadians look to the federal government to provide economic leadership on national and international economic questions, they tend to see many economic policy issues in highly divisive regional terms. Further, they also tend to derive much of their sense of belonging to Canada from the social policy and program roles played by the federal government. This is reflected, for example, in the importance attached to equalization payments to "have-not" provinces and the federal health and social security system as fundamental expressions of the country's sense of fairness and decency.

The important challenge for the Government will be to draw the linkages between Prosperity and the social agenda from two dimensions. First, that only a prosperous country can afford to be fair and decent; and second, and perhaps just as important, that by being careful about how we design our social programs, being fair and decent can also make us more efficient and productive. For example, medicare's underlying principles of operation make an important contribution to ensuring that our medical care system is more cost effective per capita than its American counterpart and hence places a lesser burden on the country's economy. A high quality national childcare system would allow us to mobilize women more effectively in the workforce. Further, by designing a system that stimulates the development of children we could improve their ability to learn when they enter the educational system and hence ensure that the next generation is better equipped to deal with the knowledge based economy of the future. Labour relations, which have traditionally been perceived as managing the equitable treatment of workers and the distribution of wealth (i.e. social policy), are now increasingly recognized as important to the competitiveness of firms and the creation of wealth. Thus, many of the most competitive firms today are seeking consensual rather than adversarial relationships with their workers, creating an environment that is conducive to creativity and innovation and providing their workers with a measure of control over their work environment.

IV ISTC's Strategic Direction: Building International Competitiveness in the Context of Prosperity

Constructive support by ISTC for the Government's priorities will depend heavily on our ability to get ISTC's own act together inside the federal government and with other private and public sector partners. Despite our success in moving our industrial development mandate away from an emphasis on broadly based financial assistance to a more focused and strategic role, we have not been effective enough in communicating,

either internally or externally, our new departmental priorities and activities. In fact, too many people still see us as "the department of bail-outs".

A major effort needs to be undertaken, to communicate better to those inside and outside government, what our priorities are, not with a view to self-advertisement, but as a vital element in effectively executing our mandate with our partners. We also need to make progress on a relationship-building agenda starting with the agencies in the portfolio of our Ministers (International Trade, Investment Canada, the Export Development Corporation, the Federal Business Development Bank, the National Research Council, the Natural Sciences and Engineering Research Council, Statistics Canada, as well as ISTC) and including other public and private sector partners. A priority is to continue and improve on our leadership on the competitiveness agenda which we have been building for the past three years, in conjunction with the Prosperity Secretariat and Employment and Immigration Canada (EIC). We need to find creative ways to lever cooperation with other partners, to improve service and get our message out. Now, with the launch of the Agenda for Prosperity, our credibility demands no less.

ISTC's long-term mandate of promoting international competitiveness and scientific excellence will be best served by focusing on a cluster of government priorities along the following strategic thrusts:

Building the Economic Agenda to Support National Unity

Over the coming year, the Government will be deeply preoccupied with national unity and constitutional issues. There are a number of ways in which ISTC can contribute substantially to the development of the economic agenda to support national unity. First and foremost, the Prosperity initiative should galvanize public thinking about the importance of unity for our future prosperity in a highly competitive international environment. The Prosperity consultations should also point the way to the new partnerships needed between governments and the private sector and, in a very practical way, resolve questions about who should be doing what. Within our own mandate, we will need to cast a national unity light on all our principal activities, such as:

- our efforts to strengthen Canada's internal markets through the development of comprehensive federal-provincial arrangements to expedite the reduction and removal of all interprovincial barriers to trade by 1995;
- the leadership we give to the development of the economic and business base for aboriginal self-reliance;

- our promotion of national or Canada-wide science and technology networks e.g. the Centres of Excellence, Strategic Alliances Program, a national Wide-Band High Speed telecommunications network to link Canadian and foreign researchers, Human Frontier Science Program, the programs of the Natural Sciences and Engineering Research Council (NSERC) and the National Research Council (NRC);
- our network of regional offices and of industry sector branches which deliver services to businesses and provide ISTC's clients with access to national industrial, trade and technological intelligence and expertise;
- our advocacy work on constitutionally sensitive framework policies having an impact on industrial competitiveness (e.g. human resources, telecommunications).

