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**LEATHER, FOOTWEAR AND ALLIED TRADES**

# **RESEARCH AND DEVELOPMENT**



*Canada*  
**DEPARTMENT OF INDUSTRY,  
OTTAWA**

**THE SHOE AND LEATHER  
COUNCIL OF CANADA**

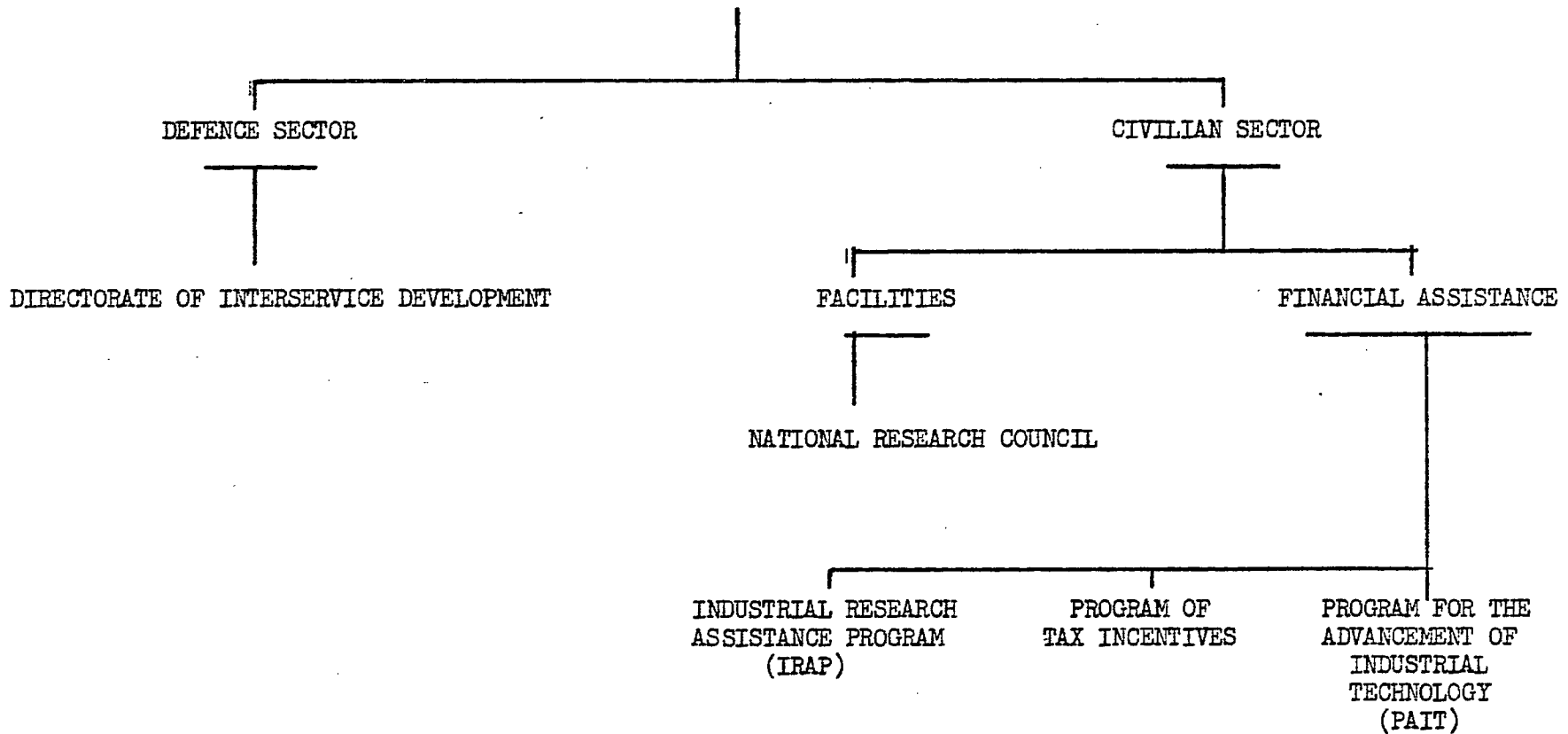
**JUNE - 1965**

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FEDERAL GOVERNMENT ACTIVITIES

IN

RESEARCH AND DEVELOPMENT



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SECTION

"A"

ADDRESS

BY

A.M. GUERIN

APPAREL AND TEXTILES BRANCH

DEPARTMENT OF INDUSTRY

TO

JUNE MEETING

THE SHOE AND LEATHER COUNCIL OF CANADA

HOTEL L'ESTEREL

STE-MARGUERITE, QUEBEC

JUNE 21, 1965.

I am indeed grateful for your invitation to be with you in these pleasant surroundings and for the opportunity to discuss some of the various aspects of leather and footwear research and development.

Your Executive are to be commended for their initiative in arranging to review this subject at this meeting. By doing so, they have shown an awareness of the probable need for expanded research and development within the leather and footwear area in Canada.

We, in the Department of Industry, wholeheartedly welcome and will support, as best we can, this initiative; for, in so doing, we will be fulfilling part of our Department's responsibility to industry, namely "to promote the development and use of modern technology in Canada and improve the effectiveness of participation by the Government of Canada in industrial research".

There are many possible ways that an expanded program of research could be carried out, but it is essential first to realize the vital necessity of research for our Canadian economy as a whole and for manufacturing industry in particular.

You will be aware that the rate at which to-day's products is being rendered obsolete is accelerating; that change which once took generations to evolve now happens in five years, often less, and that consequently your own competitive position increasingly depends on your ability to bring about changes effectively. Your future rests on your ability to initiate change and thereby continually develop and market effectively materials and products of value as measured by international standards.

I should like to turn now to the facilities and financial assistance which are made available to your industry by the Federal Government for research and development. My remarks will centre chiefly on Government activity in the non-defence sector, with a quick look at defence research and development as applied to your industry. In addition, I intend to discuss the three financial programs relating to research and development, namely: National Research Council's Industrial Research Assistance Program, commonly called IRAP; and the program of tax incentives; and then, the Department of Industry's brand new program for the advancement of industrial technology, which is oriented towards development.



