**SR&ED - COURSE & CASE STUDY CONTENTS SUMMARY**
**For the fiscal year ended: December 31, 2015**

## TABLE OF CONTENTS

## I) Contents & purpose:

The study contains all information required to:

- Recognize eligible SR&ED activities and
- File and support a claim for Canadian SR&ED tax credits

# A What is the SR&ED program?

## A.1 SR&ED Incentive Program

The federal Scientific Research and Experimental Development (SR&ED) incentive program is designed by the Department of Finance, legislated in the *Income Tax Act* of Canada and administered by the Canada Revenue Agency (CRA).

These tax-based incentives for research and development provide direct financial support for taxpayers that are performing eligible activities in Canada. The program is intended to increase Canadian competitiveness in the world marketplace and to stimulate domestic economic growth. The government is committed to providing benefits to SR&ED performers by reducing the after-tax cost of doing research and development in Canada in the private sector. Most provinces offer additional incentives.

## A.1 Objectives of the program:

Currently, the federal government has three stated objectives for its science policy[1]:

1) Sustainable job creation and economic growth;
2) Improved quality of life; and
3) Advancement of knowledge.

With respect to the third criteria, the expanded explanation of the objective is as follows:

> "To create in Canada world centres of excellence in scientific discovery; to build a broad base of scientific inquiry; to foster Canadian participation in all major fields of science and technology; and to ensure that new knowledge can be acquired and disseminated widely, from Canadian sources and from around the world."[2]

**Seminar Format**

There is a substantial amount of published interpretation, most representing the views of the CRA. These views are not always shared by industry, but for the most part, provide excellent assistance in understanding the program.

This seminar will often bring participants back to the legislative foundation to better understand the rules of the SR&ED program. This should better allow the participants to later refer to the various interpretations and determine the extent to which they could take a different view.

**These seminar notes are intending to introduce participants to the SR&ED program, more particularly to provide a bridge between interpretation documents and the legislation. The seminar and the seminar notes should not be relied upon in planning for or reporting on SR&ED work. Participants should rely on the provisions in the *Income Tax Act* (Canada) and the various Provincial Acts relevant to the time period covering the issues under consideration.**

[1] Science & Technology for the New Century – A Federal Strategy, March 1996, Industry Canada
[2] Ibid.

## SR&ED incentives in Canada

**Credits Earned by Rate**

| | By Value of Credits - $ millions | | | By Number of Corporations | | | |
|---|---|---|---|---|---|---|---|
| | Earned at 35% rate | Earned at 20% rate | Total credits earned | Earning at 35% rate | Earning at 20% rate | Earning Both 35% & 20% rates | Total corporations earning credits |
| 2002 | 865 | 2,397 | 3,262 | 11,603 | 4,133 | 325 | 16,061 |
| 2003 | 954 | 2,238 | 3,193 | 13,418 | 4,309 | 339 | 18,066 |
| 2004 | 1,083 | 2,271 | 3,354 | 15,295 | 4,051 | 339 | 19,685 |

| **SR&ED claim intake** | Year end Mar 31, 2015 | | Year end Mar 31, 2014 | | Variance | |
|---|---|---|---|---|---|---|
| Office | Claims | ITC's | Claims | ITC's | Claims | ITC's |
| National | 23,137 | $ 3,856,342 | 25312 | $ 4,361,819 | -8.6% | -11.6% |
| Hamilton | 3085 | $ 381,022 | 3492 | $ 571,217 | -11.7% | -33.3% |
| Toronto | 3854 | $ 607,852 | 4115 | $ 701,446 | -6.3% | -13.3% |
| Toronto West | 1329 | $ 260,569 | 1354 | $ 287,765 | -1.8% | -9.5% |
| Ontario | 8268 | $ 1,249,443 | 8961 | $ 1,560,428 | -7.7% | -19.9% |
| Montreal | 3379 | $ 790,398 | 3648 | $ 795,622 | -7.4% | -0.7% |

***Source: CRA Redbook***

## A.2 Comparing R&D Funding by Country[3]

If we want to make a rough comparison of Canada's funding vs. other industrialized countries we can use a ration named the "Beta Index" ( B-Index).

It is calculated as:

After tax cost of $1 of R&D / (1- tax rate)

Simply stated:

B-Index is the before-tax income needed to break even on one dollar of R&D spent.

The **lower** the B-Index the more **favorable** it is for a company to perform R&D in a particular country.

As we can see from this comparative that Canada does in fact have one of the lowest B-Indices however, **many countries provide other "direct" funding** instead of "tax incentives."

The OECD report provides a further comparison of the total % of "Business Expenditures on Research & Development" (BERD) which are financed by the government (next page).

**Comparing the value of B-indexes 2002**

(manufacturing companies, by country)

| Country | Large company | Small company |
|---|---|---|
| Australia | 0.801 | 0.801 |
| Austria | 0.875 | 0.875 |
| Belgium | 1.009 | 1.006 |
| **Canada** | **0.827** | **0.678** |
| Denmark | 0.893 | 0.893 |
| Finland | 1.01 | 1.01 |
| France | 0.939 | 0.939 |
| Germany | 1.025 | 1.025 |
| Greece | 1.015 | 1.015 |
| Iceland | 1.012 | 1.012 |
| Ireland | 1 | 1 |
| Italy | 1.026 | 0.557 |
| Japan | 0.991 | 0.879 |
| Korea | 0.874 | 0.821 |
| Mexico | 0.969 | 0.969 |
| Netherlands | 0.901 | 0.647 |
| New Zealand | 1.023 | 1.023 |
| Norway | 1.018 | 0.768 |
| Portugal | 0.665 | 0.665 |
| Spain | 0.559 | 0.559 |
| Sweden | 1.015 | 1.015 |
| Switzerland | 1.01 | 1.01 |
| United Kingdom | 0.904 | 0.894 |
| United States | 0.934 | 0.934 |

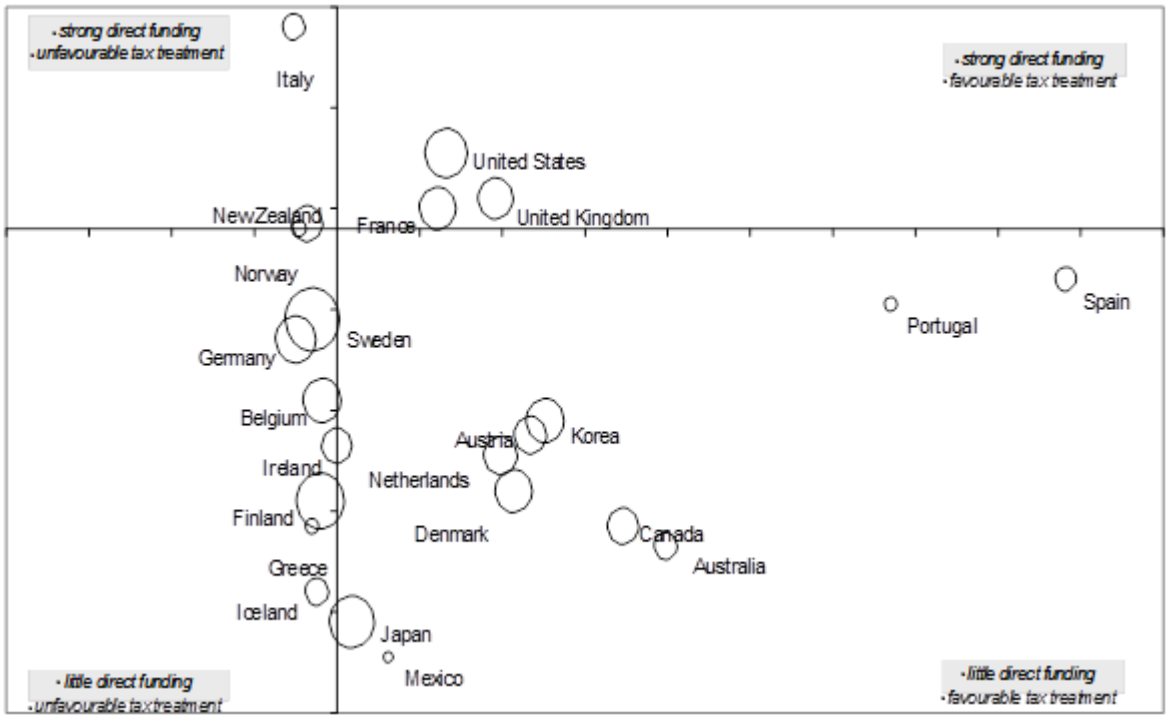
**Notable quote:**

**"He who asks a question is a fool for 5 minutes.**
**He who does not ask a question remains a fool forever."**

**- Chinese proverb**

[3] Tax Incentives for Research and Development: Trends and Issues, OECD, 2002

**Government funding of business (OECD)**
Direct (Grants) vs. Indirect (Tax Credits)




**Authors Analysis & commentary:**

This table indicates that the Canadian government finances approximately 4% of total business research whereas most other countries are significantly higher (e.g. France, US & UK are all >10%).

As a result it appears that the Canadian government is not nearly as generous as other countries in funding SR&ED.

Despite this fact the SR&ED credit appears to have created a scenario where a smaller amount of funding is in fact creating a significant amount of SR&ED.

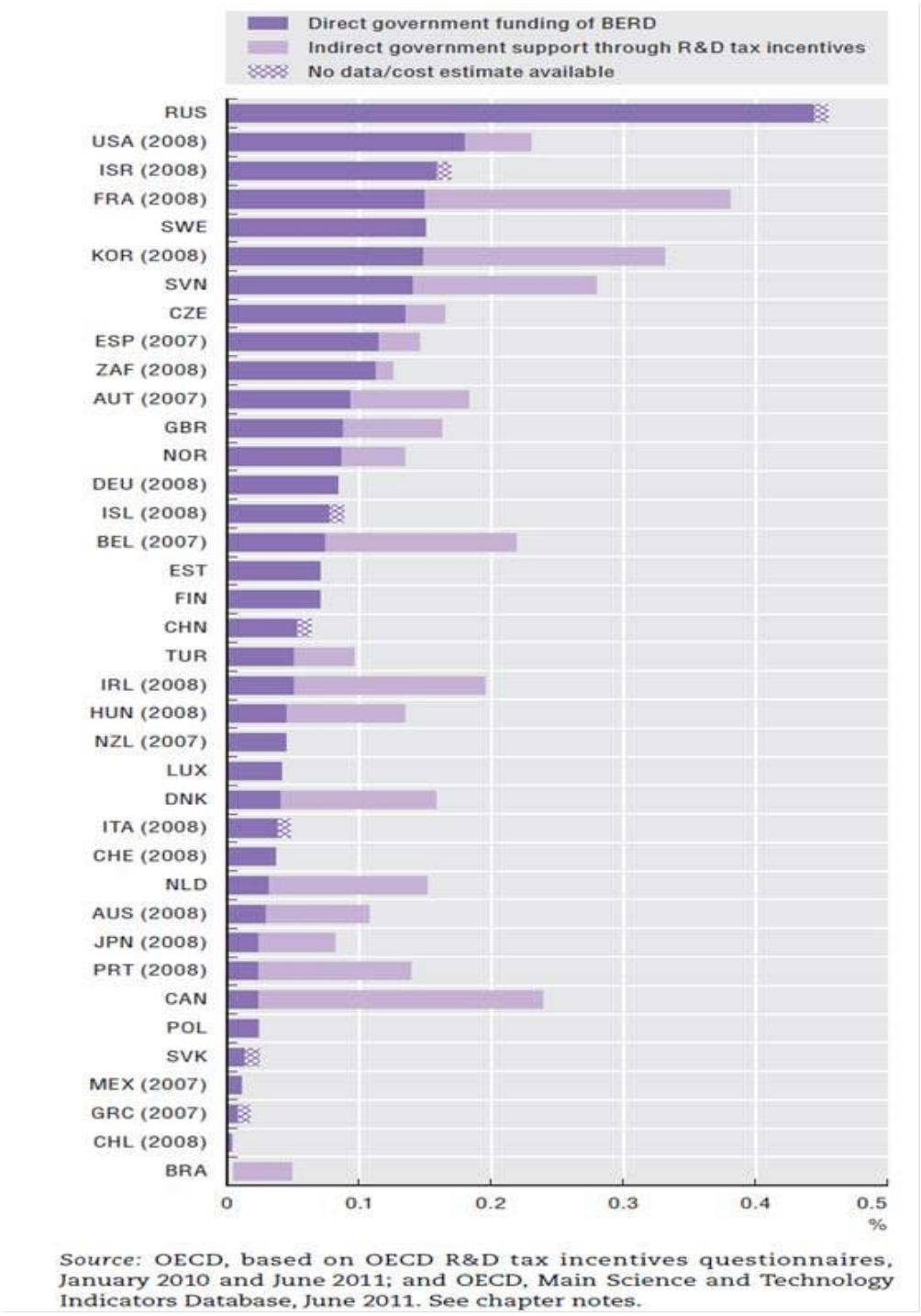
The next page provides a comparison of the funding provided directly (grants & contracts) vs. indirectly (tax credits). NOTE: These balances **do NOT** include "military & defence" related R&D spending.

**Notable quote:**

**"The best way to have a good idea**
**is to have a lot of ideas."**

**- Dr. Linus Pauling**

## Government Funding of Business R&D - Direct vs. Tax Credits[4]




*Source:* OECD, based on OECD R&D tax incentives questionnaires, January 2010 and June 2011; and OECD, Main Science and Technology Indicators Database, June 2011. See chapter notes.

[4] OECD SCIENCE, TECHNOLOGY AND INDUSTRY SCOREBOARD 2011 © OECD 2011

# B SR&ED Eligibility

## B.1 International R&D Tax Credits

Often companies perform eligible research in several countries.

A detailed review of the government funding methods in most countries illustrates that almost all countries use a similar definition of the R&D project and thus the eligible activities.

### B.1.1 History of the international definition

The **Frascati Manual** is a document setting forth the methodology for collecting statistics about research and development. The Manual was prepared and published by the Organisation for Economic Co-operation and Development (OECD).