Supporting the Consultations on Prosperity: National and Sectoral

As a prime mover and a key participant in the Agenda for Prosperity, ISTC has a particular obligation to make a substantial contribution to the *national consultations* and partnership-building envisioned by the Government. Our principal role will be to garner insights and mobilize action on the sectoral front where the Department's core expertise exists. In addition, however, we are well-placed to take the lead in identifying, analyzing and developing possible Government strategies in response to key cross-sectoral issues which are likely to emerge from the consultations. For example, issues related to cyclical and secular trends in corporate investment, technology development and adoption/diffusion, structural adjustment and individual firm or employee adjustment.

The *portfolio consultations* on prosperity will provide a timely catalyst for translating the international competitiveness concept into improved sectoral competitiveness knowledge and action plans. In addition to ISTC's own sectoral economic and strategic analyses, the Porter study and studies to be published this fall by the Science Council and Economic Council on sectoral R&D and productivity will complement the knowledge base to support this exercise. The challenges for ISTC will be to:

- (1) engage fully all staff in the consultation exercise, as this will be one of the principal ways we can build sectoral knowledge to support forward-looking, strategic sectoral analysis; and,
- (2) manage an effective consultative process which:

- synthesizes this information as a basis for consensus on the competitive challenges confronting key sectors over the next 5 - 10 years;
- broadens the representation of interests in existing sectoral organizations to build new partnerships among key players including business, customers, suppliers, labour, science, education, all three levels of governments, and international experts; and,
- develops a shared agenda for action among key players which will add significantly to the effectiveness and clarity of ISTC's future sectoral role.

There will be a need to manage the expectations that will come out of the prosperity consultations. Emphasis on the contribution all stakeholders will need to make to prosperity will be important in this context. Finally, the sectoral consultations should also develop information and ideas on some economy-wide issues, which can contribute to the "national" track of prosperity consultations and should energize all parties to undertake a mutually reinforcing and synergistic program of action and continuous feedback to enhance competitiveness.

Embedding the Prosperity Agenda in ISTC'S Daily Work

a) Facilitating Industrial Restructuring

The industrial restructuring now taking place has to be viewed not only in the context of the recent recession and current interest and exchange rates but, more importantly, in the context of the globalization of markets, investment and technology flows. Structural responses to liberalized trade may have been spurred on, but they were not led, by cyclical changes. The rationalization of traditional manufacturing and resource processing industries on a North America wide basis is part of a global transformation being brought about by the changing character of trade, where there is an inextricable interlinkage of trade, investment and technology flows.

Emphasis on product quality, innovation and service is also contributing to structural change with a significant increase in the importance and pervasiveness of the service sector. Traditional distinctions between goods and services are becoming increasingly blurred as producers add knowledge value to products and sell services and goods as packages.

The companies poised to thrive in this new environment will be those which are:

- forward looking in their orientation -- those that make the longer term investment in R&D and innovation, implement organizational innovations to take full advantage of technological developments and employee initiative and skills, and move towards a consensual form of employer-employee relationship which, in some cases, involves redefining the organization of work; and
- outward-looking and seeking new markets and new opportunities in traditional markets.

Just as companies will need to modify old strategies to meet the conditions of a changing world, so will ISTC need to re-examine its activities to ensure that it is in a position to facilitate the major industrial restructuring underway. At the very least, a better understanding of economic trends with respect to restructuring in the manufacturing sector and developments taking place in the service sector is needed. Efforts will have to be devoted to:

- obtaining, in cooperation with private and public sector partners, better data on what is happening in the economy in terms of firm restructuring, industry rationalization, etc.;
- assisting with rationalization and restructuring, for example, in the shipbuilding industry, by implementing West Coast rationalization and developing a post rationalization shipbuilding policy to reflect market needs, the restructured industry and requirements for defence industrial base;
- finding ways to focus the attention and use resources of all key partners for positive restructuring (e.g. adding knowledge to resource extraction, encouraging technology transfer and diffusion, upgrading products) and building on regional strengths at the firm and sector level;
- analyzing developments in service industries in order to obtain a better understanding of the enormous potential offered by these industries (e.g. trade in services) and the challenges they face (e.g. cross border shopping issues);
- energizing ISTC's efforts, especially in the regional office network, to develop concerted adjustment strategies in cooperation with the regional

agencies, Employment and Immigration Canada and provincial governments, to achieve most effective use of resources in the pursuit of both industrial competitiveness and regional development goals;

- focusing on developing and delivering effective programs and services to facilitate restructuring and adjustment; and,
- getting information and the message out to Canadians and strengthening linkages with key partners.