The development end of national defence is handled by the Directorate of Interservice Development. This group develops footwear to meet the particular requirements of the armed services. In recent years, a number of contracts for the development of leathers with specific properties, rubber and leather footwear, and leather gloves and mittens have been awarded to Canadian tanners and footwear and glove manufacturers respectively. In many cases, the resulting products or techniques used, are directly adaptable to the civilian market.

Turning now to the much larger field of civilian research and development, Government involvement may be classified under two broad headings . . . . the National Research Council's own facilities in Ottawa, and Federal Government financial programs to assist industrial research and development activities.

The National Research Council was set up in 1916, but it was not until 1927 that funds were provided for the establishment of laboratory facilities. A leather laboratory was formed in 1930 and performed useful work for the tanning industry, including some intensive research into fat liquoring, until 1938 when, apparently because of lack of interest on the

part of the industry, it was closed down. Since then, but not in recent years, the applied physical chemistry and rubber laboratories of N.R.C. have been called upon occasionally to perform work on non-leather composition soling.

It should be noted that presently the particular N.R.C. laboratories which are of possible interest to your industry operate primarily in the field of chemical research.

One of the original aims of the N.R.C. was to encourage research in the universities through a system of grants to university professors. This still pertains and I understand that N.R.C. would give serious consideration to any applications received from the industry for grants of this nature. You may wish to consider this matter.

Before leaving direct public involvement in research facilities, mention should be made of the Ontario Research Foundation which was originally set up in 1928 through a Province of Ontario grant of \$1-million, matched by an equal amount from Ontario industry. Financial support since has been almost entirely on the basis of revenue received for contract research performed on request by both industry and Government.

The Department of Biochemistry of the O.R.F. has, over the years, performed valuable research work in the leather field through sponsorship by the Tanners Association of Canada, the Directorate of Interservice Development and the Colombo Plan. This work has included a program on the impregnation of sole leather and research projects on tanning materials such as spruce extracts and others.

It is with some regret that we learn that, due to insufficient leather research contracts in recent years, the Foundation has decided to close its leather research facilities at the end of this year.

The Economic Council, in discussing research and development, has said that Canada must continue to rely heavily on imported technology, but stresses the need to "expand substantially her own efforts in order to supplement and adapt what is available and in order to take adequate advantage of particular Canadian possibilities". The Federal Government, during the past three or four years, has shown an increasing awareness of the importance of research and development to this country to the extent that it has three financial assistance programs which are designed to encourage increased research and development by industry. (I will be limiting my remarks to those programs which relate to the civilian market . . . . there

are programs which apply to industries involved in defence work, however, their interest to your industry is somewhat limited.)

The Government has two programs which relate to research and one to development. You are all familiar, no doubt, with the special 150% allowance for expenditures on scientific research and development which applies to any amount spent in a fiscal year, which is greater than that spent in 1961. In the material you have before you, you will find a copy of the two relevant sections of the Income Tax Act (72 and 72A), as well as the definition of "Scientific Research" as it applies to this legislation. You will also find an excerpt from the most recent budget address of the Minister of Finance wherein he makes mention of the intention to bring forward a new bill that will provide, in 1967 and later years, for a grant or a credit against tax liabilities equal to 25% of the defined amount of expenditures on scientific research or development carried out by a business, either directly by its own staff or by contract with others in Canada. The Minister further proposed that the whole amount of capital expenditures for scientific research or development be eligible to qualify for the bonus, subject to certain safe-guards. In regard to current expenditures, he proposed that the bonus be calculated on the increase in research and

development expenditures in any particular year over the average of such expenditures in the three preceding years.

Another means of assistance for research, is the Industrial Research Assistance Program (IRAP), of the National Research Council.

Assistance is provided in the form of complete payment of all the salaries of the research personnel working on a specific approved project. Usually, this amounts to approximately one-half the total cost of any project.

Grants are provided under this program for research projects in the sciences, engineering, and development of prototypes and processes. Excluded from this program are projects in such fields as quality control, testing of products and production techniques, market research and sales operations.

The organizations applying for a research grant must be either a manufacturing company or an organization directly associated with one or more manufacturing companies and incorporated in Canada, and the research project must be carried out in this country. The organization chooses its own project, retains all patents and other rights, may publish the results of its research or maintain secrecy, and no attempt is made to restrict the use of results. Commercial security is maintained in all dealing regarding the project.

Inasmuch as these grants apply to "research", marketability is not a major consideration. However, proposals that have little commercial prospect are likely to be turned down. Although the use of the results of research is not restricted, consideration is given to the declared intentions of the applicant, and preference is given to those projects which might result in Canadian production and exports. Smaller organizations receive special consideration, particularly if they have good growth potential, even if the proposed project is on a relatively small scale. In awarding grants, the main interest is in promoting longer term research leading to major improvements in the state-of-the-art, not the troubleshooting or short term product improvement type of research.

So far, a total of 142 projects have been accepted for assistance, spread out in the various segments of Canadian industry. Of the 142 projects, 125 are currently active. The Government made a budget commitment of \$3,000,000 for this program for the 1964-65 fiscal year, and for the current fiscal year, commitment authority will be sought for \$4,500,000.

The two preceding programs, which have been in existence for a few years, relate primarily to research. The Government did not provide any direct assistance for organizations as far as their expenditures on "development" were concerned. This was recognized by the Department of Industry

and as a result a new program has been formulated for the purpose of satisfying this need. It is called the Program for the Advancement of Industrial Technology (or PAIT), and is intended to carry out the results of research projects through the development stage . . . . probably the most difficult and risky step in translating an idea into a useful product.