In June 1963, OECD experts met with the NESTI group (National Experts on Science and Technology Indicators) at the Villa Falconieri in Frascati, Italy. Since then it has been revised several times. In 2002 the 6th edition was published.

The manual sets forth fundamental definitions for: basic research, applied research, and research & development. It also organizes Fields of science into main and sub-categories.

Over the past 40 years, the NESTI group has developed a series of documents, known as "Frascati Family", which includes manuals on:

- R&D (Frascati Manual),
- innovation (Oslo Manual),
- human resources (Canberra Manual),
- technology balance of payments and
- patents as science and technology indicators.

Originally an OECD standard, it has become an acknowledged standard in R&D studies all over the world and is widely used by various organisations associated with the United Nations and European Union.

### B.1.2 Three forms of research

The Frascati Manual outlines three forms of research. These are basic research, applied research and experimental development[10]:

1. **Basic research** is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, **without any particular application or use in view**.

2. **Applied research** is also original investigation undertaken in order to acquire new knowledge but **directed towards a specific practical aim or objective**.

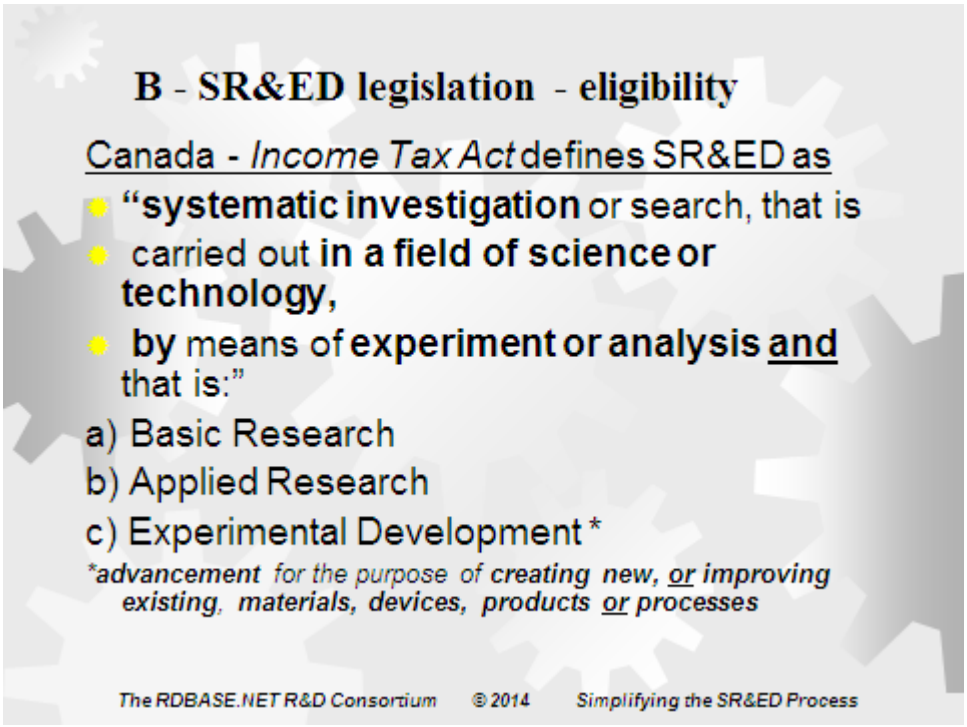
3. **Experimental development** is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing **new materials, products or devices**, to installing new processes, systems and services, or to improving substantially those already produced or installed.

## B.2 Definition of Qualified Activities via Eligible Projects (Scientific Method)

"For a … project to be classified as R&D, its completion must be dependent on a scientific &/or **technological advance**, the aim of the project must be the **systematic resolution** of a scientific and/or **technological uncertainty**."[5]

[5] Frascati Manual 2002 paragraph 135

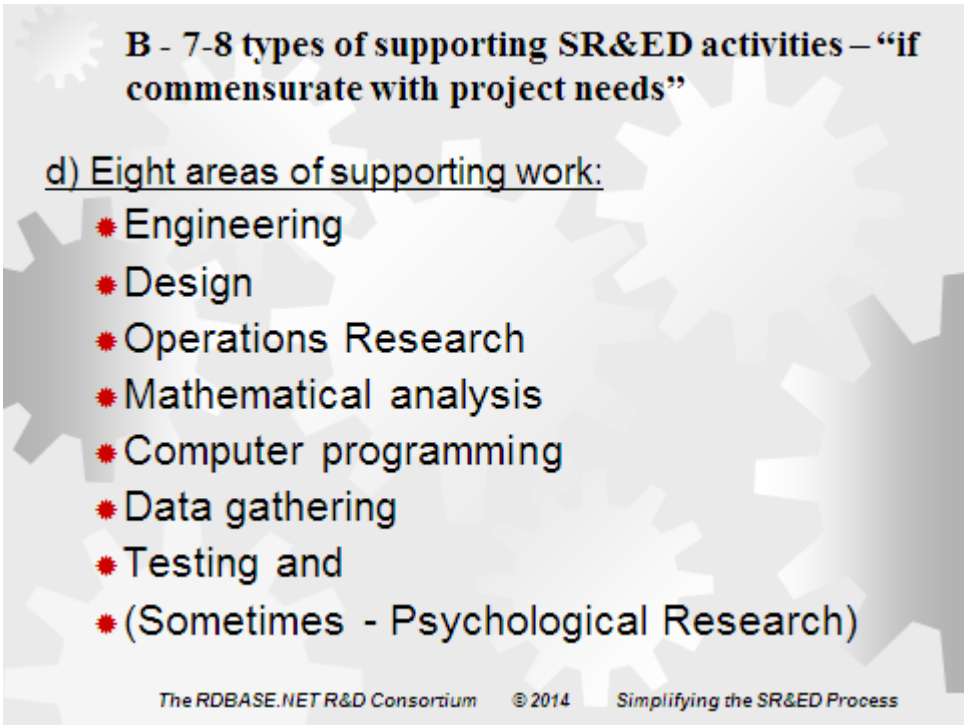

International definition of an R&D project
"For a … project to be classified as R&D, its completion must be dependent on a scientific &/or technological advance, the aim of the project must be the systematic resolution of a scientific and/or technological uncertainty."
Source: Frascati Manual 2002, paragraph 135
The RDBASE.NET R&D Consortium © 2014 Simplifying the SR&ED Process




## B.3 Legislative definitions of SR&ED – inclusions & exclusions

The definition of scientific research and experimental development appears in subsection 248 (1) of the ITA

> "**scientific research and experimental development** means **systematic investigation** or search that is carried out **in a field of science or technology by** means of **experiment or analysis and** that is:
>
> (a) **basic research**, namely, work undertaken for the advancement of scientific knowledge without a specific practical application in view,
>
> (b) **applied research**, namely, work undertaken for the advancement of scientific knowledge with a specific practical application in view, **or**
>
> (c) **experimental development**, namely, work undertaken for the purpose of achieving technological advancement for the purpose of **creating new, or improving existing**, **materials, devices, products or processes, including incremental improvements thereto**, and, in applying this definition to a taxpayer,
>
> **includes:**




(d) work undertaken by or on behalf of the taxpayer with respect to **engineering, design**, operations research, mathematical analysis, **computer programming, data collection**, **testing** or psychological research, where the **work is commensurate with the needs, and directly in support, of work described in paragraph (a), (b) or (c)** that is undertaken in Canada by or on behalf of the taxpayer,

**but does not include** work with respect to

(e) **market research** or **sales promotion**,

(f) **quality control or routine testing** of materials, devices, products or processes,

(g) research in the **social sciences or the humanities**,

(h) prospecting, exploring or drilling for, or producing, minerals, petroleum or natural gas,

(i) the **commercial production** of a new or improved material, device or product or the commercial use of a new or improved process,

(j) **style changes**, or

(k) **routine** data collection."[6]

[6] end of ITA subsection 248(1) definition of SR&ED


## B.3.1 Analysis of inclusions and exclusions

**Inclusions:**

(a-d) Generally speaking, the legislation on the previous page provides that all work aimed at incremental technical improvements is eligible for credit to the extent that it was **"commensurate with the needs" involved with the resolution of some predetermined technological uncertainty**.

**Exclusions:**

(e, f & k) **Market research and sales promotion**, quality control, routine testing and routine data collection are excluded activities to the extent that they extend beyond the resolution of the significant technical uncertainties. Where work which may normally be considered market research involves issues such as the quantification of future project objectives, this work may be eligible SR&ED. Quality control, testing and data collection are eligible, to extent that they are required to resolve technological uncertainties.

(j) **Style changes** are excluded activities unless the design change has a technological aspect that is tied to an eligible project. Generally speaking, style changes are routine activities which can not be considered, "commensurate with the needs, and," the resolution of one or more technical uncertainties.

(g) **Research in the social sciences or the humanities** is a deliberate exclusion that covers work in any non-technical field such as accounting, finance, business studies, economics and psychology to name a few. Some may note that psychological research is mentioned as a potentially supporting activity in paragraph (d) of the legislation. The CRA's formal position is that this research will be limited to pharmaceutical medical industries where it is tied to other technical or scientific drug studies.

(h) **Prospecting,** exploring or drilling for, or producing, minerals, petroleum or natural gas are all excluded activities under the SR&ED program. However where activities are undertaken in the resource sector and are primarily undertaken to achieve a technological advance that meets the

criteria for SR&ED, such activities will be allowed. Where the SR&ED activity is secondary the eligibility is not likely to be accepted by the CRA.

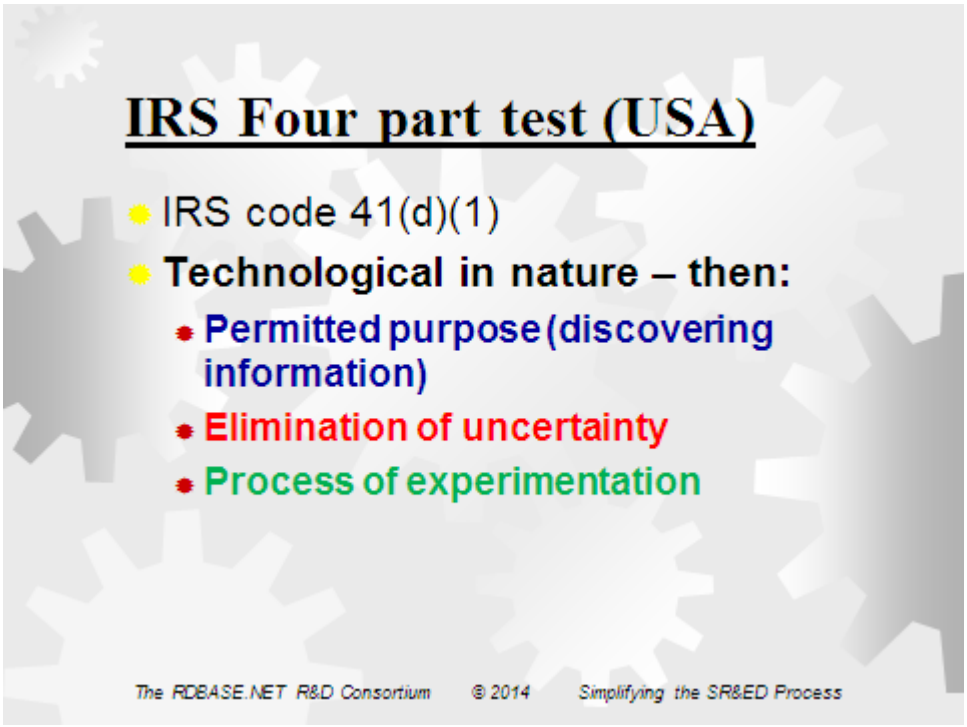
(i) **Commercial production** of a new or improved material, device or product or the commercial use of a new or improved process is excluded once the technological uncertainties related to achieving the technological advancement have been resolved. Some taxpayers are finding that claims involving experimental production are being challenged by the CRA on the basis of the (i) exclusion. This is an area that was raised in the 2007 consultation process.

This definition of scientific research and experimental development encompasses a wide variety of scientific and technological work. The Department of Finance, in defining scientific research and experimental development, generally followed the internationally accepted definition. It includes experimental development work outside the predictable “Research Lab” environment. Qualifying R&D work may take place in a lab, on “the shop floor”, and elsewhere.

It is important to note that the ITA defines scientific research and experimental development as work (i.e. systematic investigation or search) undertaken for the advancement of scientific knowledge or technological capability.

As a result, some work performed in the course of completing a business project is not considered to be eligible; they are not part of the SR&ED project. In order to differentiate between qualifying and non-qualifying R&D, the ITA refers to qualifying work as Scientific Research and Experimental Development, or SR&ED.

It is important to differentiate between excluded work and work that is necessary to support an eligible project. For example, testing to resolve a technological uncertainty is eligible, but routine testing not related to attempting to advance technology is excluded. The production of an experimental prototype may be eligible but the production of a unit strictly for the purpose of sale is not.




