judging their importance to Canadian AMT firms. Structures such as the European Union Fourth Framework should be exploited to connect Canadian firms more strongly to relevant markets.

Financing

Difficulties in accessing sources of capital, including equity and bank financing for research and development (R&D) and for expansion, are ongoing, important challenges. In some cases, R&D tax credits are seen to be positive factors in ensuring that R&D continues in Canada.

Customer Support

Support and maintenance often represent a challenge for AMT suppliers when customers demand local service support, which smaller firms may find difficult to provide. Many suppliers are moving to remote diagnostics through computer linkages. Some customers, however, such as auto assemblers, need support to all of their production sites around the world.

Procedure Requirements

Many companies experience hindrances arising from export-import procedures, particularly delays with service personnel crossing the U.S. border.

Strategic Direction

Strategic Objective: To achieve a level of $4 billion of Canadian AMT shipments to existing and developing Canadian and foreign markets by the year 2000.

Overall Approach: For those new and existing markets identified by the Canadian AMT supplier industry as most relevant to its strengths, improve mechanisms for connecting Canadian capabilities with potential partners and customers, and improve the ease of entry into foreign markets and the conduct of foreign trade for Canadian companies. The following strategies have been formulated to help achieve the objective.

Strategies

- Promote the identity of the Canadian AMT industry by distinguishing its characteristics and strengths in terms of know-how, technology and economics, by becoming familiar with and categorizing member companies, and by collating and summarizing AMT industry statistics.
- Identify and focus on priority AMT markets abroad and select those for exploitation in relation to Canadian AMT strengths. In particular, find ways to enhance the awareness and understanding of Canada's missions abroad about AMT, and to encourage Canadian companies to take advantage of their capabilities.
- Forge linkages between Canadian companies and their markets, by refining intelligence about AMT markets abroad, identifying specific foreign companies and their early requirements related to Canadian technology strengths, and enhancing mechanisms and information avenues for promoting Canadian companies abroad, especially SMEs.
- Broaden the scope of the search abroad to include opportunities related to important domestic industry sectors that will help to develop Canadian AMT capabilities for subsequent application in those sectors.
- Explore strategic alliances, joint ventures, investment mechanisms and trade structures to help Canadian AMT suppliers participate in foreign markets and clarify and reduce hindrances to trade activities experienced by Canadian AMT suppliers.
- Foster personnel exchanges and collaborative AMT research projects between Canadian AMT companies and foreign companies, universities and technology institutes.
- Establish closer links with relevant technology centres and identify technology sourcing opportunities in important AMT customer markets.

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ADVANCED MATERIALS

Advanced materials (AM) constitute a spectrum of new materials and processes that enable the design and manufacturing of products with novel and improved properties. The materials can either be used in structural applications, as in the construction and automotive sectors, or in functional applications, as in the exploitation of electronic and superconductive properties. AM include metals, ceramics, polymers and composites of these. These materials have high added value, are at the early stage of the product life-cycle and are enabling for many industries. Advanced processes related to the production and transformation of materials are also included in the sector.

Main Challenges

The development of trade opportunities in AM is achieved through unique partnerships, an intimate knowledge of client needs, and an ability to find creative solutions to improve productivity and product performance. In this context, the key challenges for industry are to:

- access critical market intelligence. (Who are the potential clients, and what are the requirements and partnership opportunities?);
- prospect technology, and facilitate technology transfer (e.g. create strategic alliances) of unique AM, and related applications and processes;
- increase networking opportunities, particularly among Canadian SMEs, foreign industry and AM organizations that have an overall goal to foster trade activities, technology access and investment opportunities; and
- consult on the formulation and adoption of international materials standards to achieve compatible standards with major trade partners.

The materials industry is composed of several broad categories, which have different specific international orientations and challenges. For example, a challenge for the ceramic industry is to open new relations with countries like the Russian Federation and Poland, which offer unique technologies that can translate into new partnership opportunities. For the polymer-composite industry, the challenge is not only to continue to promote trade relations and to access technology within the G-7 (Group of Seven leading industrialized countries), but also to gather market intelligence and to explore growing opportunities in Asia and Latin America more systematically.

Investment prospecting, while not a direct challenge to the industry, is an important area for international activities. For example, new investments in advanced polymer and fibre technologies, which Canada does not yet possess, directly translate into increased trade opportunities and potentially a more competitive AM-user industry. The challenge within the context of this strategy is to leverage the networking capital created from the international business activities into new potential investment for Canada.

The clients of the AM industry come from a multisectoral background — aeronautics, automotive, sporting goods, marine and construction, to name only a few. International venues of client sectors are potentially attractive to develop new trade opportunities. The challenge for industry is to pilot activities toward venues that might offer real opportunities to enter new markets.

Finally, ongoing dialogue between industry, government and institutional stakeholders will continue to provide the basis for identifying trade opportunities and articulating industry requirements.