This new program is designed to stimulate the growth of Canadian manufacturing industry by the application of science and technology to the development of new and better products and processes. It is also expected to help create an industrial environment attractive to our best qualified scientific, technical and managerial personnel. The basic concept of the program is to help industry help itself in upgrading its technological capability and in expanding its innovation activity. In other words, the initiative for proposing development projects and the responsibility for direction and execution will rest entirely with the sponsoring firms. Development assistance will be in the form of cost sharing, normally on an equal basis with the firm proposing the project.

The salient points are that:

- The development work must be carried out in Canada.
- If the project is successful, repayment will be in accordance with a schedule negotiated prior to first production.

- If the project is not successful, then repayment is forgiven.
- Title to all designs, technical data, drawings, and all other information relating to the project will remain the property of the firm.
- Inventions, methods, or processes conceived as part of the project will remain the property of the firm, patents may be obtained by the firm, and no licenses are granted to foreign interests without prior approval of the Department of Industry.
- Assistance under this program applies not only to individual firms, but also to groups of firms, research institutions, etc., as long as there is adequate provision for subsequent production and sales.

We, in the Department of Industry, would welcome an opportunity to help your industry participate in the above programs, to disseminate further information on them to those interested and to give assistance, where requested, in preparing applications to the relevant Government agency.

Few companies in your industry are large enough to support a research and development staff of their own. A parallel situation exists in most other industrialized countries and, in many of them, our counterparts



there have resorted to the establishment and utilization of leather and footwear technical research centres. In Britain, in the footwear area, SATRA, whose Director and Secretary are with us today, is an excellent example of this type of centre and we would urge you to make a close examination of what they have to offer to our industry in Canada.

I have, in my remarks, attempted to describe the various methods by which the Canadian Government encourages research and development in Canada. For expanded particulars of the various schemes I have outlined, please see the kit each of you have which includes a transcript of my talk as well.

We felt that a comprehensive understanding of these schemes and activities was essential to your consideration of the subject of research and development. We hope that you will give serious thought to this whole area as it relates to both our industry and your own company's particular part in it. Above all we hope that, if you should feel that the facilities and assistance programs I have outlined still do not completely meet the needs of your industry, you will put your suggestions before us. I can assure you they will be sympathetically received and considered.

SECTION

"B"



**NATIONAL RESEARCH COUNCIL**  
**INDUSTRIAL RESEARCH ASSISTANCE PROGRAM**

1. General

This circular outlines in general the intent and nature of the program and basic considerations which will govern its operations. It is undesirable, if not impossible, to draw hard and fast lines bounding research activities and this has not been attempted. The initial stages of the program necessarily will be experimental in nature, leading to development of policy and procedures mutually satisfactory to Government and Industry. This has been kept in mind in the preparation of the circular.

2. Purpose

The program is intended to stimulate interest of Canadian industry in research and development and promote the establishment of new industrial research facilities and the expansion of existing facilities across Canada.

3. Direction of Program

The Research Council, with its many years of successful experience in developing university research facilities with government assistance, is to be directly responsible for the administration of the plan as approved by the Canadian Government.

It will be assisted in adapting the program to industrial needs by advice from the NRC Advisory Committee on Industrial Research. This group is comprised mainly of well-known industrialists representing a wide range of Canadian industries and serving for two and three-year appointments.

#### 4. Scope of Program

Financial assistance will be concentrated mostly on relatively long-term applied research in the sciences, and in engineering, and in the development of prototypes and processes. It will exclude fields such as quality control, testing of products and production techniques, market research and sales operations, geological or geophysical explorations, and research in the social sciences and psychology.

#### 5. Screening of Projects

The screening of applications and approval of financial aid will be done by a committee known as the NRC Committee on Industrial Research Assistance (CIRA). This Committee, in accordance with a recommendation from the industrial members of the Advisory Committee, will consist of senior representatives from government agencies having a direct interest in industrial research.

#### 6. Selection of Projects

In general it is desired to spread the available funds amongst various fields of industry, to include companies which have been engaged in research previously, and those which have not, and to assist both large and small companies located across Canada.

Only those companies incorporated in Canada will be eligible and all research under the program must be carried out in Canada.

Projects are to be of company choice in fields they consider of continuing scientific and commercial interest to them.

Preference will be given to longer-term projects offering good potential for achieving major advance in performance or technique rather than projects offering only marginal improvements over the current state of the art.

In particular, selection of projects by the screening committee will be governed by factors such as scientific feasibility, the company background, its record of competence and quality, the experience and capabilities of its scientific and technical staff and the continuity of company interest in research.

#### 7. Subcontracting of Research

While the primary objective of the Assistance program is to build up industrial research facilities in individual manufacturing companies, special circumstances occasionally may justify all or part of an approved research project being subcontracted to commercial research organizations or research facilities in other companies or organizations.

A group of companies, not in a position individually to support a research organization, may wish to set up a research facility on a continuing basis to operate on behalf of the group. Projects proposed by such a group will be considered if they come within the intent and purpose of the program.

#### 8. Assessment of Progress

Assessment of progress and continuing prospects of success will be made by representatives of the National Research Council through personal visits to a project as required.

#### 9. Disclosure of Information

All information submitted to the Committee and all reports will be treated as strictly confidential.

General publication of papers, reports, etc., on a project will be in accordance with company practice.

#### 10. Extent of Financial Aid

The cost of a project is to be shared on the basis of approximately equal contributions by NRC and industry. In the interests of simplicity in administration, accounting procedures, etc., as they affect both NRC and industry, the division of costs in general will provide for the salaries and wages of scientific and technical staff to be paid by NRC and payment for equipment and overhead by industry.

In general the upper limits of financial assistance for each project will be governed by the funds available in the initial stages, and the desirability of having several good projects under way rather than one or two large ones. The lower limits will avoid prejudicing

the chances of success by too limited an effort and will be judged on the merits of each case.

It is recognized that research projects under this program may extend over several years. Financial aid will continue on an annual basis, subject to satisfactory performance, continuing prospects of success, and the annual provision of funds by Parliamentary Vote.