The IRA definition of eligible R&D expenses for ITC follows the CRA & International definition as illustrated in following pages

## B.4 Eligible vs. ineligible fields of science


**The complete listing of eligible vs. ineligible fields of science is provided on the next page.**

**This listing from OECD is also used by the CRA.**

## B.4.1 Fields of Science or Technology – International

Fields of science - OECD classifications 2007

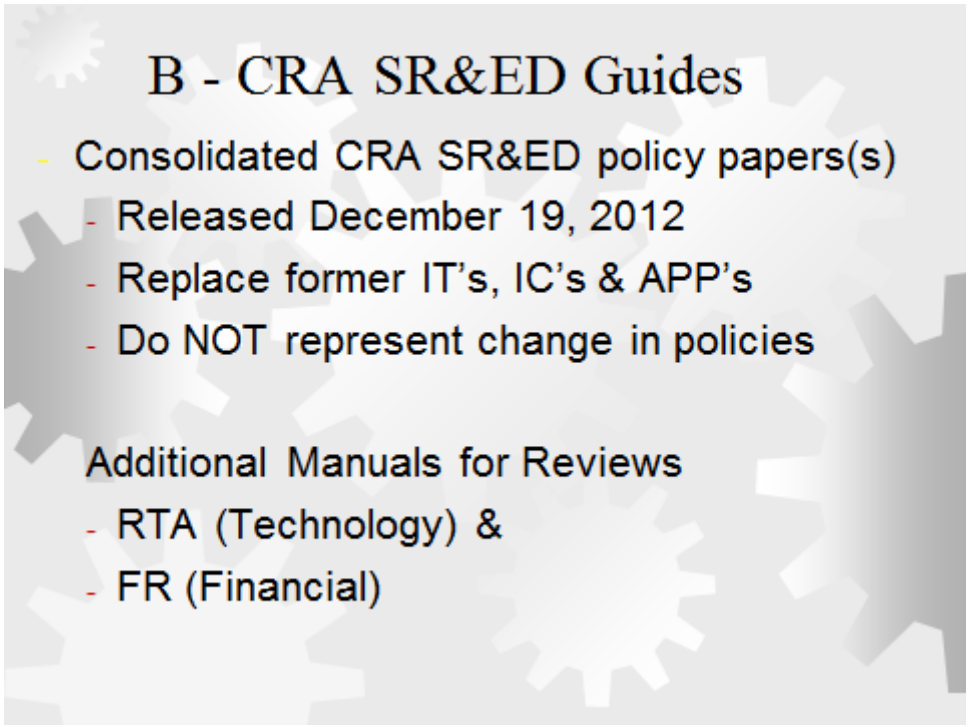
| | | |
|---|---|---|
| **1. Natural Sciences** | 1.1 Mathematics<br>1.2 Computer and information sciences<br>1.3 Physical sciences<br>1.4 Chemical sciences<br>1.5 Earth and related environmental sciences<br>1.6 Biological sciences<br>1.7 Other natural sciences | **ELIGIBLE for R&D tax credits** |
| **2. Engineering & Technology** | 2.1 Civil engineering<br>2.2 Electrical engineering, electronic engineering, information engineering<br>2.3 Mechanical engineering<br>2.4 Chemical engineering<br>2.5 Materials engineering<br>2.6 Medical engineering<br>2.7 Environmental engineering<br>2.8 Environmental biotechnology<br>2.9 Industrial Biotechnology<br>2.10 Nano-technology<br>2.11 Other engineering and technologies | |
| **3. Medical & Health Sciences** | 3.1 Basic medicine<br>3.2 Clinical medicine<br>3.3 Health sciences<br>3.4 Health biotechnology<br>3.5 Other medical sciences | |
| **4. Agricultural Sciences** | 4.1 Agriculture, forestry, and fisheries<br>4.2 Animal and dairy science<br>4.3 Veterinary science<br>4.4 Agricultural biotechnology<br>4.5 Other agricultural sciences | |
| **5. Social Sciences** | 5.1 Psychology<br>5.2 Economics and business<br>5.3 Educational sciences<br>5.3 Sociology<br>5.5 Law<br>5.6 Political Science<br>5.7 Social and economic geography<br>5.8 Media and communications<br>5.7 Other social sciences | **NOT ELIGIBLE for R&D tax credits** |
| **6. Humanities** | 6.1 History and archaeology<br>6.2 Languages and literature<br>6.3 Philosophy, ethics and religion<br>6.4 Art (arts, history of arts, performing arts,music)<br>6.5 Other humanities | |

## B.5 Summary of Federal (CRA) and Provincial Guides

In order to prepare the SR&ED forms (listed in section ***T***) the Federal and Provincial governments have prepared a series of guidelines. The documents of greatest relevance have been cited in this section.

**Each of these documents are also** available for download over the Internet at http://www.cra-arc.gc.ca/txcrdt/sred-rsde/frh-eng.html.

### B.5.1 Overview of CRA guides regarding SR&ED eligibility




#### B.5.1.1 Former GuidanceTechnical eligibility (See additional guides in APP section)

Plastics Guidance Document - New section (April 2004) on **moulds, tools and dies**

**Chemicals** Guidance Document #1 - Shop floor SR&ED
**Chemicals** Guidance Document #2 - Qualifying Work

**Food and Consumer Packaged Goods** Sector - SR&ED Guidance Document

**Plant Breeding and Seed Industry** Scientific Research and Experimental Development (SR&ED) - Program Guidance Paper

**Textile Industry** Guidance Document

SR&ED Investment Tax Credits for **Farm Producers**

SR&ED **software** guidance paper - CRA with CATA (September 2000)
IC 97-1 - Scientific Research and Experimental Development - Administrative Guidelines for **Software Development**

IC94-1 - SR & ED – **Plastics Industry** Application Paper

IC94-2 - SR & ED **Machinery and Equipment Industry** Application Paper

IC86-4R3 - Experimental Development and Scientific Research **(general guidelines)**

IC86-4R2SUP1 - Scientific Research and Experimental Development **Automotive** Industry Application Paper

IC86-4R2SUP2 - Scientific Research and Experimental Development **Food Industry** Application Paper

#### B.5.1.2 Prior Guidance on Financial eligibility

#### B.5.1.3

IT151R5 - Scientific research and experimental development expenditures

T4088 - Claiming Scientific Research and Experimental Development Expenditures - Guide to Form T661

- Additional tax forms are listed and reproduced in section T.

## B.6 December 2012 SR&ED Policy Papers:

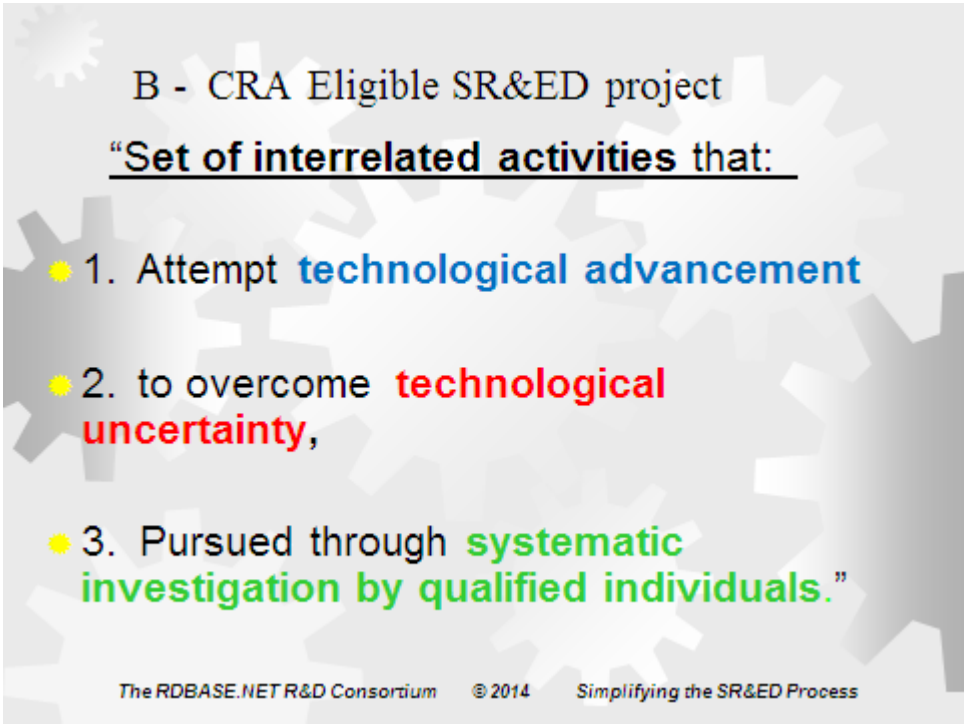
The CRA released the following consolidated policy documents [2012-12-19].

They are available from the CRA website[7] and will be referred to in the case study examples.

- Assistance and Contract Payments Policy
- Contract Expenditures for SR&ED Performed on Behalf of a Claimant Policy
- **Eligibility of Work for SR&ED Investment Tax Credits Policy**
- Materials for SR&ED Policy
- Pool of Deductible SR&ED Expenditures Policy
- Prescribed Proxy Amount Policy
- Recapture of SR&ED Investment Tax Credit Policy
- SR&ED Capital Expenditures Policy
- SR&ED Claims for Partnerships Policy
- SR&ED During Production Runs Policy
- SR&ED Filing Requirements Policy
- SR&ED Glossary
- SR&ED Investment Tax Credit Policy
- SR&ED Lease Expenditures Policy
- SR&ED Overhead and Other Expenditures Policy
- SR&ED Salary or Wages Policy
- SR&ED Shared-Use-Equipment Policy
- SR&ED while Developing an Asset Policy
- Third-Party Payments Policy
- Total Qualified SR&ED Expenditures for Investment Tax Credit Purposes Policy
- Traditional and Proxy Methods Policy

[7] http://www.cra-arc.gc.ca/txcrdt/sred-rsde/whtsnw/menu-eng.html

## B.7 CRA - definition of a project




### B.7.1 Technical objectives

The CRA requires that the scientific or **technological objectives** you state:

- "be quantifiable or verifiable;
- contemplate a reasonable timeframe (generally <= 3 years)" and;[8]
- "be clearly stated at an early stage in the project's evolution"[9].

Excerpts from CRA form T4088[10]:

> "To establish whether or not the work you claim is eligible, we have to examine eligibility **at the project level**. You must present your claim showing your work organized as SR&ED projects."
>
> "**An SR&ED project consists of a set of interrelated activities** that meet the **three criteria** of SR&ED defined in the current version of Information Circular 86-4, *Scientific Research and Experimental Development*. This means that the set of activities must be necessary for:
>
> 1. The attempt to achieve specific scientific or **technological advancement,** and

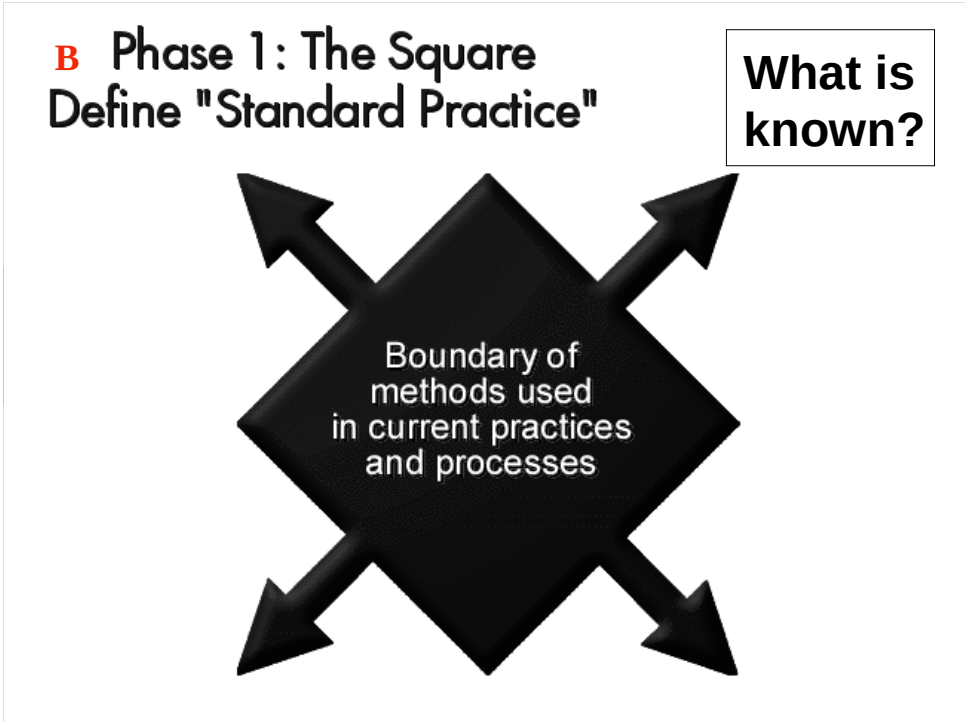
[8] CRA form T4088, part 2, paragraph A – Guide to the T661 form.
[9] Information Circular 86-4R3, paragraph 2.10.3
[10] This is the CRA's guide to the T661 form

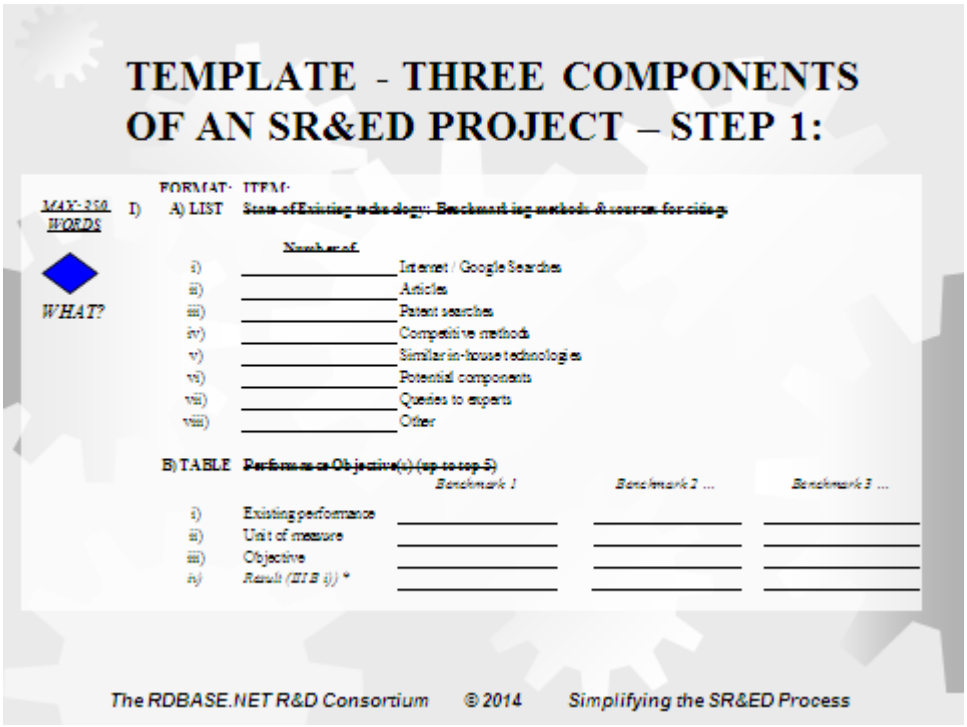
2. overcome scientific or **technological uncertainty,** and

3. must be pursued through a **systematic investigation** by means of experiment or analysis performed **by qualified individuals**."[11]

[11] Excerpts from CRA form T4088[11]- the Guide to completing an SR&ED claim

## B.7.2 Phase 1: The Square - define standard practice



### B.7.2.1 International directives

### B.7.2.2 Define industry "standard practice"

"The basic criterion for distinguishing R&D from related activities is the presence in R&D of an appreciable element of novelty and the resolution of scientific and/or technological uncertainty,

i.e. when the solution to a problem is **not readily apparent to someone familiar with the basic stock of common knowledge** and techniques for the area concerned."[12]

### B.7.2.3 Technological objective beyond standard practice

"…. If the primary objective is to make **further technical improvement** on the product or process then the work comes within the definition of R&D ……. if the primary objective is to develop markets, to do preproduction's planning or control system working smoothly, then the work is no longer R&D." [13]

### B.7.2.4 CRA directives (Canada) – pre-Dec 19, 2013

"Commonly available sources of knowledge or experience are those that can reasonably be assumed to be **readily available to those with basic training or experience in the field of concern.**

These resources enable them to be sufficiently **qualified to participate** in SR&ED. They also include knowledge that is available in the **business context** of the firm….