b) Finding Imaginative Approaches to the Human Dimension of Competitiveness

ISTC has played a critical role in shaping current understanding of the pivotal importance of human resources for international competitiveness. At the same time that we have moved human resource issues to the centre of the Prosperity Agenda, we have made some progress in reflecting this priority in ISTC's own work. Our priorities for the medium term need to focus more on integrating human resources factors into our intelligence gathering on sectoral strengths and weaknesses and in complementing the work of Employment and Immigration Canada in the services ISTC provides to businesses. Over the next year we need to find imaginative and practical approaches to:

- fostering a stronger commitment to human resource development by managers at the firm level and promoting the learning culture needed in the work place for future competitiveness;
- at the sectoral level, encouraging management and labour to work together to identify skill gaps and requirements and to find and implement training solutions;
- working with educators and business leaders to upgrade the management skills of Canadian entrepreneurs so that they can strategize and plan markets and financing and become the technology-confident champions we need;
- building knowledge about, and developing solutions to, specific human resource supply/demand problems, especially in specialized niches of engineers, scientists, technicians and technologists needed to underpin competitiveness in a knowledge-based global economy;

- working at elementary and secondary levels to get youth turned on to science and math without raising jurisdictional issues; and,
- adding to the knowledge base as to how government's adjustment and training policies and programs can be improved to foster competitiveness and facilitate adjustment.

c) Getting the International Markets and Marketing Framework Right

One effect of the increasing globalization of industry is the need to ensure that the international framework of rules is appropriate to encouraging trade in goods and services, rather than inhibiting it, and recognizes the increasing integration of global trade, investment and technology flows. At the same time, it is essential that firms that traditionally have only looked at domestic markets become aware of the potential and learn the skills required to take advantage of new markets. Participation in ongoing trade negotiations, development of international marketing, investment and technology plans and addressing specific trade issues provide ISTC with opportunities to refine further its supportive framework.

First and foremost, ISTC needs to develop activities that will encourage the broad range of firms which do not currently export to be more aggressive in exploiting new opportunities, particularly in the U.S. Giving sectoral focus to our international activities and focusing on market niche opportunities are important first steps in that direction. Other challenges for ISTC will be to advance industry's interests in:

- the concluding stages of the MTN and the negotiation of the NAFTA;
- FTA and MTN implementation issues to support and encourage industry to take advantage of new opportunities and adjust to new competitive circumstances;
- conducting further assessments, both quantitative and qualitative, on opportunities arising out of the FTA. There is a need to move from generic FTA activities to approaches targeted at the sectoral and sub-sectoral level;

- exploiting our new science and technology relationship with Japan and developing strategies for Canada's science and technology (S&T) relationships with Europe and the U.S.; and,
- anticipating future changes in international rules and rulemaking, pursuing Canada's competitive interests as international regulations and standards are harmonized, and being alert to the potential for the creation of non-tariff barriers (e.g. environmental regulation).

d) Getting the Domestic Framework Right

Over the past several years, the Government has promoted competitiveness through major changes to its science and technology policy as well as to framework policies such as competition policy, foreign investment, regulation of the transportation sector, intellectual property, etc. Given the accelerating pace of international developments, all of these policies are subject to ongoing review and challenge, with ISTC prepared to intervene as an advocate for industrial competitiveness interdepartmentally or, through its Ministers, in Cabinet. In addition, upcoming events could dictate a major Departmental advocacy effort in the following areas:

- competition in the provision of long distance telecommunications services will be on Cabinet's agenda in the coming year;
- the fifth year review required by law of the deregulation of transportation will take place in 1992;
- possible revisions to intellectual property regimes affecting the regulatory framework for pharmaceuticals and biotechnology;
- regulatory reform at the sectoral level (e.g. agri-food); and,
- the reform of post-secondary education funding which will be the subject of active discussion over the coming months as the review of Established Programs Financing announced in the Budget proceeds.

A major challenge for ISTC with respect to framework policies is that our clients have competing interests in many of these issues. They are either providers or users of goods and services affected by regulation (e.g. shippers and carriers in the transportation sector, owners and users of intellectual property). Efforts will

be made over the coming year to establish coherent ISTC positions on these issues which balance the competing interests of our clients.

e) Making Sustainable Development a Reality

Environmental issues continue to gather momentum on both the domestic and international agenda. Pressures for changes to current patterns of resource use and production present an increasingly serious challenge to all sectors of the Canadian economy. The multi-sectoral and intrusive nature of environmental policy, coupled with potentially adverse implications for Canadian industrial competitiveness, at least in the short term, will require ISTC to work to ensure that the economic side of sustainable development is not ignored as the Government's commitment to sustainable development at home becomes a reality. This is particularly important in light of Canada's high profile in forums seeking solutions to global environmental problems.