Financial support will not necessarily be extended, however, beyond the original concept of the general scope and duration of a project. Further assistance will be considered only insofar as it relates to the primary purposes of the assistance program.

All title and rights to research results are to be retained by industry.

#### 11. Applications

Correspondence should be addressed to:

The Secretary  
NRC Committee on Industrial Research Assistance  
National Research Council  
100 Sussex Drive  
OTTAWA.



**NATIONAL RESEARCH COUNCIL**  
**INDUSTRIAL RESEARCH ASSISTANCE PROGRAM**  
**INSTRUCTIONS FOR MAKING APPLICATION**

I. GENERAL

Since information related to company proposals may vary considerably with the size of company, the type of industry, the nature of the project and similar factors, a standard application form may not meet all company requirements. On the other hand, NRC requires some standardization to facilitate the screening and evaluation of projects and their comparison with other proposals. The following procedure is intended to meet both needs as simply as possible.

II. PRIORITIES OF PROPOSALS

Where more than one proposal is submitted, companies are to indicate their priority of interest and reasons in their covering letter.

III. SIGNING AUTHORITY

Submissions are to be made over the signature of a company executive authorized to commit the company officially.

IV. FORM OF PROPOSAL

- (a) Proposals are to be in duplicate on plain white bond paper 8-1/2" x 11". Supporting material, if any, is to be listed in the proposal as attachments or appendices.
- (b) Proposals are to be submitted in two parts. The purpose of Part I is to provide sufficient information on the background of companies, and their technical and production experience and capabilities, to enable our

scientific and technical personnel to assess and compare company suitability and qualifications for research assistance.

The purpose of Part II is to provide information to assess the feasibility of the research project, the prospects of success, and the value of the project in promoting expansion of industrial research in Canada.

- (c) Where more than one proposal is submitted simultaneously by a company, the second and ensuing proposals are to be separate but only Part II will be required.
- (d) The proposals in general should follow the form and sequence shown below.

#### APPLICATION FOR NRC INDUSTRIAL RESEARCH ASSISTANCE

CONFIDENTIAL

#### Part I

#### Description of Company

##### 1. Company Details

- (a) Name of company.
- (b) Address of head office.
- (c) Name of president.
- (d) Name, qualifications and experience of the Director of Research and his position in the company organization.

##### 2. Company Background

Brief summary of the company's origin, development, present and future fields of interest in research, and interest in exports, if any.

##### 3. Company Manufacturing Facilities

Brief summary of the company's manufacturing facilities including locations and number of personnel employed.



#### 4. Company Research Facilities

Brief description of company's direct research effort and facilities, if any, including:

- (a) Location of research facilities.
  - (b) General nature of work currently in progress.
  - (c) Number and classifications of professional staff, i. e. 1 physicist, 4 chemists, 2 engineers, etc.
  - (d) Number of technicians.
  - (e) Number of other service staff.
  - (f) Major equipment available, excluding routine laboratory equipment.
  - (g) Annual expenditure on research expressed in dollars and as a percentage of sales.
5. Where companies presently do not possess research or manufacturing facilities they should summarize any plans to establish such facilities as related to their research proposal and their continuing participation in research work.
6. If research is being conducted for the company elsewhere, give brief summary.

### APPLICATION FOR NRC INDUSTRIAL RESEARCH ASSISTANCE

CONFIDENTIAL

#### Part II

#### Description of Research Project

##### 1. General Description

- (a) Title of project.
- (b) The scientific background of problem on which proposal is based.
- (c) The nature of the investigation to be made.
- (d) The possible end results of the project and the potential commercial applications.

- (e) A statement on how the project increases the amount of research being done in the company; how it is distinct from work now being undertaken or which would be undertaken by the company in its normal program, i. e., a new field of research or work of a more basic nature; what continuity of research effort is contemplated.
- (f) The name and address of the laboratory where the project is to be undertaken.

## 2. Research Staff

- (a) List the names, educational qualifications, experience and current salaries of professional staff and the names, salaries and duties of the technicians to be directly employed on the project.
- (b) Where such staff must be obtained from outside the company, indicate how, when and where they are to be obtained, and provide corresponding information to 2 (a) above.

## 3. Cost and Duration of Project

- (a) State the proposed date of commencement of project and the exact amount of assistance requested for the fiscal year 1 April 1962 to 31 March 1963. Include a brief summary of the costs to be borne by the company, estimated or otherwise.
- (b) Estimate the duration of the project and successive annual costs.

## V. FORWARDING OF APPLICATIONS

Applications are to be sent to:

The Secretary,  
NRC Industrial Research Assistance Committee,  
100 Sussex Drive,  
Ottawa 2, Canada.

3 April 1962

## INDUSTRIAL RESEARCH ASSISTANCE PROGRAM

### NATIONAL RESEARCH COUNCIL

#### GENERAL CONDITIONS OF GRANT

1. The program is intended to stimulate interest of Canadian industry in research and development and promote the establishment of new industrial research facilities and the expansion of existing facilities across Canada.
2. Financial assistance will be given primarily to assist industry in establishing and maintaining relatively long-term applied research projects in science and engineering which offer a reasonable potential for achieving a major advance in performance or technique. Such projects will not include those currently under way in the company or which would normally be undertaken by the company, unless industrial research assistance will make possible a substantial increase in such projects.
3. Assistance under this program will be confined to companies incorporated in Canada and to research to be carried out in Canada.
4. Financial assistance will be granted to a company only after its application has been approved by the Committee on Industrial Research Assistance (known as CIRA) of the National Research Council.
5. Applications for financial aid from a group of companies desiring to establish and maintain a group sponsored and operated research facility will be entertained by CIRA.
6. The factors to be considered by CIRA when dealing with an application for assistance will include the scientific feasibility of the proposed research project, the background and general competence of the company, the quality, experience, and capabilities of its scientific and technical staff and the extent and continuity of the company's interest in research.
7. Financial assistance normally will be limited to salaries and wages of scientific and technical personnel directly and continuously employed on the research project and will exclude the cost of supporting services such as drafting rooms, machine shops, photographic and X-ray departments, etc. Consultants' fees also are excluded, except under special circumstances. Such excluded amounts may be considered as part of the company's matching share. Salaries may include pension and health insurance contributions and other fringe benefits normally paid by the company.

