

benefit to Canada through the eventual production of new and improved products and processes for sale in domestic and foreign markets. Any taxable Canadian corporation carrying on business in Canada may apply for a grant which is based on the corporation's expenditures for scientific research and development carried out in Canada. Since the inception of the program in 1967, some \$107 million has been authorized for payment to Canadian corporations for scientific research and development to be conducted in Canada. Of this amount, \$31.3 million was authorized for payment during the year ended March 31, 1972.

Financial assistance for selected projects to develop new or improved products and processes which incorporate new technology and which offer good prospects for commercial exploitation in domestic and international markets is provided under the Program for the Advancement of Industrial Technology (PAIT). The basic aim of this program, established in 1965, is to help Canadian secondary industry upgrade its technology and expand its innovative activity by underwriting the technical and market risks of specific product or process development projects involving a significant technological advance. In 1971 the program was expanded to include operations and market research, and systems and applications studies directly related to market potential or increased productivity. Applications for PAIT assistance are appraised as to the technical and commercial feasibility of the project, the capabilities of the company to carry it out, and the project's potential contribution to the economic growth of Canada. Projects supported include the development of a water bomber aircraft, satellite communications equipment, electromagnetic prospecting equipment, flight and safety devices, advanced machinery and machine tools, wood-harvesting equipment, and data display devices. From the inception of the program in 1965 to March 31, 1972, the Department made commitments to provide assistance to the extent of \$126.8 million for 515 projects having an estimated value of \$247.4 million.

In order to compete for and participate in the development and production programs of other NATO countries, Canada's defence industry must keep pace with product developments and advances in manufacturing technology dictated by the requirements of modern military equipment. The Defence Industry Productivity (DIP) Program is designed to enhance the technological competence of the Canadian defence industry in its export activities by providing financial assistance to industrial firms for selected projects. Emphasis is placed on those areas of defence technology having civil export sales potential. Assistance may cover the development of products for export purposes and the acquisition of modern machine tools or other advanced manufacturing equipment to meet exacting military standards as well as pre-production expenses to establish manufacturing sources in Canada for export markets.

Projects initiated under the DIP Program have been instrumental in helping industry to develop its skills on a specialized basis in fields of technology that have defence and civil applications and which Canada is favourably situated to exploit. Costs of these projects are shared by the Department and the Canadian firm concerned and, in some instances, by the governments of other NATO countries. Among the projects that have received assistance are communications and aircraft navigation systems, gas turbine engines for aircraft, flight safety and simulation equipment, and information display facilities. Exports of the products of these developments continue to increase, including significant orders for such diverse applications as commercial airlines, public communications networks and television distribution systems. Since the inception of the Program in 1959, more than 597 projects involving a contribution of some \$344 million have been supported.

The Department assists small firms in Canada to keep abreast of technological advances and to maintain a more competitive position in world markets through the establishment of three programs. As a result of the financial assistance provided by the Centres for Advanced Technology Program, instituted in 1968, universities and other organizations are able to establish centres of expertise in fields where industry is unable to conduct the research necessary to develop new areas of technology, or where many industries seem likely to benefit from research into a common technological area. Three centres have been established — the Canadian Institute of Metalworking at McMaster University, the Centre for Powder Metallurgy at the Ontario Research Foundation and the System Building Centre at the University of Toronto. Through the Industrial Research Institutes Program, scientific services are available to industrial firms unable to maintain research facilities and personnel of their own, thus helping to alleviate the shortage of scientific and technical resources that exists in Canadian industry, to foster a closer relationship between universities and improve their