ISTC's initial response to the challenge of sustainable development and increasing importance of environmental issues was to focus on the integration of environmental and economic objectives in the development of the Green Plan and Canada's position on international environmental issues. The Department argued for increased reliance on market-based instruments for resolving environmental problems and for supporting the interests of Canada's emerging environmental industries in addressing global market opportunities.

The challenge for ISTC as the Green Plan is implemented over the next two years, will be to:

- promote wider recognition of the need for corporate environmental sensitivity and the concept of pollution prevention as a competitive edge across all sectors and within Government;
- promote the development of a world-class environmental industry by identifying domestic and foreign market opportunities and fostering the development, transfer and commercialisation of environmental technologies;
- build on our MOU with Environment Canada to ensure we have effective and timely partnership arrangements with the private sector and other government departments to develop key aspects of sustainable development initiatives, particularly with respect to new regulatory initiatives;

- encourage a change in the Government's approach to environmental policy, to shift the paradigm from reliance on regulatory toward economic instruments and from government toward industry-defined solutions to environmental problems; and,
- foster an integrated approach to the management of the environmental agenda which recognizes the interdependence of domestic and international environmental issues and the need for consistent, rational and informed policy responses.

f) Stimulating Investment for Innovation and Growth

The availability of affordable investment capital for the development and growth of Canadian firms is critical for our competitiveness. For maximum effect, ISTC efforts need to increase their leverage through the cooperation of public and private sector partners and intermediaries. The ISTC priority will be to focus on enhancing the availability of investment capital for competitiveness by:

- improving formal and informal capital markets by ascertaining the availability of investment capital for technology-driven and knowledge-based firms and positioning government support measures accordingly (the Federal Business Development Bank, Small Business Loans Act, tax system);
- improving access of aboriginal businesses to capital from private as well as government sources (e.g. through equity contributions, funding of dedicated lending institutions) and working to upgrade business skills so that these businesses may reach their full potential;
- bridging the information gap by working with other departments and private sector partners to help to bring together the investment supply and demand sides; and,
- working with educators and business intermediaries to improve management skills of small and medium-sized businesses through information and services designed to enhance the viability of growing firms, with a view to improving the credibility of proposals they submit to suppliers of capital.

g) Enhancing the Science and Technology Base for Industrial Innovation

Science and technology (S&T) policy in Canada underwent significant changes in the year leading up to the creation of ISTC and in the period following. These changes include:

- getting the private sector to do more R&D;
- building the research base in universities;
- promoting technology transfer and diffusion; and,
- fostering R&D alliances.

Most importantly, we have seen a convergence of S&T policies with those involving trade, human resource development and other elements of the microeconomic policy agenda. It is in this context that the ISTC portfolio can best deal with the prosperity agenda because S&T priorities, whether narrowly defined (R&D) or broadly considered (to include highly qualified people (HQP), investment, intellectual property, procurement), are the direct responsibility of our Ministers. As well, the importance of S&T to prosperity will continue to grow in the coming decade and its relevance to unity issues will become more evident with the growing importance of collaborative international science activities to which a fragmented Canada would likely be a mere bystander.

In light of this, the challenges ISTC faces in enhancing the S&T base for industrial innovation are:

- ensuring access for Canadian industry to leading-edge technology through supporting business and basic R&D and by optimizing technology diffusion into and within Canada. Our suite of innovative services (e.g. Manufacturing Visits Program, Advanced Manufacturing Technologies Application Program, Technology Outreach Program, sector campaigns, Strategic Technologies Program) provide strong underpinnings on which to build in this respect;
- ensuring the development of infrastructure to maximize industrial investment in innovation in Canada, especially in R&D related value-added activities. This includes:
 - * increasing the supply and expertise of HQP resources;

- * improving the quality of research infrastructure, private, public and academic;
- * building stronger technology transfer and information networks across Canada; and,
- * strengthening investment in critical technology capability.