8. Salaries and wages of professional and technical personnel directly employed on the project on a short-term basis will be paid in cases where such employment is not of a casual nature and is approved by CIRA as part of the project.
9. The company is to include with its application the number and nature of positions proposed for financial aid. The names, educational qualifications, experience and salaries of the personnel to occupy these positions are also to be provided. Similar information is to be supplied by the company when personnel are hired or when changes in personnel are made.
10. The company agrees to submit to CIRA, at its request, written reports concerning the research project.
11. All information submitted to CIRA will be treated as confidential.
12. All grants are made annually and apply to the fiscal year commencing 1 April and ending 31 March. The amount of the grant normally is fixed for the current fiscal year and any increase must be approved by CIRA. Expenditures over the approved amount become the responsibility of the company.
13. The continuance of financial aid past the current fiscal year is in the discretion of CIRA and will depend on satisfactory performance by the company during the current year, the continuing prospect of the successful completion of the project and the provision by Parliament of the necessary funds.
14. CIRA is to be permitted to make inspections of the plant and facilities used by the company in connection with the research project through a duly authorized representative, the nature, extent and frequency of such inspections to be in the discretion of CIRA.
15. No patent or property rights shall accrue to the Government of Canada as a result of the research project.
16. Payment is to be made monthly in arrears on receipt of invoices from the company dated as of the end of the calendar month and submitted to reach the Secretary of CIRA by the tenth day of the following month. It is essential that all invoices be received by the tenth of April following the end of the fiscal year in order to receive payment under Government financial procedures. Otherwise the payments may become the responsibility of the company.

17. Invoices are to list the name, salary or wage rate, period of employment and amount claimed for each individual, and the total amount of the claim.
18. The unspent balance of any grant will lapse on 31 March of each year. Any expenditures incurred after that date must be met from the renewed grant in the new fiscal year or become the responsibility of the company.
19. Application for renewal of the grant must be received by CIRA by the first of January preceding the fiscal year for which the renewal is required. Any changes in cost, personnel, positions, or other variations from the original submission must be covered in the same detail as required for the original application.

SECTION

"C"

Government of Canada

Special Deduction  
Allowed  
For  
Scientific Research  
Under The Income Tax Act  
And  
Proposed Changes

Prepared by  
Department of Industry

June 1965

Special Deduction Allowed for Scientific Research  
(Extract from Income Tax Act Section 72-72A)

72. (1) There may be deducted in computing the income for a taxation year of a taxpayer who carried on business in Canada and made expenditures in respect of scientific research in the year.

- (a) all expenditures of a current nature made in Canada in the year
  - (i) on scientific research related to the business and directly undertaken by or on behalf of the taxpayer,
  - (ii) by payments to an approved association that undertakes scientific research related to the class of business of the taxpayer,
  - (iii) by payments to an approved university, college, research institute or other similar institution to be used for scientific research related to the class of business of the taxpayer,
  - (iv) by payments to a corporation resident in Canada and exempt from tax under this Part by paragraph (gc) of subsection (1) of section 62,
  - (v) by payments to a corporation resident in Canada for scientific research related to the business of the taxpayer; and
- (b) such amount as may be claimed by the taxpayer not exceeding the lesser of
  - (i) the expenditures of a capital nature made in Canada (by acquiring property other than land) in the year and any previous year ending after 1958 on scientific research relating to the business and directly undertaken by or on behalf of the taxpayer, or
  - (ii) the undepreciated capital cost to the taxpayer of the property so acquired as of the end of the taxation year (before making any deduction under this paragraph in computing the income of the taxpayer for the taxation year).

(1a) There may be deducted in computing the income for a taxation year of a taxpayer who carried on business in Canada and made expenditures in the year in respect of scientific research carried on outside Canada, all such expenditures of a current nature made in the year.

- (a) on scientific research related to the business and directly undertaken by or on behalf of the taxpayer; or



(b) by payments to an approved association, university, college, research institute or other similar institution to be used for scientific research related to the class of business of the taxpayer.

(2) The Minister may obtain the advice of the National Research Council, the Defence Research Board or any other agency or department of the Government of Canada carrying on activities in the field of scientific research as to whether any particular activity constitutes scientific research.

(3) No deduction may be made under this section or section 72A in respect of an expenditure made to acquire rights in, or arising out of, scientific research.

★(3a) Where in respect of an expenditure on scientific research made by a taxpayer in a taxation year an amount is deductible under this section and under section 27, no deduction may be made in respect of the expenditure under section 27 in computing the taxable income of the taxpayer for any taxation year.

(4) In this section and in section 72A,

(a) "approved" means approved by the Minister after he has, if he considers it necessary, obtained the advice of the National Research Council,

(b) "scientific research" has the meaning given to that expression by regulation,

(c) references to expenditures on or in respect of scientific research

(i) where the references occur in subsection (1a) of this section, include only expenditures incurred for and wholly attributable to the prosecution of scientific research, and

(ii) where the references occur other than in subsection (1a) of this section, include only expenditures incurred for and wholly attributable to the prosecution, or the provision of facilities for the prosecution, of scientific research in Canada, and

(d) references to scientific research relating to a business or class of business include any scientific research that may lead to or facilitate an extension of that business, or as the case may be, business of that class.

(5) An amount deducted under paragraph (b) of subsection (1) shall, for the purpose of section 20, be deemed to be an amount allowed to the taxpayer in respect of the property (acquired by the expenditures) under regulations made under paragraph (a) of subsection (1) of section 11 and for that purpose the property (acquired by the expenditures) shall be deemed to be of a separate prescribed class. 1948, c. 52, s. 65; 1949 (2nd Sess.), c. 25, s. 33.