An enterprise may not have **practical access** to information proprietary to a competitor, or known in specialist or academic circles." [14]

"Essentially, the **presence of a technological uncertainty puts the project into the realm of experimental development** when solutions cannot be based on standard practice alone.

A claim for qualifying expenditures should clearly explain all **departures from standard practice** in the experimental development activity."[15]

[12] Frascati Manual 2002 paragraph 84
[13] Frascati Manual (2002) proposed standard practice for survey on research and experimental development Paragraph 111
[14] CRA IC 86-4R3 – glossary
[15] Ibid paragraphs 4.3 & 4.4

### B.7.2.5 CRA directives (Canada) – post Dec 19, 2013

"The company is expected to have information that is common knowledge ... to professionals familiar with the specific areas of science or technology…

**Technology base or level**

Refers to the existing level of technology and consists of the knowledge of the technological resources within the company & sources available publicly …. include:

- technical knowledge ...of **its personnel;**
- **current products**, techniques, practices & methodologies (trade secrets **& intellectual property**).
- **Publicly available sources** … publications, journals, textbooks, internet-based information & expertise ... through employees or contractors.

The technology base will vary from company to company even though the knowledge available publicly remains the same."[16]

### B.7.2.6 IRS directives (USA)

**Permitted purpose:**

**"Discovering information … application of which … development of a** new or improved business component of the taxpayer ...

A business component may include a product, process, technique, formula, invention, or software."[17]

**A) Define industry "standard practice":**

"*discovering information [defined]* as obtaining knowledge that exceeds, expands, or refines the common knowledge of skilled professionals in a particular field of science or engineering."[18]

**B) Objective beyond standard practice:**

**"**Research is to be treated as conducted for a qualified purpose if it relates to (i) a new or

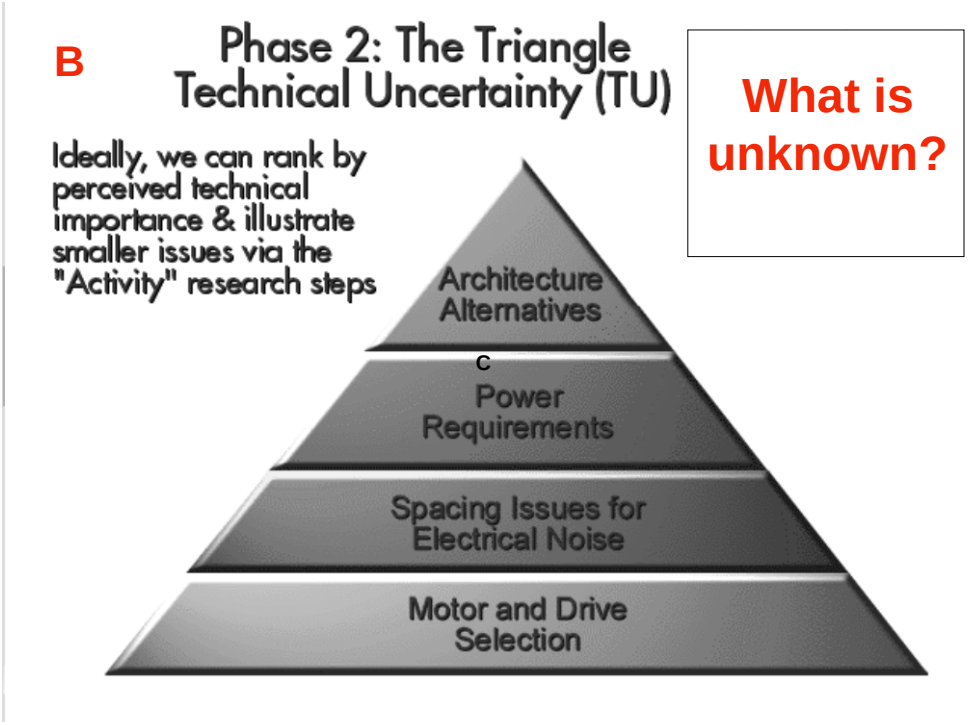
16 Source: CRA SR&ED Glossary Dec. 19, 2012 SR&ED policy papers

17 IRS code Section 41(d)(1 & 4)

18 IRS code Section 41(d)(1 & 4)

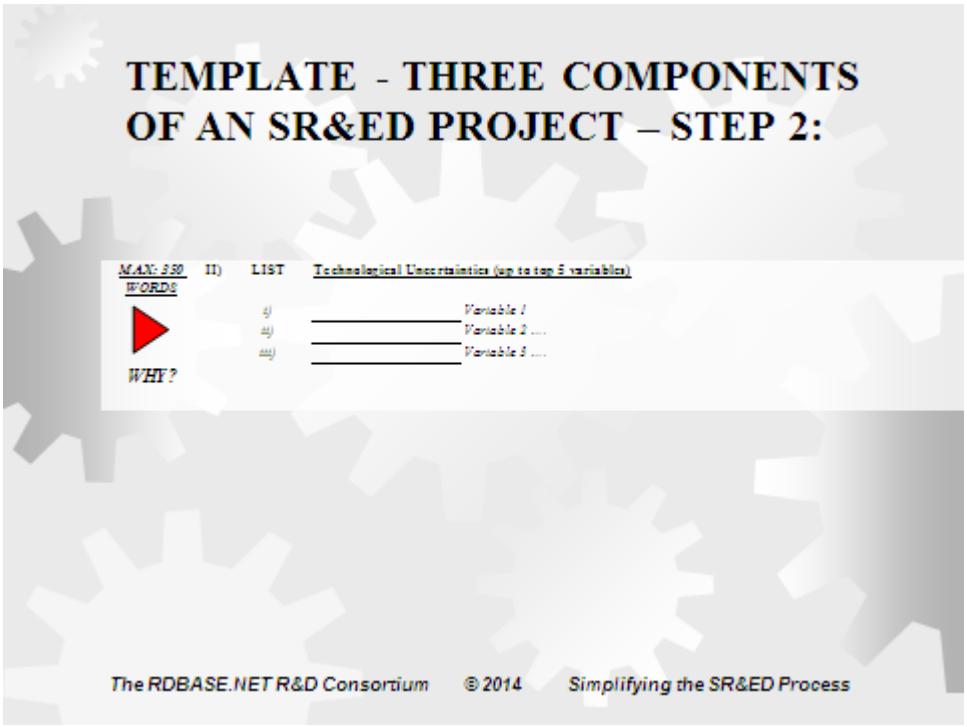
improved function, (ii) performance, (iii) reliability or quality."[19]

### B.7.3 Phase 2: The triangle - technical uncertainty




**The CRA recognizes two specific sources of eligible technical uncertainty for SR&ED:**

19 IRS code Section 41(d)(3)(A)


TEMPLATE - THREE COMPONENTS OF AN SR&ED PROJECT – STEP 2:
MAX: 350 WORDS
II) LIST Technological Uncertainties (up to top 5 variables)
i) Variable 1
ii) Variable 2 ....
iii) Variable 3 ....
WHY?
The RDBASE.NET R&D Consortium © 2014 Simplifying the SR&ED Process

### B.7.3.1 International Directives

"The basic criterion for distinguishing R&D from related activities is the presence in R&D of an appreciable element of novelty and the resolution of **scientific and/or technological uncertainty**,

i.e. when the solution to a problem is not readily apparent to someone familiar with the basic stock of common knowledge and techniques for the area concerned."[20]

The paper includes some supplementary criteria for distinguishing R&D:

- What is new or innovative about this project?
- Is it seeking previously undiscovered phenomena, structures or relationships?
- Does it apply knowledge or techniques in a new way?
- Is there a significant chance that it will result in new (extended or deeper) understanding of phenomena,
- relationships or manipulative principles of interest to more than one organization
- Are the results expected to be patentable?

### B.7.3.2 CRA directives – pre Dec 19, 2012

"Specifically, **scientific or technological uncertainty** may occur in either of two ways:

- **[scientific uncertainty]** it may be uncertain whether the goals can be achieved at all; **or**

- **[system uncertainty]** the taxpayer may be fairly confident that the goals can be achieved, but may be **uncertain which of several alternatives (i.e., paths, routes, approaches, equipment configurations, system architectures, circuit techniques, etc.)** will either work at all, or be feasible to meet the desired **specifications or cost targets**, or both of these…Work on combining standard technologies, devices, and/or processes is **eligible if** non-trivial combinations of established (well-known) technologies and **principles for their integration carry a major element of technological uncertainty**; this may be called a "system uncertainty."[21]

In the author's opinion, this definition underlines the importance of continually outlining initial expectations and explaining resultant variances for work with any significant integration uncertainties.

[20] Frascati Manual 2002 paragraph 84
[21] CRA IC 86-4R3 paragraph 2.10.2

### B.7.3.3 CRA directives (Canada) – post Dec 19, 2013

"Scientific or technological uncertainty:

Scientific uncertainty

- Whether a given result or objective can be achieved or ...

System uncertainty

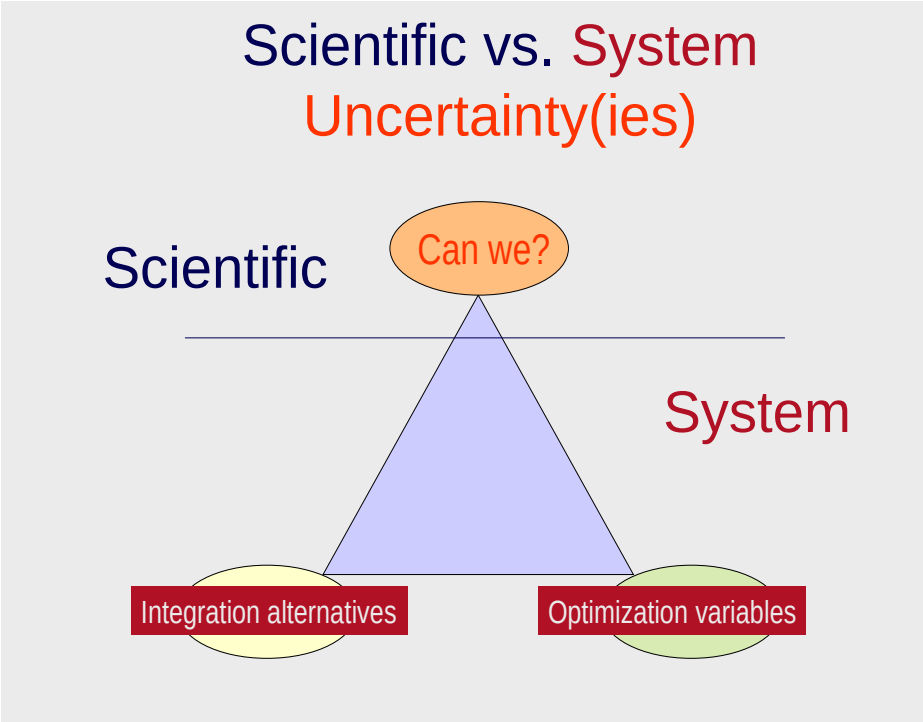
- what alternatives (for example, paths, routes, approaches, equipment configurations, system architectures, or circuit techniques) will enable the goals to be met based on the existing technology base or level.

Formulating a hypothesis

- means an idea, consistent with known facts, that serves as a starting point for further investigation to prove or disprove that idea."[22]

[22] Source: CRA Eligibility of Work for SR&ED Investment Tax Credits Policy paragraphs 2.1.1 & 2.1.2

**Importance of continually documenting system uncertainties**




CRA guidance on identifying system uncertainties

> "If the technological specifications or objectives to resolve the "system uncertainty" are such that the basic design of the **underlying technologies must be changed** to achieve the integration, the current **costs of the overall project may qualify**."[23]

Implications to documenting Activities

Once we can recognize system uncertainties, we can focus the documentation process on clarifying the need for any of the related activities.