Obviously, efforts must be devoted to strengthening our linkages with the Natural Sciences and Engineering Research Council, the National Research Council (particularly with the Industrial Research Assistance Program - IRAP), and with the Canada Institute for Scientific and Technical Information (CISTI), the Space Agency and Statistics Canada and, beyond that, with other key stakeholders in government and in the private sector. Getting the newly reconstituted National Advisory Board on Science and Technology (NABST) off on the right foot is an immediate priority and should help us in defining the national agenda and building partnerships in these areas.

h) Strengthening Linkages with Key Partners

ISTC has extensive experience in alliance building: we have working relationships on procurement issues (Supply and Services Canada, National Defence, Transport Canada), on science policy (science based departments), on sectoral issues (e.g. Agriculture, Forestry, Fisheries and Oceans), on regional issues (regional agencies and provincial governments) and on key policy issues that affect our clientele (e.g. with EIC on human resource issues and Environment Canada on environment issues). We also have extensive working relationships, both formal and informal, with industry (companies and associations) and the scientific and academic communities. Given our limited resources, there is a need to solidify these linkages so that we can lever others into sharing our vision and into devoting resources to activities which will advance Canada's international competitiveness and scientific excellence. The lodging of International Trade, Statistics Canada, Investment Canada, the National Research Council, the Natural Sciences and Engineering Research Council as well as the Prosperity Task Force, under the three ISTC Ministers provides a unique opportunity to find synergies among the strategic thrusts of these organizations. The diversity of our client base and their interests which touch on the mandates of virtually every government department makes the strengthening of partnerships as formidable as it is important.

- The traditionally strong and effective ISTC-IT relationship needs to be examined to ensure that greatest advantage is taken of relative skills and knowledge, such that the best possible synergy to serve our common client base is created.
- The partnership established under the ISTC/Environment Canada MOU will can be strengthened with the addition of Energy, Mines and Resources and the creation of a private sector External Advisory Group. This could serve as a model for building networks and partnerships with other stakeholders on key competitiveness issues such as learning, investment, taxation, science and technology and competition policy.
- Sectoral consultations on prosperity should provide vehicles for solidifying ISTC's relationships with key private sector players including business, labour, science and education, as well as other levels of government in addressing such issues as the removal of interprovincial barriers; industrial restructuring; technology diffusion; innovative management; enhancing effectiveness and complementarity of business programs and services; and building a more entrepreneurial and innovative business culture.
- There is a need to develop stronger partnerships with the regional agencies and provincial governments to ensure that policies and resources directed to regional development and international competitiveness objectives are as complementary as possible. Moving in that direction will require that, through our regional office network, we improve our intelligence on provincial programs and policies and that we develop strategic approaches to regional issues.

Improving the Marketing and Communication of ISTC Priorities and Activities

The most telling indictment of the job ISTC has done in communicating its industrial, scientific and technological development priorities and activities came from Mr. Wilson shortly after he was assigned overall responsibility for this portfolio. At that time, he remarked that if he was not aware of the many good and useful things the Department was doing; what did that say about our success in reaching our clientele outside government?

Doing a more credible job of communicating the Department's new mandate and activities is not a question of better self-advertisement or seeking credit for our contributions. In fact, such an attitude to the issue would be self-defeating. If we fail to convey the thorough knowledge of the competitiveness of Canadian industry and the solid substance behind our advocacy work, programs and services, empty advertisement would likely be greeted with confusion, misinterpretation or, worse, incredulity among those we are attempting to influence or serve within government and the private sector. In short, marketing activities need to be centred on the ISTC "product", which is principally our knowledge.

In looking at how we market our knowledge, we have to conduct a searching examination of:

- the need to market more systematically our services, expertise and programs to our clients not only to make them better known, but to convey a consistent and forceful message that links them to the mission and mandate of the Department;
- the resources we devote to knowledge-building and integration -- many good ideas and initiatives are lost for want of time, not only to pursue and develop them, but to follow through with a sustained marketing effort -- frequently this can be achieved by establishing upfront partnerships at the product development stage;
- how well we are communicating internally and integrating our positions on horizontal issues (as in the Agenda for Prosperity) with our sector expertise so that all ISTC staff really know the product we are marketing; and,
- the need for more systematic marketing, as opposed to ad hoc offerings, of our sector expertise to regulatory agencies having an impact on competitiveness (as previously noted, we have made a good start with our MOU with Environment Canada and need to take similar steps with others).

In all of these activities we need to look for the opportunities which will be presented to communicate the interdepartmental partnership established within ISTC Ministers' portfolio to advance the international competitiveness of our clients.