★ NOTE: Applicable to the 1962 and subsequent taxation year (1964, c. 13, s. 14 (4)).

Special Deduction Allowed for Scientific Research (cont'd)

\* 72A. (1) In addition to the deductions allowed for the year by section 72, a corporation, other than a corporation referred to in subsection (2), that carried on business in Canada and made expenditures in respect of scientific research in a taxation year, may deduct in computing its income for the year 50% of the amount by which

- (a) the aggregate of
  - (i) all expenditures of a current nature made in Canada in the year, as described in subparagraphs (i) to (v) of paragraph (a) of subsection (1) of section 72 on scientific research, and
  - (ii) all expenditures of a capital nature made in Canada (by acquiring property other than land) in the year on scientific research,

exceeds

- (b) the aggregate of
  - (i) the base scientific expenditure of the corporation, and
  - (ii) any amount paid to the corporation in the year in respect of scientific research undertaken by the corporation
    - (A) by Her Majesty in right of Canada or a province,
    - (B) by a person resident in Canada, or
    - (C) by a person not resident in Canada if such person is entitled, in respect of the payment, to a deduction in computing his income by virtue a subparagraph (v) of paragraph (a) of subsection (1) of section 72.

(2) In addition to the deductions allowed for the year by section 72, a corporation that carried on business in Canada and made expenditures in respect of scientific research in a taxation year and that was associated with one or more other corporations in the year or in the last taxation year of the corporation that ended before April 11, 1962, may deduct in computing its income for the year an amount determined by the following rules:

- (a) determine the amount, if any, by which
  - (i) the aggregate of the expenditures described in subparagraphs (i) and (ii) of paragraph (a) of subsection (1) made in the year by the corporation

\* NOTE: Subsections (1) to (3) and subsection (6) of section 72A are applicable to the 1962 to 1966 taxation years, each inclusive (1962-63, c.8, s.16 (2); 1963, c.21, s.18 (3)).

exceeds

(ii) the aggregate of the base scientific expenditure of the corporation and any amount paid to the corporation in the year as described in subparagraph (ii) of paragraph (b) of subsection (1);

(b) determine the amount, if any, by which

(i) the aggregate of all expenditures described in subparagraphs (i) and (ii) of paragraph (a) of subsection (1)

(A) made by the corporation in the year, or

(B) made by each corporation associated with the corporation in the year, in the associated corporation's taxation year that ended in the same calendar year as the year referred to in Clause (A).

exceeds

(ii) the aggregate of

(A) the base scientific expenditures of the corporation and of each corporation associated with the corporation in the year.

(B) the base scientific expenditures of each corporation

1. that was associated with the corporation in the last taxation year of the corporation that ended before April 11, 1962.

2. that was not associated with the corporation in the year, and

3. in respect of which substantially all the business that was carried on by such corporation in Canada in its last taxation year that ended before April 11, 1962, was acquired in any manner whatsoever by the corporation or one or more corporations associated with the corporation in the year, and

(C) all amounts described in subparagraph (ii) of paragraph (b) of subsection (1)

1. paid to the corporation in the year, or

2. paid to each corporation associated with the corporation in the year, in the associated corporation's taxation year that ended in the same calendar year as the year referred to in subclause 1:

- (c) ascertain the aggregate of
  - (i) the amount calculated under paragraph (a), and
  - (ii) the amount calculated pursuant to paragraph (a) for each corporation that is associated with the corporation in the year; and
- (d) determine the amount equal to 50% of that proportion of the amount determined under paragraph (b) that
  - (i) the amount determined under paragraph (a) is of
  - (ii) the aggregate ascertained under paragraph (c), and the amount determined under paragraph (d) is the amount that may be deducted in computing the income for the taxation year of the corporation.

★(3) For the purposes of subsections (1) and (2), the base scientific expenditure of a corporation is an amount equal to

- (a) the aggregate of all expenditures of a current or capital nature (by acquiring property other than land) made in Canada by the corporation in the last taxation year of the corporation that ended before April 11, 1962, on scientific research related to the business of the corporation,

minus

- (b) any amount paid to the corporation in the year referred to in paragraph (a) as described in subparagraph (ii) of paragraph (b) of subsection (1),

but where the corporation had no taxation year that ended before April 11, 1962, its base scientific expenditure is nil.

(4) Where property (other than land) acquired by a corporation by expenditures of a capital nature made in Canada by the corporation on scientific research has, in a taxation year, been disposed of by the corporation, there shall be included in computing the income of the corporation for the year the lesser of

- (a) an amount equal to 50% of
  - (i) the proceeds of disposition of the property, or
  - (ii) the capital cost to the corporation of the property whichever is the lesser, or

(b) an amount equal to

- (i) the aggregate of each amount deductible under subsection (1) or (2), as the case may be, in computing the income of the corporation for the year and each previous year

minus

- (ii) the aggregate of each amount included by virtue of this subsection in computing the income of the corporation in respect of a previous disposition of property.

(5) For the purpose of paragraph (b) of subsection (4), the amount deductible under subsection (1) or (2), as the case may be, in computing the income of a corporation for a taxation year shall not include any amount in excess of 50% of the expenditures of a capital nature made in Canada by the corporation (by acquiring property other than land) in the year on scientific research.

★(6) For the purpose of paragraph (a) of subsection (1), an expenditure of a capital nature made by a corporation in the year on scientific research does not include any expenditure made by the corporation in that year for the acquisition, from another corporation associated with the corporation in the year, of facilities for the prosecution of scientific research.

★ NOTE: Applicable to the 1962 to 1966 taxation years, each inclusive. (1963, c. 21, s. 18 (3)).

Definition of Scientific Research  
(Extract from The Canada Gazette, Vol. 97, No. 5,  
Income Tax Regulations; amended)

2900. (1) For the purpose of paragraph (b) of subsection (4) of section 72 of the Act and subject to subsections (2) and (3) of this section, "scientific research" means a systematic investigation or search by means of experimentation or analysis carried out in the field of science

- (a) to acquire new knowledge,
- (b) to devise and develop new products or processes, or
- (c) to apply newly acquired knowledge in making improvements to existing products or processes.

