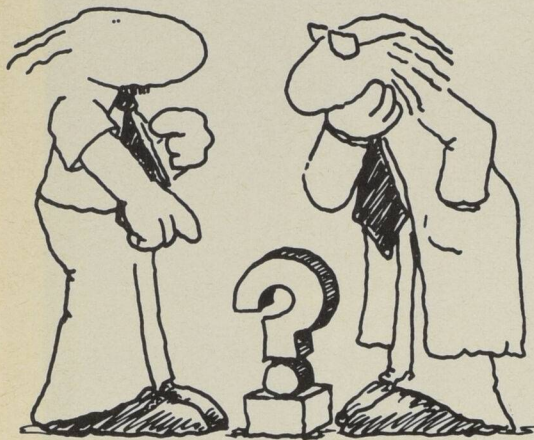


Transforming ideas into technology

Incubator Program

NRC's new program will assist a limited number of small Canadian firms with research and development which could lead to substantial benefits from marketing the commodity or service.



Despite the fact that Canada is by and large a branch plant economy, there are examples of Canadian technology that have surfaced and prospered against considerable odds — the nuclear power system (based on the Candu reactor) and the telecommunications and aerospace industries, are just three examples.

How did these Canadian technologies achieve success? Usually with great difficulty. Due to the nature of Canada's economy, its small home market and fierce competition from the U.S. and abroad, it required substantial investment by successive Canadian governments. This gave the aspiring firms and corporations the boost and security needed to take the risks inherent in high technology.

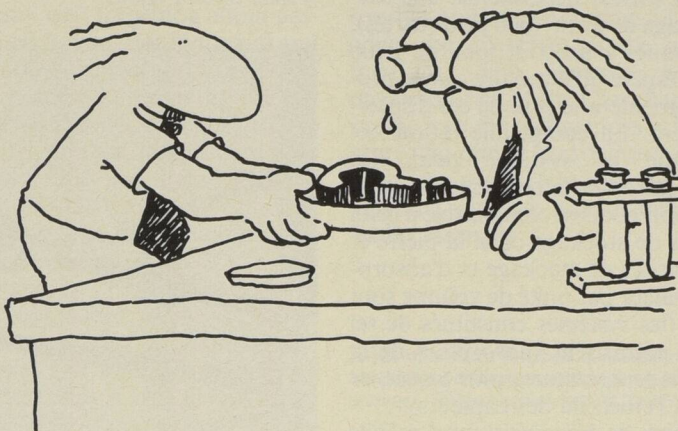
The National Research Council is one of the government agencies which help to initiate and strengthen technological capability in Canada. This support takes the form of direct financial support for industrial research and development, technology transfer from its laboratories to industry, and interchange between its own personnel and those from industry.

Now, NRC has established yet another form of industrial assistance — a program of long-term cooperation with small, high technology companies wishing to conduct major research and development projects. The aptly termed *Incubator Program* is designed to assist Canadian companies through that difficult period when the chances of failure are greatest — at the stage where ideas are transformed into some practical application.

High technology is one area where Canada can compete successfully with the

rest of the world, simply because the field is so dependent on research and the development of new ideas. The advances in high technology are so rapid that only those countries with a dynamic research capability can compete. Canada has this capability because it has invested in research, particularly in government agencies such as NRC and in universities.

At NRC, several of the laboratories are designated National Facilities to ensure that small companies which cannot afford such elaborate research tools have access to them and to the expertise of a highly competent research staff. The *Incubator Program* goes one step further. When space and resources permit, and a number of other important criteria are met, individual NRC laboratories will open their doors, making their instruments and skills available to small Canadian companies wishing to undertake joint research and development programs. This interaction will, hopefully, lead to a marketable service or product for the firm, and a gain in fundamental knowledge for NRC researchers in the field of endeavor.



An excellent precedent already exists for this type of cooperative venture. The Electron Physics Group in NRC's Division of Electrical Engineering helped SEMCO Instruments Ltd. of Ottawa develop a scanning electron microscope capable of magnifying images 300,000 times. This powerful tool is invaluable in many areas of research, from the engineer trying to ferret new information from metal surfaces to the needs of the biologist attempting to understand the structures of the cellular microcosm. □

Sadiq Hasnain