Encouraging Excellence in ISTC Staff

ISTC's success as a knowledge based organization and a reasoned advocate for international competitiveness and scientific excellence within government is highly

dependent on its employees. The commitment of ISTC management and the involvement of ISTC employees in the past few years have enabled the Department to take tangible actions towards achieving the results envisaged by the Public Service 2000 initiative and the ISTC Corporate Development process - a client, and a people, oriented organization. Priority initiatives include:

- creating a more positive and supportive work environment that fosters creativity and innovation through the completion and on-going implementation of the ISTC PS 2000 PLUS Multi-Year Framework - Phase I, the ISTC Human Resources Management Framework and the ISTC Information Management Strategy;
- investing in the development of the professional expertise of employees through:
 - * an increased central corporate training and development budget (25% increase for each of the fiscal years 1991-1992 and 1992-1993);
 - * a comprehensive departmental Training Needs Analysis;
 - * a Departmental Assignment Program;
 - * a departmental Upward Feedback system; and,
 - * a comprehensive training package for employees at headquarters and in regional offices;
- ensuring that ISTC's qualified workforce is representative of Canada and able to benefit from the diversity of views and talents of Canadians through the equitable representation of women and minorities;
- improving internal communications through a policy outlining the roles and responsibilities of all staff from the Deputy Minister to individual employees and through annual Employee Opinion Surveys;
- interacting and coordinating efforts between managers and employees through improved internal communications and initiatives taken by individual managers such as corporate focus days, increased staff meetings and employees' participation in the planning process;
- developing a consultative culture that emphasizes the on-going consultation with all parties who can contribute to, or are affected by, the Department's programs,

policies and practices; and,

- increasing delegation by reviewing procedures to ensure that authority is delegated to the lowest possible levels to allow empowered employees ready access to the tools required to get the job done and, ultimately, to provide the best possible service to their clients.

ISTC is now about to take a look at the extent to which these initiatives move the Department in the direction of Total Quality Management (TQM). TQM is an organizational philosophy that means involving all aspects of the organization in an orientation toward the client. Strong leadership, employee empowerment and the elimination of work that does not add value to the client, are vital elements of TQM.

More particularly, the object of the study, which is carried on with the support of 18 ISTC employees (known as our "Quality Review Team") is to find answers to key questions:

- how closely do existing practices and initiatives in ISTC resemble the TQM approach;
- how does ISTC compare to similar organizations in its pursuit of quality management principles;
- what would the benefits of TQM be to ISTC; and
- how applicable are TQM principles to ISTC.

All employees are committed through these initiatives to continuous improvement of service to clients, and to the Department's learning culture and work environment.

Summary

Our long term mission, in the context of the strategic direction and thrusts identified in this paper, would be best served by a concerted focus on the national unity and Prosperity clusters of activities. We also need to redouble our efforts to improve the building and marketing of the department, and to develop the skills of ISTC's own people. The major responsibilities in these areas include:

National Unity

- Developing a Canada 1995 strategy and getting a federal-provincial process started;

Prosperity

- managing sectoral competitiveness consultations to develop shared sectoral action agendas, and to contribute sectoral insights to the national consultation;
- improving ISTC's knowledge base on industrial restructuring issues, and working with firms, industry sectors and regional interests to facilitate restructuring;

Marketing ISTC

- developing a more entrepreneurial approach to marketing ISTC's priorities, and to exploiting and marketing the synergies the Wilson portfolio offers in terms of serving client needs;

Encouraging Excellence in ISTC Staff

- investing in professional development and training for ISTC employees within the context of ISTC's Public Service 2000 Plus Strategy.

V. Concluding Reflections

The strategic environment and ISTC's priorities discussed in this paper are not radical new departures and will likely not be susceptible to significant change in the short to medium term (although the Soviet coup and its spectacular reversal in recent weeks confirms our suspicion that we have not yet reached "the end of history"). Nevertheless, it is worthwhile periodically to take stock of progress on the Government's agenda and of what ISTC's key contributions should be. This paper is such a stock-taking. It reflects the priorities developed by sectors around the five competitiveness building blocks in this year's planning cycle. It also addresses some of the areas where the Department might focus renewed efforts to improve our performance or to take advantage of significant changes in our situation such as the Wilson portfolio matchup with International Trade, and the success of having prosperity/competitiveness moved to the centre of the Government's economic agenda.

It is obviously not intended as a business list, and does not deal on a project-by-project basis with all of the programs, activities and problem files that we all deal with on a

daily basis. It should, however, if the strategic thrusts identified are the right ones, provide an ongoing test of whether we are investing departmental resources in "doing the right thing", and exploiting the right opportunities as they emerge, rather than simply coping with our in-baskets.

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