(2) Where a taxpayer has devised a new product or a new process to which paragraph (b) of subsection (1) is applicable, or where a taxpayer has devised an improvement to an existing product or process to which paragraph (c) of subsection (1) is applicable, "scientific research" in respect thereof shall include development, testing and evaluation of a prototype.

- (3) "Scientific research" does not include:
- (a) market research,
  - (b) sales promotion,
  - (c) quality control of products or routine product testing,
  - (d) research in social sciences,
  - (e) prospecting, exploring or drilling for minerals, petroleum or natural gas, including geological, geophysical or related studies,
  - (f) preparation of specifications and other engineering information required to enable construction of facilities for commercial production, or
  - (g) preparation, prior to commencement of commercial production, of instructions for the operation of facilities referred to in paragraph (f).

(2) This section is applicable to the 1962 and subsequent taxation years.

Extract from the Budget Address of the  
Minister of Finance Regarding  
Scientific Research and Development  
(Given April 26th, 1965)

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The Income Tax Act includes a provision introduced in 1962 which permits those making expenditures on scientific research to deduct not only the amount of these expenditures from income in the year in which they are incurred, but also an additional 50 per cent of the increase in research expenditures over those in the 1961 base year. This results in a reduction in taxes, which is equivalent to making a grant in support of such research.

I have received many representations and suggestions in regard to this extra 50 per cent deduction, as well as enquiries as to its future beyond the 1966 taxation year when the present provision expires. The government believes it is highly important to continue to offer a general inducement to industry to expand its effort in scientific research and development. We consider, however, that this inducement could be made fairer and more effective if it were in a form that was of more value to new and small companies, subject to the lower rate of tax, and of those faced with losses. The assistance now proposed would take the form of grants of defined amounts to be taken in cash or applied as credits against the tax liability of the business concerned. Such benefits would then be accounted for to Parliament in the same way as other expenditures.

For this purpose we propose to bring forward a bill that will provide in 1967 and later years a grant or a credit against tax liabilities equal to 25 per cent of the defined amount of expenditures on scientific research development carried out by a business, either directly by its own staff or by contract with others in Canada. For 1966 a business will be permitted to elect whether to get the benefits available under the Income Tax Act or the benefits under this new legislation.

It is proposed that the whole amount of capital expenditures for scientific research or development would be eligible to qualify for the bonus, subject to certain safeguards. In regard to current expenditure, it is proposed that the bonus be calculated on the increase in research and development and expenditures in any particular year over the average of such expenditures in the three preceding years.

This assistance for research and development will be administered by the Department of Industry. It will be available automatically to all businesses whose expenditures on research and development are less than \$50,000 a year. Those who wish to receive assistance based on larger expenditures than this will be able to do so by getting prior agreement from the Minister of Industry that the research and development proposed, if successful, would be likely to benefit Canada.

I have set forth the government's intention here so those making long term plans will be able to take these intentions into account. The legislation proposed will not be required until 1966, and we will welcome comments and suggestions based on the outline I have given.

SECTION

"D"



STATEMENT BY THE HONOURABLE C.M. DRURY  
MINISTER OF INDUSTRY TO THE HOUSE OF COMMONS  
ON A PROGRAM FOR THE ADVANCEMENT OF INDUSTRIAL TECHNOLOGY  
JUNE 4, 1965

I wish to bring to the attention of Honourable Members a proposal which was mentioned in the Speech from the Throne and which will be submitted to the House for approval in the Supplementary Estimates of the Department of Industry. It is a Program for the Advancement of Industrial Technology, which is designed to promote the growth of Canadian industry by the application of scientific and technological advances to the development of new products and processes of benefit to the national economy.

The basic concept of the program is to help industry help itself to improve its technological capability and to expand its innovation activity by underwriting development projects which involve a genuine technical advance and which, if successful, offer good prospects for commercial exploitation. Assistance under the program will be available to individual firms or groups of firms which have the capabilities and facilities to undertake the development work, and to manufacture and market the results. Support will be concentrated on the development of producer goods and manufacturing processes, which serve to increase productivity and contribute directly to economic growth. Wherever possible, advantage will be taken of Canada's natural resources, skills,

and environment to establish a unique capability or technical leadership. Preference will be given to projects which offer maximum return to the economy and the broadest distribution of benefits to the nation as a whole.

The initiative for proposing development projects and responsibility for their direction and execution will rest with industry. Costs will be shared by the government and the industrial firm, and in the event the project is successful and the results are brought into commercial usage, the firm will be required to repay the government's contribution. In order to ensure expeditious and effective exploitation of the results of the development projects, title to patents, designs, information and equipment resulting from the project will vest in and remain the property of industrial firms. However, firms will be expected to exploit the results of the project in Canada.

It is hoped this program will improve the position of Canadian industry in relation to its foreign competitors who enjoy the advantage of substantial government financial support for their research and development endeavours. It is also expected that it will help to create an industrial environment attractive to our best qualified scientific, technical, and managerial personnel. This program is envisaged as a catalyst for technical progress, and since investment in research and development is economically regenerative, the potential return to the economy could be many times the original outlay.

It is estimated that expenditures in fiscal year 1965-66 to initiate this program will be \$5,000,000, which amount will be included in the Supplementary Estimates of the Department of Industry and placed before the House for approval. For future years, it is expected that the rate of expenditure will build up progressively depending upon industry's needs and ability to expand its level of technical activity.



# NEWS RELEASE

DEPARTMENT OF INDUSTRY • OTTAWA CANADA

FOR IMMEDIATE RELEASE

IND 54/65

## PRESS SUMMARY

OTTAWA, June 4, 1965:- A program of financial assistance to Canadian industry for research and development was announced here today by the Honourable C.M. Drury, Minister of Industry.