### B.7.3.4 IRS directives (USA)

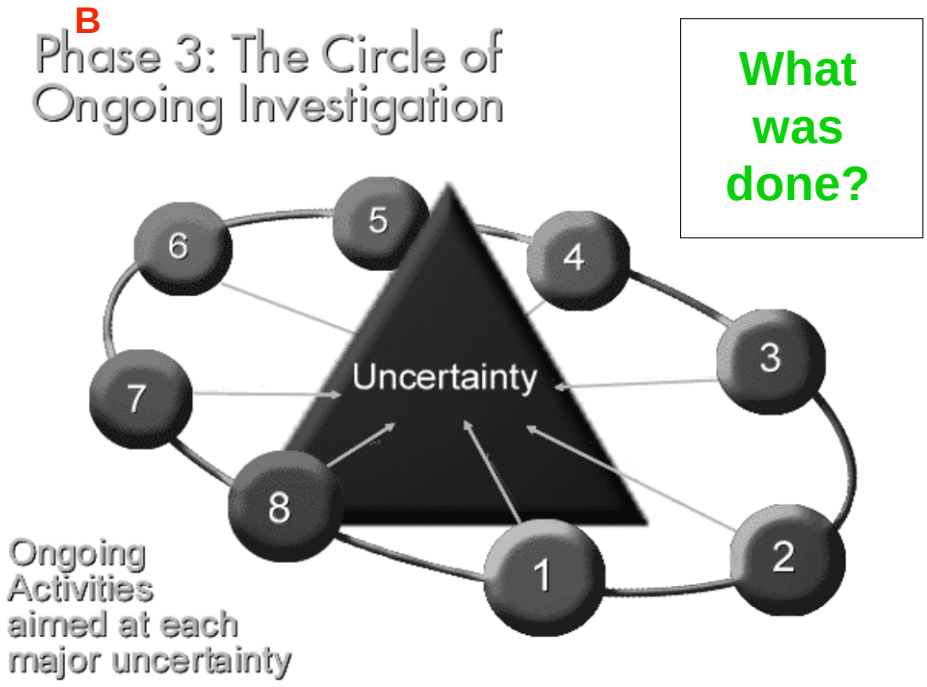
**Illustrating Technological Uncertainty:**

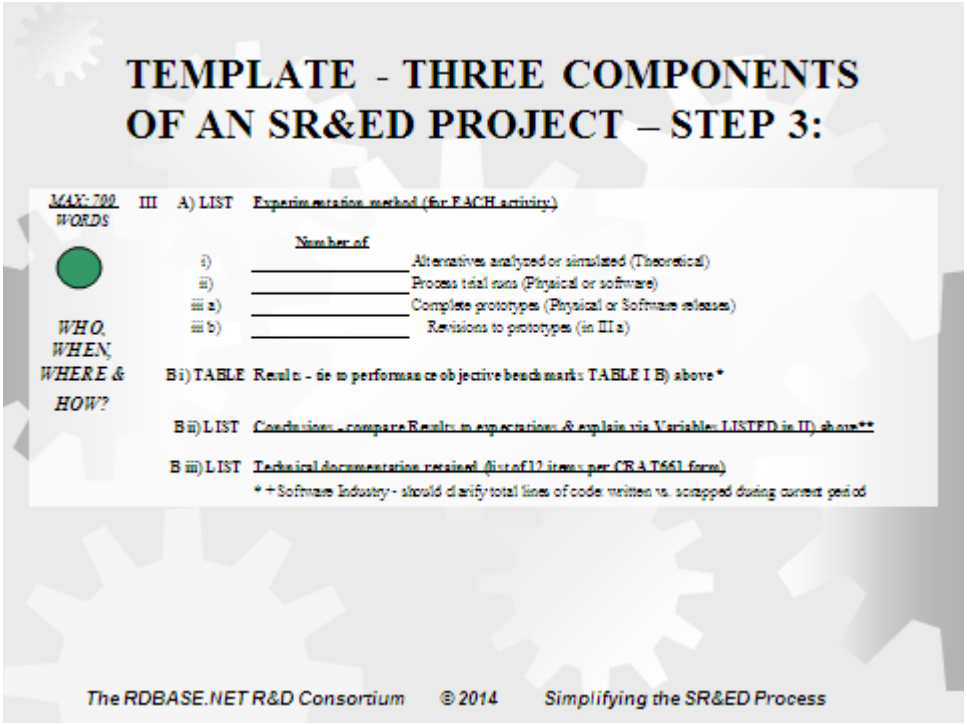
"The capability or the method of achieving that result, or the appropriate design (to achieve) that result, is uncertain as of the beginning of the taxpayer's research activities." [24]

"Discovering information ... **does not require that the taxpayer succeed** in developing a new or improved business component." [25]

[23] Excerpts from CRA IC 86-4R3 paragraph 4.8 – characteristics of SR&ED
[24] IRS code Section 41(d)(1 & 4)

## B.7.4 Phase 3: The circle - Activities & conclusions




25 Regulations to S.41(3)(ii)

### B.7.4.1 International Directives

"Research and experimental development is **creative work undertaken systematically** to increase the stock of knowledge, including knowledge of humanity, culture and society, and the use of this stock of knowledge to devise new applications."[26]

Research has been defined in a number of different ways. "In the broadest sense of the word, the definition of research includes **any gathering of data, information and facts for the advancement of knowledge."**[27]

Generally, **research is** understood to follow a certain structural process including[28]:

- Observations and Formation of the Objective
- Hypothesis: A testable prediction which designates the relationship between two or more variables.
- Gathering, Analysis & Interpretation of data
- Test, revising of hypothesis
- Conclusion, reiteration if necessary

### B.7.4.2 CRA Directives – pre Dec 19, 2012

The CRA requires work **to be supervised by personnel with appropriate technical backgrounds** and clarifies that in describing activities performed:

"It **must demonstrate the presence of analysis or experiment** in the methodology you used to carry out the work. It must also include the results you obtained **and the conclusions you made.** For example, the types of technical records that are appropriate to support your claim are:

- an analysis of the problem,
- internal design documents and drawings,
- test data and results, &
- progress reports."[29]

"The improvement of existing technologies or methodologies using well-established routine engineering or routine development would be ineligible if the outcome is predictable. However…if the…**activity is carried out in support of an eligible** experimental development project, then the activity is eligible."[30]

**Documentation**

Claimants need to retain evidence of the work that was performed and support for eligibility under the program. Possible types of supporting information:[31]

- planning documents

[26] (OECD (2002) Frascati Manual: proposed standard practice for surveys on research and experimental development, 6th edition
[27] Wikipedia definition of "Research"
[28] Wikipedia definition of "Scientific Method"
[29] Form T4088 – Guide to form T661
[30] Excerpt from IC 86-4R3 paragraph 2.13
[31] CRA Guide to Supporting Technical Aspects of a SR&ED Claim

- resource allocation records
- documents of discussions dealing with unexpected obstacles encountered
- minutes of the meetings
- records of trial
- project notebooks
- technical drawings
- photographs
- test records, protocols and results
- quantitative measurement data
- results of analytical and/or statistical analysis
- progress and final project reports, etc.
- physical samples
- scrap

### B.7.4.3 CRA Directives – post Dec 19, 2012

"The **systematic investigation** or search called for in the definition of SR&ED is an approach that includes defining a problem, advancing a hypothesis towards resolving that problem, planning and testing the hypothesis by experiment or analysis, and developing logical conclusions based on the results.

- **An experiment is** the test of a hypothesis under controlled conditions.

- **Analysis is** the detailed examination of information to differentiate the **various parts** of a whole, determine their attributes, or **explain their relationships**. It is performed against the background of available knowledge and experience."[32]

### B.7.4.4 IRS directives (USA)

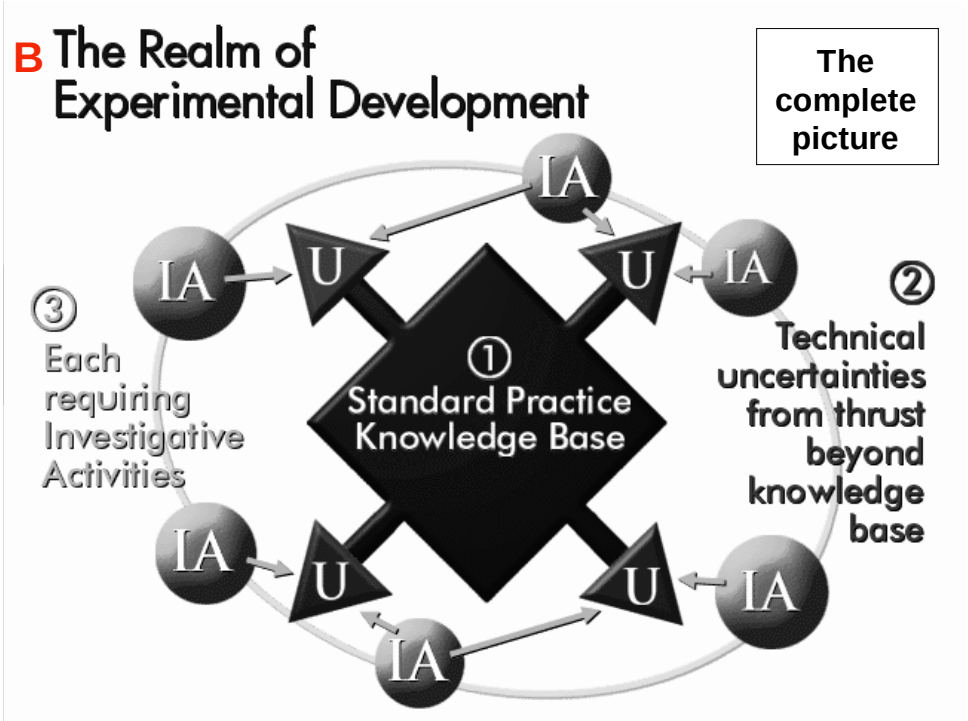
**Process of Experimentation:**

" is a process to evaluate more than one alternative designed to achieve a result where the capability or method of achieving that result is uncertain at the outset ... [it] may involve

(i) Developing hypotheses
(ii) Experiment
(iii) Rejection & refining hypotheses" [33]

[32] Source: CRA SR&ED Glossary Dec. 19, 2012 SR&ED policy papers
[33] Regulations to S.41 para 5 ,

## B.8 Putting it all together




### Technical advancement requires technical uncertainty

"Essentially, the **presence of a technological uncertainty puts the project into the realm of experimental development** when solutions cannot be based on standard practice alone."[34]

"Achieving a **technological advance** would require removing the element of **technological uncertainty** through a process **of systematic investigation**…For an experimental development activity to be eligible the **technological advance** achieved **has only to be slight."**[35]

"In the context of experimental development, scientific or **technological advancement is the knowledge acquired in carrying out the SR&ED project**, which advances the understanding of the underlying scientific relations or technology…For an experimental development activity to be eligible…it must seek to advance the taxpayer's technological knowledge base. The **technological advance** achieved **has only to be slight."**[36]

[34] Excerpt from IC 86-4R3 paragraph 4.3
[35] Excerpt from CRA, IC 86-4R3 paragraph 2.13
[36] Excerpt from IC 86-4R3 paragraph 2.13

### B.8.1.1 CRA Directives – post Dec 19, 2012

"Scientific or **technological advancement** is the generation of information or the discovery of knowledge that advances the understanding of scientific **relations** or technology. …

If … process optimization efforts do not face and address one or more clearly articulated technological uncertainties, then they are not experimental development.

The rejection of a hypothesis is advancement because it eliminates a possible solution. Hence, scientific or technological advancement can be achieved even if the project's objectives are not met."[37]

### B.8.1.2 IRS directives (USA)

"Discovering information ... **does not require that the taxpayer succeed** in developing a new or improved business component." [38]

37 Source: Excerpts from CRA Eligibility of Work for SR&ED Investment Tax Credits Policy Paper Dec. 19, 2012

38 Regulations to S.41(3)(ii)

## B.8.2 Putting it all together – The Project Template


# RDBASE.NET International SR&ED template

| | | Recommended documentation | GOAL: prove to Government (CRA, IRS, patent office) |
|---|---|---|---|
| **I** | **OBJECTIVE BEYOND STANDARD PRACTICE** | | |
| **i)** | **State of Existing technology** | State benchmarking methods & sources | Limits of information available to someone "skilled in the art." |
| **ii)** | **Objective(s)** | Top 5 measureable "Objectives" | Quantifiable Objectives beyond known limits |
| **II** | **TECHNOLOGICAL UNCERTAINTIES** | Top 5 "Variables" for experimentation | Formulate "test matrix" to test hypotheses |
| **III** | **EXPERIMENTAL ACTIVITY** | Defined by tax year* | |
| **i)** | **Experimentation method** | Number of alternatives tested & how? | Justify sample sizes |
| **ii)** | **Results** | Correlate to "Objectives" | Provide basis for Conclusions |
| **iii)** | **Conclusions** | Correlate to "Variables" | "New knowledge" illustrates "Technological Advancement" |

# RDBASE.NET template for claiming tax credits internationally

## I PROJECT OBJECTIVE BEYOND STANDARD PRACTICE:

***GOAL is to prove to Government (CRA, IRS, etc.) :***

### i) State of Existing technology: Benchmarking methods & sources

*Technology limits of "readily available" information to someone "skilled in the art."*

| | | Number (#) of | |
|---|---|---|---|
| i | Internet / Google Searches | | internet sites |
| ii | Articles | | articles |
| iii | Patent searches | | patents |
| iv | Competitive methods | | products / processes |
| v | In-house technologies | | products / processes |
| vi | Potential components | | products |
| vii | Queries to experts | | responses |
| viii | Other | | |

### ii) Objective(s)

*Quantifiable Objectives beyond known limits*

| | | Performance benchmarks (top 5)* | |
|---|---|---|---|
| | | Benchmark 1 | Benchmark 2 |
| i | Existing benchmark | | |
| ii | Units of measure | | |
| iii | Performance objective | | |
| iv | *Result (III below)** | | |

## II TECHNOLOGICAL UNCERTAINTIES

*Using "science" to formulate hypotheses & experiments*

| | Variables for experimentation (top 5)** | |
|---|---|---|
| | Variable 1 | Variable 2 |
| Name of variable | | |

## III EXPERIMENTAL ACTIVITY

*Defined by tax year**

### i) Experimentation method

*Justify sample sizes via "variables"*

| | | Number of | | |
|---|---|---|---|---|
| i | Analysis / simulation | | alternatives | *Quickest* |
| ii | Process trials | | runs / samples | *Longer* |
| iii | Prototypes | | samples | *Longest* |
| | protoype revisions | | revisions | |

### ii) Analysis

| | | | | |
|---|---|---|---|---|
| i | Results | | * vs. Objectives I | *Identify the unexpected* |
| ii | Conclusions | | ** on Variables II | *Attempt understand "why?"* |
| iii | Documentation | | Experiments/Analysis | *Proof experiments & costs* |

### iii) Direct Costs

| | | | | |
|---|---|---|---|---|
| i | Wages | | Hours / Employee | * *PROJECTS span multiple years but ACTIVITIES match tax years.* |
| ii | Contractors | | Labour $ / Contractor | |
| iii | Materials | | Consumed/transformed | |

## B.9 CRA SR&ED Guidance – the consolidated document

On December 19, 2012 the CRA released a consolidated document to replace all prior

- Interpretation Bulletins (IT's)
- Information Circulars (IC's) &
- Application Policy Papers (APP's)

related to SR&ED credits.

While the CRA claims that this change does not represent any new policies they do provide clarification on certain issues and in some cases remove ambiguities among former documents.

Perhaps the most significant "new" analysis is an attempt to correlate;

- The **CRA's 3 component eligibility** criteria to

- The **5 criteria** used by the **Tax Court of Canada**

## Notable quote:

**"The impossible is often the untried."**

**- J. Goodwin**

## Tax Court of Canada (TCC) – outline of the SR&ED process

In the landmark SR&ED tax case of Northwest Hydraulics the judge stated 5 questions which have become the basis for evaluating SR&ED projects:

1. Is there a technical risk or **uncertainty**?

2. Did the person claiming to be doing SRED formulate **hypotheses** specifically aimed at reducing or eliminating that technological uncertainty? This involves a **five stage process:**

   a. the observation of the subject matter of the problem;
   b. the formulation of a clear objective;
   c. the identification and articulation of the technological uncertainty;
   d. the formulation of an hypothesis or hypotheses designed to reduce or eliminate the uncertainty;
   e. the methodical and systematic testing of the hypotheses.

3. Did the procedures adopted accord with established and objective **principles of scientific method,** characterized by trained and systematic observation, measurement and experiment, and the formulation, testing and modification of hypotheses?

4. Did the process result in a **technological advance**, that is to say an advancement in the general understanding?

5. Although the Income Tax Act and the Regulations do not say so explicitly, it seems self-evident that a **detailed record** of the hypotheses, tests and results be kept, and that it be kept as the work progresses

The CRA has addressed these questions and attempted to

- correlate them with their own 3 step format
- as illustrated on page 4.

### Role of the "expert witness"

As a background to his decision, the Federal court judge in the case of RIS Christie[39] provided an overview of the **role of the scientists** in determining SR&ED eligibility stating,

> "What constitutes scientific research for the purposes of the Act is either a **question of law** or a question of mixed law **and fact to be determined by the Tax Court of Canada, not expert witnesses**, as is too frequently assumed by counsel for both taxpayers and the Minister.
>
> An expert may assist the court in evaluating technical evidence and seek to persuade it that the research objective did or could not lead to a technological advancement. But, at the end of the day, the **expert's role is limited to providing the court with a set of prescription glasses through which technical information can be viewed** before being analyzed and weighed by the trial judge."

## Notable quote:

**"The only way to discover the limits of the possible is to go beyond them into the impossible."**

**- A.C. Clarke**

[39] RIS Christie v. The Queen [1996] E.T.C. 537 (TCC), [1999] E.T.C. 2004 (FCC)

# Defining the "Scientific method"

**The classical definition in the Oxford English Dictionary states;**

"The scientific method is a method of procedure that has characterized natural science since the 17th century, consisting in

- **systematic observation,**
- **measurement,**
- **experiment, and the**
- **formulation, testing, and modification of hypotheses.**"

A linearized, pragmatic scheme **list is offered below**."

| WHAT INFORMATION IS REQUIRED | HOW TO PROVIDE INFO. |
|---|---|
| **Scientific Method**<br>**Oxford Dictionary** | **RDBASE SR&ED project -**<br>**5 Steps** |
| **1.** Define a question | **Step 1b):** Objectives > Standard Practice |
| **2.** Gather information and resources (observe) | **Step 1a):** Define Standard Practice (SP) |
| **3.** Form an explanatory hypothesis | **Step 2:** Correlate research to Uncertainties |
| **4.** Perform an experiment and collect data, | **Step 3a):** Work done "systematically" |
| **5.** Analyze the data | |
| **6.** Interpret the data and draw conclusions that serve as a starting point for new hypothesis | **Step 3b):** Clarifying "technological conclusions" |
| **7.** Publish results | Recommended but not required for SR&ED projects |
| **8.** Retest (frequently done by other scientists). | |
| Note: The iterative cycle inherent in this step-by-step methodology goes from point 3 to 6 back to 3 again | Provided via steps 2 & 3 |

**A modern update from Wikipedia**

"Scientific method refers to a;

- body of **techniques**
- for investigating phenomena,
- **acquiring new** knowledge, or
- **correcting** & integrating **previous knowledge**.

To be termed **scientific**, a method of inquiry must be based on

- gathering empirical and **measurable evidence**
- subject to specific principles of reasoning.

The **chart on the next page** then compares the SR&ED questions posed by each of:

- the Tax Court of Canada (TCC)
- Canada Revenue Agency (CRA) &
- The Scientific Method (RDBASE reporting structure)

# SR&ED project eligibility – TCC vs. CRA requirements

| WHAT INFORMATION IS REQUIRED | | HOW TO PROVIDE INFO. | | Author's Commentary: |
|---|---|---|---|---|
| **Tax Court of Canada (TCC)**<br>**5 SR&ED eligibility Questions** | **CRA intepretation**<br>**3 Criteria** | **RDBASE SR&ED project -**<br>**5 Steps** | | **HOW to meet all requirements** |
| **1.** Was there a scientific or a **technological uncertainty**—an uncertainty that could not be removed by **standard practice**? | **2.** Scientific or technological **uncertainty** | **Step 1a):** Define Standard Practice (SP)<br>**Step 1b):** Objectives > Standard Practice<br>&<br>**Step 2:** Correlate research to uncertainties | | The TCC question **contemplates the first 3 steps** of the RDBASE SR&ED project structure. |
| **2.** Did the effort involve formulating **hypotheses** specifically aimed at reducing or eliminating that **uncertainty**? | **3.** Scientific & technical **content** | **Step 2:** Correlate research to uncertainties | | **Hypotheses** require **"variables"** for experimentation.<br><br>These create the basis for the **"controlled experiments"** required by the tax court. |
| **3.** Was the adopted procedure consistent with the total discipline of the **scientific method**, including formulating, testing, and modifying the hypotheses? | **3.** Scientific & technical **content** | **Steps 1-5: Specifically 3a):** Work done "systematically" | | The **"scientific method"** is an internationally accepted definition which the **Tax Court of Canada has adopted** despite **resistance** by the **CRA**.<br><br>Arguably the **"scientific method"** contemplates **all 5 steps** of the RDBASE SR&ED project structure. |
| **4.** Did the process **result in** a scientific or a **technological advancement**? | **1.** Scientific or technological **advancement** | **Step 3b):** Clarifying "technological conclusions" = advancements | | **"Technological advancement" is the "conclusion"** after **ALL 5 steps** to be performed.<br><br>The **tax courts** (correctly) recognize this is a **"result"** but the **CRA** still requests this as the **first step** of the reporting process. |
| 5. Was a **record of** the hypotheses tested and the **results** kept as the work progressed? | **3.** Scientific & technical **content** | **Step 2:** Correlate research to uncertainties<br>**Step 3a):** Work done "systematically" | | **Documentation of experimentation** is required by both the "scientific method" & the CRA's "content" criteria. |

## Step 1a): Ensure proper definition of existing knowledge at the outset:

**Northwest Hydraulics**[40]

CRA position (all work SP)

> "Standard Practice refers to directly adapting a known engineering or technological practice to a new situation when there is a high degree of certainty that the known technology or practice will achieve the desired objective.
>
> The devices and processes developed by NHC in the course of the modelling work may have been "new" in the sense of a new location (i.e. a hydraulic structure that was not there before, or the implementation of a river improvement scheme),
>
> but all of the work described in the NHC project reports refers to **standard devices and processes**, which are routinely used in similar design situations all over the world."

Judge's analysis

> "Q. Could these designs have been implemented by resorting merely to textbooks?
>
> A. No, you wouldn't find any of that in a textbook. But there are design guides available and certainly there are **suggestions** there and these were used in the **initial design**. But not enough is available there to, I think, develop an effective design of this type.
>
> It is true that any one of the features of the final design may have been known - rubber weirs, radial gates and walls of different types were known. It was the innovative **combination and alignment** of these factors that makes this project unique."

Judge's ruling & rationale

> "The CRA's position, was essentially that the appellant, admittedly a **world leader** in the field of hydraulic model testing, **by its own excellence** sets the standard for what represents routine engineering or standard practice.
>
> With respect I think that this **sets an unrealistically high standard** - indeed a standard of perfection that would discourage scientific research in Canada.

**Author's commentary:**

The Northwest Case illustrates how CRA officials may deny claims on the basis the project

- appears to be "routine engineering"
- without providing support for their position but
- identification of "variables" for experimentation
- provide adequate evidence for the TCC

**US / IRS directives – perhaps CRA can adopt?**

In the United States the IRS[41] provides additional directives for determining "standard practice" within SR&ED claims.

> **Means of discovery**. In seeking to obtain knowledge that exceeds, expands, or refines the common knowledge of skilled professionals in a particular field of science or engineering, a taxpayer may employ existing technologies in a particular field and may rely on existing principles of science or engineering.
>
> **Patent safe harbor.** The issuance of a patent by the Patent and Trademark Office… is **conclusive evidence** that a taxpayer has obtained knowledge that exceeds, expands, or refines the common knowledge of skilled professionals. However, the issuance of such a patent is **not a precondition** for credit availability.

[40] Northwest Hydraulic Consultants Ltd., v The Queen, (Date: 1998/05/01 – TCC, Docket: 97-531(IT))
[41] Internal Revenue Service 26 CFR Parts 1 and 602 [TD 8930] RINs 1545-AV14 and 1545-A051

**Rebuttable presumption**. If a taxpayer demonstrates with credible evidence that:

- research activities were undertaken to obtain the information …
- would exceed…the common knowledge
- of skilled professionals in the particular field of science or engineering
- activities …satisfy the requirements.

The **Commissioner (IRS auditor) may overcome the presumption** [if he/she] **demonstrates** that

- the information was within the **common knowledge** of skilled professionals **or**
- the research **activities** were **not** undertaken **to obtain** the information described.

## Step 1 b): Quantification of objectives vs. standard practice

**Tax Court of Canada statements:**

**Sass Manufacturing**[42]

"Systematic investigation connotes the **existence of controlled experiments and of highly accurate measurements** and involves the **testing of one's theories against empirical evidence**.

**Northwest Hydraulics**[43]

"The addition of these words ["including **incremental improvements** thereto" ] in 1995 applicable to taxation years ending after December 2, 1992 appears to have been in response to a concern that the achievement or attempted achievement of slight improvements was not covered.

I should not have thought it was necessary to say so. Most scientific research involves **gradual, indeed infinitesimal, progress**. Spectacular breakthroughs are rare and make up a very small part of the results of SR&ED in Canada."

## Notable quote:

**"If GM had kept up with technology like the computer industry has, we would all be driving $25 cars that got 1000 MPG."**

**- Bill Gates**

[42] Sass Manufacturing Limited v. M.N.R., 88 DTC 1363
[43] Northwest Hydraulic Consultants Ltd., v The Queen, (Date: 1998/05/01 – TCC, Docket: 97-531(IT))

## Step 2: Correlate experiments to technological uncertainties (hypotheses):

### Tax court definitions of "hypotheses"

Tax Court of Canada judges have made the following statements:

**CW Agencies[44] :**

> "The word **hypothesis** in this context is normally considered to mean a **provisional concept** which is not inconsistent with known facts and **serves as a starting point for further investigation by which it may be proved or disproved objectively**."

**Maritime Ontario Freight Lines[45] ,**

> "**A hypothesis** is a tentative assumption or explanation to an unknown problem and, as a rule, this **requirement is me**t by the existence of a **logical plan** devised to observe and resolve the hypothetical problem."

**Northwest Hydraulics**

> "I do not think that **conventional engineering** would be adequate to deal with the **variables** and the uncertainties that were inherent in the major disruption and diversion of the flow of the river resulting from the construction"[46]
>
> The technological uncertainty is something that exists in the mind of the specialist such as the appellant, who identifies and articulates it and applies its methods to remove that uncertainty."[47]

### Additional definitions of "scientific hypotheses"

**Webster's online dictionary**

**Hypothesis, n.; pl. Hypotheses:**

> 1. A **supposition**; a proposition or principle which is supposed or taken for granted, in order to draw a conclusion or inference for proof of the point in question;
>
> 2. **(Natural Science)** A **tentative theory** or supposition provisionally adopted to explain certain facts, and **to guide** in the **investigation** of others; hence, frequently called a working hypothesis.

**From Wikipedia, the free encyclopedia**

**Hypothesis**:

> The term comes from the Greek, hypotithenai meaning "to put under" or "to suppose".
>
> A hypothesis (plural hypotheses) is a proposed explanation for a phenomenon.
>
> For a hypothesis to be a **scientific hypothesis, the scientific method** requires that one can test it.
>
> Scientists generally **base** scientific hypotheses on **previous observations** that cannot satisfactorily be explained with the available scientific theories.

[44] CW Agencies vs. MNR, Date: 2000/08/30, Docket: 98-1324(IT)G, (TCC)
[45] Maritime-Ontario Freight Lines Limited and Her Majesty the Queen (CITATION:2003 TCC 674) – informal procedure
[46] Ibid NW Hydraulics, Paragraph 22
[47] Ibid NW Hydraulics, Paragraph 82

**Hypothesis development**

Normally hypotheses have the form of a **mathematical model.**

A **working hypothesis** is a provisionally accepted hypothesis proposed for further research.

**Author's commentary:**

Evidence of hypotheses is the development of a "test matrix."