The plan is called a program for the advancement of industrial technology and is designed to promote the growth of Canadian industry by the application of scientific and technological advances to the development of new products and processes of benefit to the national economy.

In describing the program, Mr. Drury emphasized that if Canada is to realize the high rate of economic growth necessary to provide employment for a rapidly expanding labour force, and is to achieve the efficiency and productivity required to sustain a rising standard of living and to compete in world markets, it is essential that we call upon every resource which science and technology can provide. This fact was recognized some years ago by the Royal Commission on Canada's Economic Prospects and later by the Royal Commission on Government Organization. It was

emphasized again by the Economic Council of Canada in its First Annual Review.

Since the end of the Second World War, the industrialized nations of the world have been experiencing a technological revolution based on the systematic application of science and technology to the development of new products and processes. As a result, the product lines of many established industries have been undergoing rapid and continuous changes, and many completely new science-based industries have developed. These science-based industries have consistently demonstrated the highest rates of growth. Their products have also been the fastest growing element in world trade. With the progressive reduction of trade barriers throughout the world, Canadian industry will have to face more intense competition at home and abroad. That competition is not merely a contest of price; more and more it has become a contest of invention and innovation, in which scientific and technical superiority is the essential weapon.

Canada, in common with many other countries, has relied extensively on imported technology. The knowledge and skills which it has acquired from other countries has contributed greatly to the growth and productivity of its industry and to the high standard of living Canadians

enjoy today. Canada must continue to draw on these sources of technology in future. However, it must be appreciated that undue reliance on imported technology can impose definite limitations on the future viability and growth of Canadian industry. Any industry which is dependent on licensed or imported technology will lag behind the current state-of-the-art and hence forfeit the rewards which stem from technical leadership. Moreover, it is generally expected that industry must actively engage in research and development in order to assimilate and successfully exploit new technology.

As a matter of national policy, the governments of most countries recognize an obligation to stimulate technical progress and innovation activity in their industry by various forms of direct and indirect financial assistance. For example, the United States Government finances industrial research and development to the extent of 1.26 percent of the Gross National Product. In Britain the figure is 0.67 percent of GNP, in France 0.39 percent of GNP, and in Sweden it is 0.37 percent of GNP. Similarly, in West Germany and Japan industry receives substantial assistance from government to carry out research and development. By contrast, Canadian Government support of industrial research and development amounted to only 0.06

percent of the GNP in 1963. Although a large part of expenditures in some of these other countries is based on requirements of their defence and space programs they, nevertheless, produce a substantial upgrading in the industrial skills and technology of those countries, which places their manufacturers in a very favourable competitive position for commercial production. If Canadian products are going to sell successfully in competition with products resulting from the technological environment prevailing in other countries, the handicap under which Canadian industry is now operating in this respect must be progressively reduced. In effect, this ground rule has been established for this country by its competitors.

The importance of science and technology to Canada's economic well-being has been recognized by the Federal Government in the past few years and several measures have been introduced to stimulate research and development activity in Canadian industry. In his recent Budget Speech, Mr. Gordon, the Minister of Finance informed the House of the government's intention to continue to provide a general incentive for scientific research after 1966, when the present tax provision expires, which will take the form of a grant or a credit against tax liabilities.

The general incentive serves to create a favourable climate for the expansion of research and development activity on a broad front. However, it does not meet the needs of many situations, in particular, those which involve new and growing industries or projects of considerable technical risk. To ensure, insofar as it is practicable to do so, that no worthwhile development projects are abandoned for lack of financial support, the general incentive must be complemented and reinforced by specific incentives in the form of direct financial assistance. In recognition of this, the government has undertaken to provide direct financial assistance to industry for specific research and development projects. In the defence sector, the Defence Industrial Research Program and the Defence Development Assistance Program provide assistance for research and development in support of Canadian defence industry and defence production sharing arrangements with the United States and other allies. The National Research Council administers an Industrial Research Assistance Program which is designed to foster the establishment and expansion of industrial research activities in industry generally.



The obvious gap in the spectrum of our research and development assistance is that important area which is concerned with the application of the results of research to the development of new products and processes for the commercial market. Development is probably the most difficult and risky stage in translating an idea into a useful product or process. It invariably involves a multiplicity of technical and market factors, and costs many times the original research. But it is the essential step in the application of science and technology and the realization of the economic benefits to be derived therefrom. Accordingly, it is proposed to have the Department of Industry establish a Program for the Advancement of Industrial Technology which will provide direct financial assistance to industry for the development of new products and processes for the commercial market, and thus complement the National Research Council's Industrial Research Assistance Program and parallel the arrangements already provided in the defence sector.

The basic concept of the program is to help industry help itself to improve its technological capability and to expand its innovation activity by underwriting development projects which involve a genuine technical advance and which, if successful, offer good prospects for

commercial exploitation. Assistance under the program will be available to individual firms or groups of firms which have the capabilities and facilities to undertake the development work, and to manufacture and market the results. Support will be concentrated on the development of producer goods and manufacturing processes, which serve to increase productivity and contribute directly to economic growth. Wherever possible, advantage will be taken of Canada's natural resources, skills and environment to establish a unique capability or technical leadership. Preference will be given to projects which offer maximum return to the economy and the broadest distribution of benefits to the nation as a whole.

The initiative for proposing development projects and responsibility for their direction and execution will rest with industry. Costs will be shared by the government and the industrial firm, and in the event the project is successful and the results are brought into commercial usage, the firm will be required to repay the government's contribution. In order to ensure expeditious and effective exploitation of the results of the development projects, title to patents, designs, information and equipment resulting from the project will vest in and remain the property of industrial firms. However, firms will be expected to exploit the results of the project in Canada.

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It is estimated that expenditures in fiscal year 1965-66 to initiate this program will be \$5,000,000, which amount will be included in the Supplementary Estimates of the Department of Industry and placed before the House for approval. For future years, it is expected that the rate of expenditure will build up progressively depending upon industry's needs and ability to expand its level of technical activity.