This would require the researcher to:

- Identify the **key variables** which he/she believes explain the performance
- **Benchmark** variables vs. existing models to predict their interaction
- **Rank** the variables in order of significance
- **Test** the variables to further understand shortfall of the existing models

If the **variables of a "test matrix"**

- can be identified this provides **objective evidence** of the technological advancement
- conversely, if they can't be identified it will be nearly impossible to illustrate the limits of standard practice models.

## Notable quote:

**"Life is trying things to see if they work."**

**- Ray Bradbury**

## Step 3a): Ensuring work was done "systematically"

Tax Court of Canada statements:

**Sass Manufacturing**[48]

> "Systematic investigation connotes the **existence of controlled experiments and of highly accurate measurements** and involves the **testing of one's theories against empirical evidence**.
>
> Scientific research must mean the **enterprise of explaining and predicting** and the gaining knowledge of whatever the subject matter of the hypothesis is.
>
> This surely **would include repeatable experiments in** which the steps, the various changes made and the **results are carefully noted**."

**Zeuter Developments**[49]

> "As stated in RIS-Christie, the only reliable method of **demonstrating** that scientific research was undertaken in a **systematic fashion** is to produce **documentary evidence**."

**Rainbow Pipeline**[50]

> "What may appear routine and obvious after the event may not have been before the work was undertaken.
>
> **What distinguishes routine activity from** the methods required by the definition of **SRED** …. is not solely the adherence to systematic routines, but the **adoption** of the **entire scientific method,** with a view to removing a technological uncertainty through the formulation and testing of innovative and untested hypotheses."

## Step 3b): Clarifying the "technological conclusions / advancements"

Tax Court of Canada statements:

**Rainbow Pipeline**[51]

> "Did the process result in a technological advance, that is to say an advancement in the general understanding?"
>
> On this issue he commented,
>
> "The **rejection after testing of an hypothesis is nonetheless an advance** in that it eliminates one hitherto untested hypothesis.
>
> Much scientific research involves doing just that. **The fact that the initial objective is not achieved invalidates neither the hypothesis formed nor the methods used**. On the contrary it is possible that the very failure reinforces the measure of the technological uncertainty."

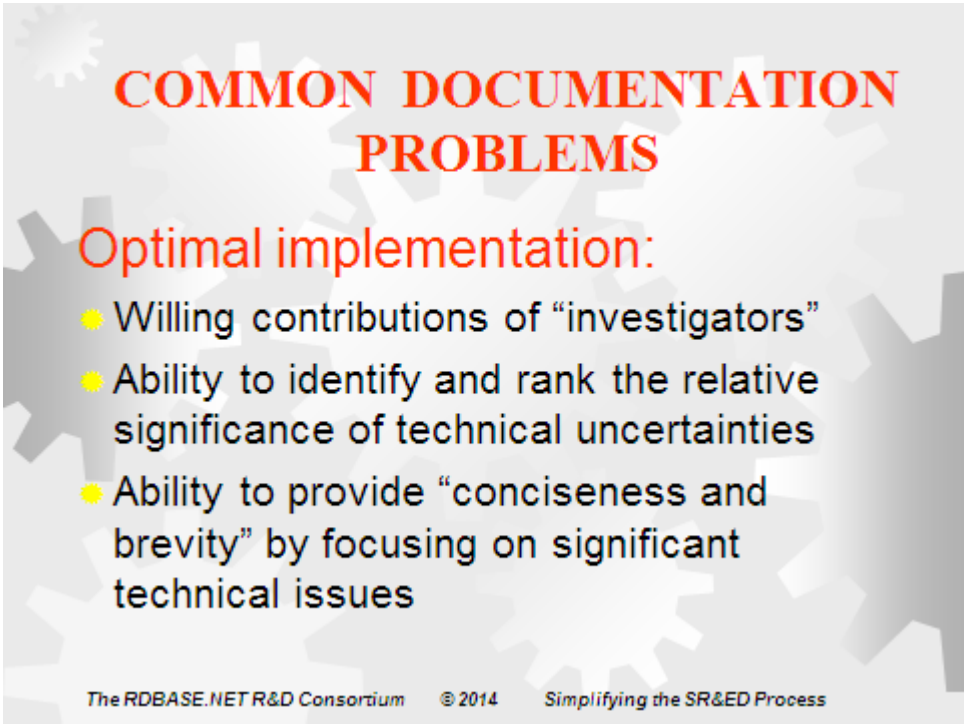
[48] Sass Manufacturing Limited v. M.N.R., 88 DTC 1363
[49] Zeuter Development Corporation v. The Queen, 2006 TCC 549, 2007 DTC 41, para 28
[50] Rainbow Pipeline Company Ltd., Date: 1999/09/15, Docket: 96-4369-IT-G I, (TCC)
[51] Rainbow Pipeline Company Ltd., Date: 1999/09/15, Docket: 96-4369-IT-G I, (TCC)

## Notable quote:

**“An idea that is not dangerous is unworthy of being called an idea at all.”**

**- Oscar Wilde**

## B.10 Common eligibility problems




### B.10.1 Facts: Recent increase in CRA challenges to "Technological Advancement" (TA)

Recently the **CRA** has appeared to increase its scrutiny on SR&ED claimants based on one basic challenge **claiming that they:**

**"Do not see the technological advancement."**

### B.10.2 Issue(s): TA has 3-5 major components – need to be specific

In the author's opinion this is like taking your car to the mechanical and claiming, "it doesn't work right." A (Properly trained) mechanic would likely start a conversation like:

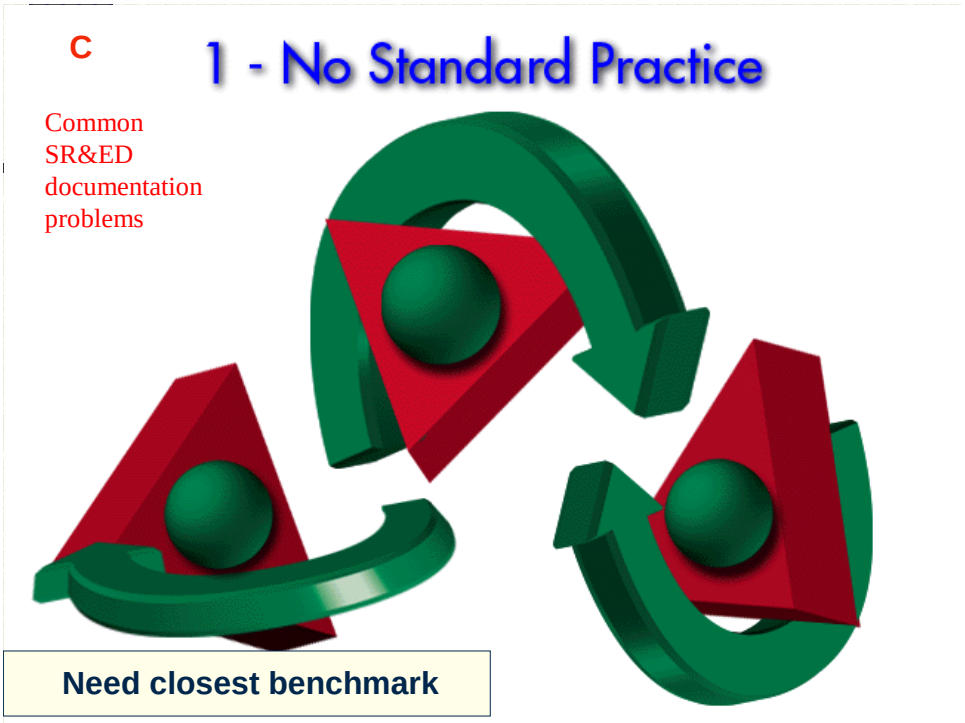
**Mechanic**:"What happens when you turn the key in the ignition? Does it start?"
**Client:** "Sure it starts fine."
**Mechanic:**"Does the engine run?"
**Client**: "Sure it runs fine."
**Mechanic:**"What happens when you put the transmission in gear? Does it move?"
**Client:** "Sure it moves but it jerks and sometimes backfires."
**Mechanic:**"Okay. That will be $500 for not just telling me the problem in the first place!"

To many this situation seems almost foolish since most people would just tell the mechanic the specific problem in the first place. Ironically when it comes to explaining "technological advancement" some CRA officials appear to provide similar lack of detail in their feedback to SR&ED claimants.

In the author's opinion a more acceptable and useful answer would be to clarify **which of the 5 major components** were lacking in the clients project description.

The next four slides use the shapes of the R&D model to illustrate some common problems in identifying and documenting eligibility:

### B.10.3 Failure to accurately define and leverage initial knowledge base




**No square - Example** starts,
"This product will be the first of its kind in the world ….."

While perhaps indicative of a **business advance**, we still **require a benchmark of/to similar products, technology or methods** to define a company's **knowledge base** & clarify:

- results are not readily apparent and
- a basis for related, technical hypotheses.

**Recommendation**

- The researcher's goal is to illustrate such **benchmarks** as the **starting point** of the investigation, **rather than the final solution**.

## B.10.4 Failure to extend beyond your company's initial knowledge base

C

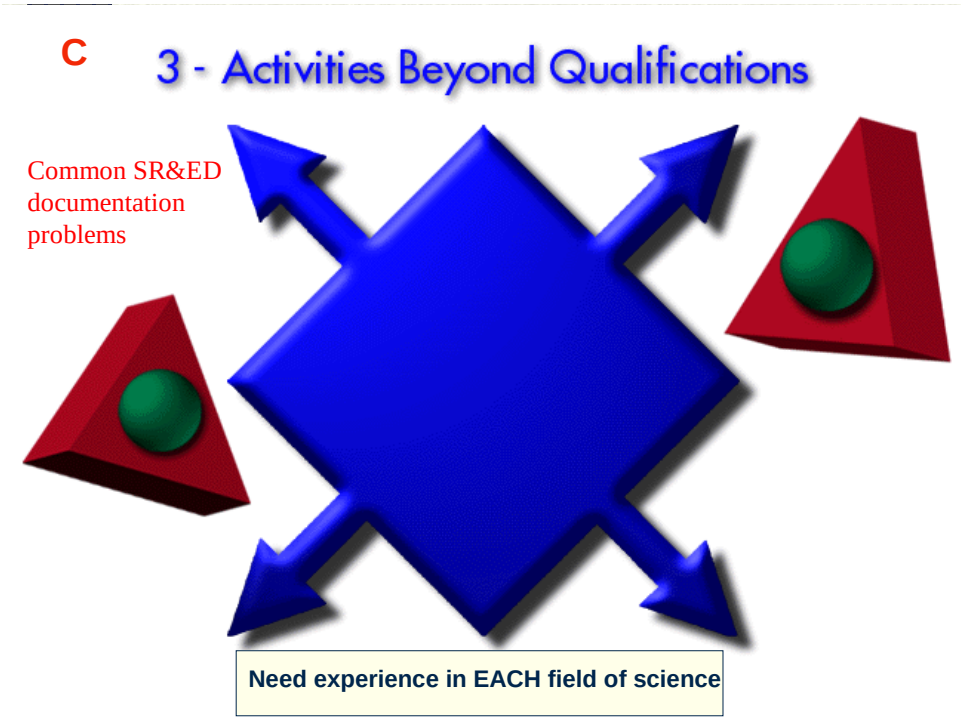
Common SR&ED documentation problems


- **Generally speaking, routine engineering** represents any **Activity** that is **NOT correlated with one, or more, technical uncertainties.**
- Typically these activities are **within the standard practice knowledge base.**

**Recommendations**

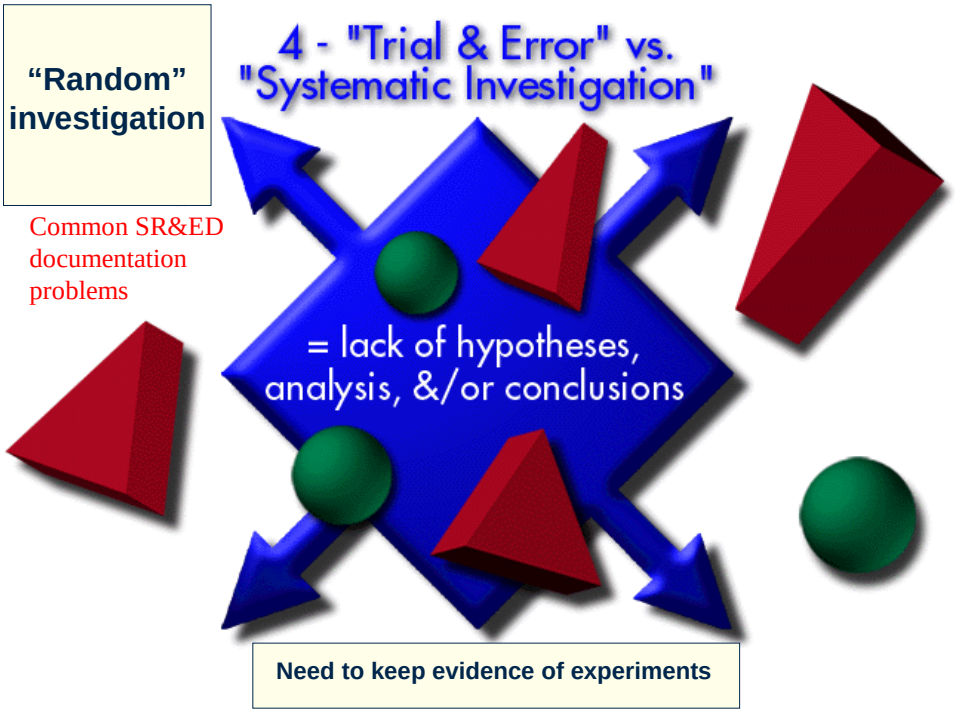
- Perhaps one of the best illustrators of **technical uncertainty** is provided by a **comparison of results** to **initial expectations**.
- Since the SR&ED program requires the correlation of **activities** to **uncertainties**, by definition, routine engineering activities will not be eligible unless they are directly related to resolution of the technological uncertainties.

## B.10.5 Matching qualifications of research personnel & projects




- The requirement for technical content includes a requirement for qualified personnel.
  - Qualifications will vary according to the complexity of the project at hand. In some cases, work experience will be sufficient while in other settings an advanced degree would be appropriate.
  - As a general rule, **a Bachelors degree or equivalent** in an area of technology will indicate adequate, technical qualifications; however this is not a mandatory requirement.
- The individual conducting the experiment should have the **ability to:**
  - **identify technical uncertainties**,
  - formulate **technical hypotheses;** and
  - **derive related, technical conclusions** as a result of this work.

## B.10.6 Systematic investigation vs. trial & error




**Trial and error (ineligible)**

- Examines potential solutions **without the ongoing evaluation of why** results occurred.

**vs.**

**Systematic Investigation (eligible)**

- Analysis of specific, **technical hypotheses and related conclusions**.

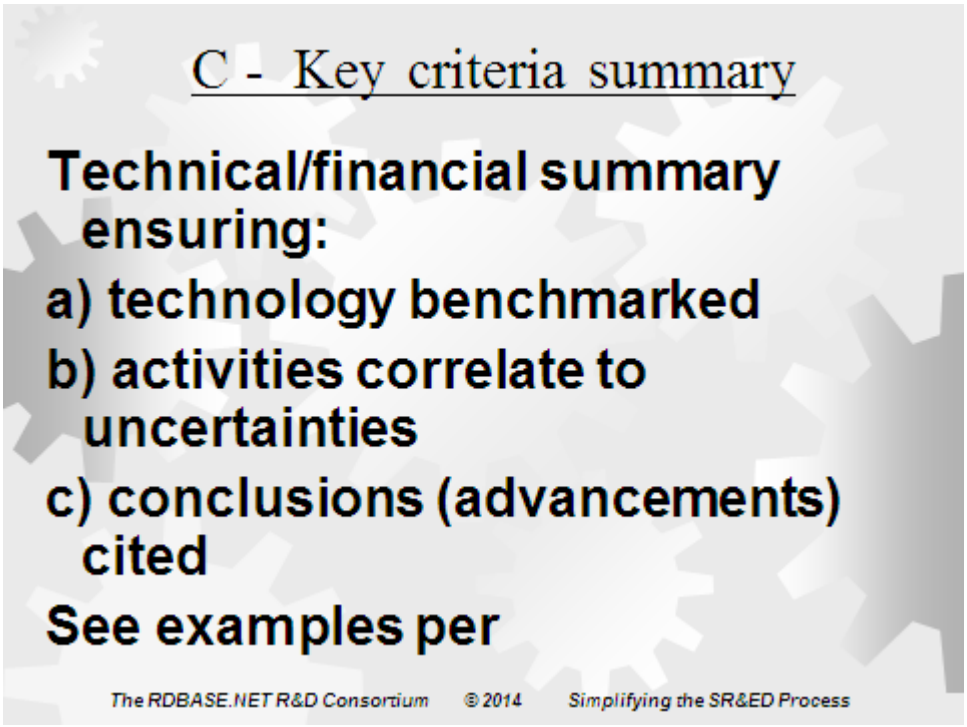
**Recommendations**

- There is nothing wrong with quick & dirty experiments as long as they are systematic and documented.

- We should pursue **explanations** for (product) failures, as well as successes.

In this way a **technical advancement** can be evidenced, even if the project itself becomes a business failure.

## c "Key Criteria summary" Methodology & Purpose




In the author's opinion the key components of an optimal project description are threefold:

1) to ensure that we've **defined the company's existing knowledge** on a topic at the outset.

2) to **correlate efforts made with** concise summaries of significant, **technical uncertaintie**s, and

3) to provide a basis to recognize significant **conclusions (i.e. technological advancements)**.

Goal 1: ensure proper definition of existing knowledge at the outset:

The "advancement" section of the grid again focuses not so much on "product" advancements but on the **methods to achieve such advancements** and the fact that they have been **benchmarked against existing standard practice.**

We find that we often use this basis of "advancement" to recommend renaming of the project away from "product" descriptions and towards "methodology" objectives. As indicated above, the "advancement" section is **not** the primary focus of the grid but only a double check to insure that:

1) Standard practice "knowledge" for this industry was defined (by at least 1 benchmark), &
2) That the solution was not a "routine" implementation of this "existing" knowledge.

If these two issues are evidenced, **no matter how small the incremental improvement maybe,** the grid can then correlation of research steps to technical uncertainties.

Goal 2: correlation of the research steps to specific, technical uncertainties:

Use of these grids then allows the reviewer to scan through the projects and identify those **research steps which clearly contemplate resolving the technical uncertainties and alternatives.**

**This is what differentiates SR&ED work from "routine engineering."**

The need for any further routine, supporting work can then be briefly mentioned but needs no further explanation. This support work will always be eligible to the extent that it was "commensurate with the needs and directly in support of [the eligible research[52]]."

Goal 3: Providing concise summaries of experimentation performed:

We have found that there are several advantages to having concise summaries of the "activity level" data.

- projects can accumulate separate uncertainties each with any unlimited number of research activities. Often **portions of the "business" project do not qualify** for SR&ED (i.e. not necessary to resolve the stated uncertainties).
- One of the key indicators of eligibility is the ability to provide a detail of the **number of experiments performed** and alternatives analyzed..
- It has been our experience that these grids provide an adequate degree of detail, particularly for someone already familiar with work in question, to skim the database and ensure that **all costs were required to resolve the state uncertainties**.

Summary of how to use these grids for submission:

As discussed above, I believe that the grids provide a simple overview of the "key variables of uncertainty" and therefore illustrate that the development work was:

a) **NOT "routine engineering"** (i.e. without any significant technological uncertainty) and instead was

b) **"systematic investigation"** into alternate solutions and their effects on other components in the system.

[52] ' Excerpt from the definition of "scientific research and experimental development" as defined in subsection 248(1) of the income Tax Act.

## C.1 Key Criteria summaries for 4 projects

| 1401 - Miniature Printer - TAX CASE (6379249 Canada Inc.) | | |
|---|---|---|
| **BENCHMARKS** | **ACTIVITIES BY YEAR** | |
| Internet searches: 100 Articles | | |
| Patent searches: 14 patents | | |
| Patent searches: 14 patents | | |
| Competitive products or processes: 5 | | |
| Similar prior in-house technologies: 54 | 2015 | |
| Potential components: 7 products | 03-Jan | 04-Jan |
| Potential components: 50 products | New print driver | Moisture analysis |
| **OBJECTIVES** | **RESULTS** | |
| Battery life: 20 pages | 22 | |
| Jam rate: 1 jams/1,000 sheets | 27 | |
| Ambient humidity limit: 95 % | | 92 |
| Media thickness upper: 0.1 mm | 0.09 | |
| Media thickness lower range: 0.05 mm | 0.04 | |
| Speed (pages per minute): 5 ppm | 5 | |
| felt medium life: 20 1000's / pages | 18.5 | |
| Overall reject rate: 0.1 % | 4 | |
| Cost : 80 $ | 83 | |
| **UNCERTAINTIES & KEY VARIABLES** | **CONCLUSIONS** | |
| 1 - Variables cited in tax case | | |
| clutch plate surface area & use of ridges | | |
| degradation) | | |
| moisture vs anti curl mechanism | | Y |
| slip clutch | | |
| static versus dynamic load | Y | |
| | **METHODS** | |
| Analysis | 400 | |
| Trials | 70 | 1200 |
| Prototypes | | |
| Lines of code | | |
| | **COSTS** | |
| Hours | 1100 | 300 |
| Materials $ | 14000 | |
| Subcontractor $ | | |

| 1500 - Engineering - Tax Case (Northwest Hydraulics) | | | |
|---|---|---|---|
| **BENCHMARKS** | **ACTIVITIES BY YEAR** | | |
| Internet searches: 21 Articles | | | |
| Patent searches: 5 patents | 2015 | | |
| products | 01-Jan | 02-Jan | 03-Jan |
| products / processes | sediment & water | works | Low Flow channel |
| **OBJECTIVES** | **RESULTS** | | |
| Decrease Bed load Deposition: 50 % | | | 60 |
| Reduce Downstream scouring: 80 % | | | 71 |
| Minimize Production cost: 23000 $ | | | 25000 |
| **UNCERTAINTIES & KEY VARIABLES** | **CONCLUSIONS** | | |
| water levels | | | |
| structure | | | Y |
| spurs | | | Y |
| scour protection scheme | | | Y |
| settling basin geometry | | | Y |
| weir, sluiceway, headgate, ejector | | | Y |
| | **METHODS** | | |
| Analysis | 63 | 55 | |
| Trials | | 4 | 18 |
| Prototypes | | 2 | 3 |
| Lines of code | | | |
| | **COSTS** | | |
| Hours | | 450 | 570 |
| Materials $ | | 22000 | |
| Subcontractor $ | 50000 | | |

| 1501 - Software R&D - International Guidelines (OECD) | | |
|---|---|---|
| **BENCHMARKS** | **ACTIVITIES BY YEAR** | |
| | 2015 | |
| | 01-Jan | 02-Jan |
| (none) | activities | activities |
| **OBJECTIVES** | **RESULTS** | |
| GIS: x<br>new theorems & algorithms : x<br>advances in generic approaches : x | | |
| **UNCERTAINTIES & KEY VARIABLES** | **CONCLUSIONS** | |
| Problems | | |
| level of o/s's, prog languages &/or tools | | |
| | **METHODS** | |
| Analysis<br>Trials<br>Prototypes<br>Lines of code | | |
| | **COSTS** | |
| Hours<br>Materials $<br>Subcontractor $ | 700 | |

| 1502 - Software - TAX CASE (ACSIS) | |
|---|---|
| **BENCHMARKS** | **ACTIVITIES BY YEAR** |
| internet searches: 20 Articles | 2015 |
| products | 01-Jan |
| | Activity 1 |
| **OBJECTIVES** | **RESULTS** |
| CPU Hardware limitations: 100 MHz | 150 |
| Fault tolerance: 99.5 % | 99 |
| **UNCERTAINTIES & KEY VARIABLES** | **CONCLUSIONS** |
| 1 - Technological uncertainty | |
| node and master behaviour | Y |
| sequences and subscriptions | Y |
| | **METHODS** |
| Analysis | 450 |
| Trials | 19 |
| Prototypes | |
| Lines of code | |
| | **COSTS** |
| Hours | 1200 |
| Materials $ | |
| Subcontractor $ | |

## C.2 DRAFT CRA SR&ED project examples Sept 18, 2013

On Sept 18, 2013 the Canada Revenue Agency (CRA) released a DRAFT document [53] containing;

- 10 specific project examples,
- each aiming to illustrate one or more specific issues.

They are requesting feedback by 18-Nov-2013.

In the author's view these examples:

- provide both insight but also ambiguity since
- project eligibility requires the "scientific method" be followed &
- ANY missing link could spell failure.

As a result the CRA begins the paper by qualifying that;

> "These examples are intended to illustrate specific concepts found in the Eligibility of Work for SR&ED Investment Tax Credits Policy. The field of work described is not an issue, nor whether the work is actually eligible."

Despite the qualification the examples then go on to illustrate how & why certain work may be eligible.

In the author's view the examples,

- while lacking certain key details,
- provide a basis to further develop complete SR&ED project descriptions.

**Rewriting the projects**

In the following pages we have

- Entered these DRAFT projects
- Into the COMPLETE T661 project reporting template
- To illustrate both
    - SR&ED indicators of eligibility &
    - Information that is lacking

**Notable quote:**

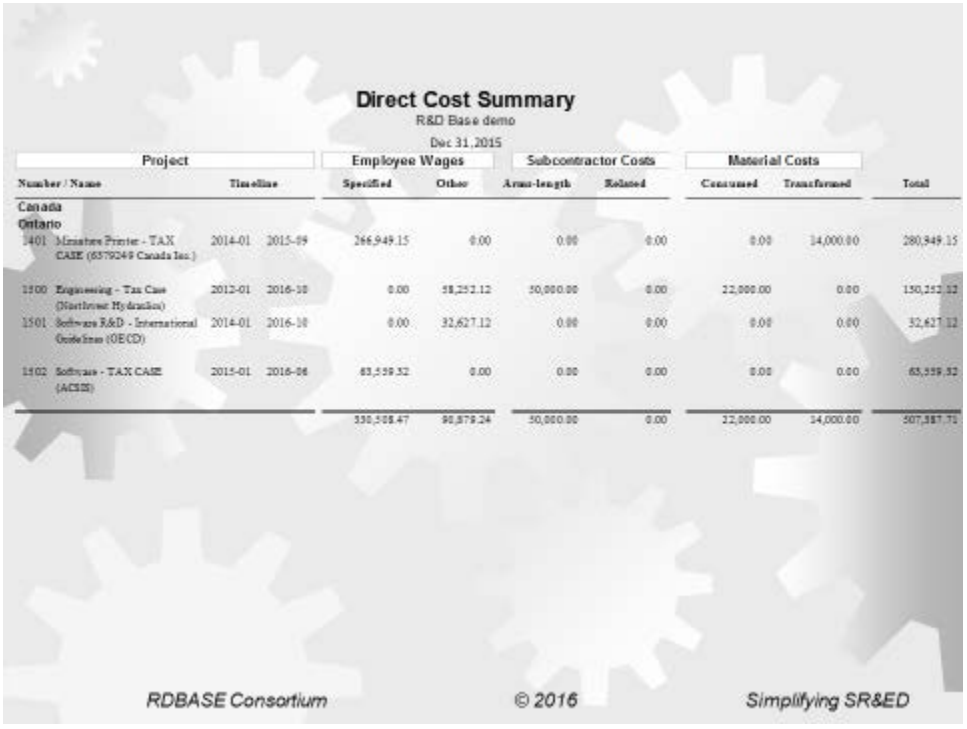
**"The first rule of any technology used in a business is that automation applied to an efficient operation will magnify the efficiency.**

**The second is that automation applied to an inefficient operation will magnify the inefficiency."**

**- Bill Gates**

[53] Draft examples to illustrate key concepts in the Eligibility of Work for SR&ED Investment Tax Credits Policy

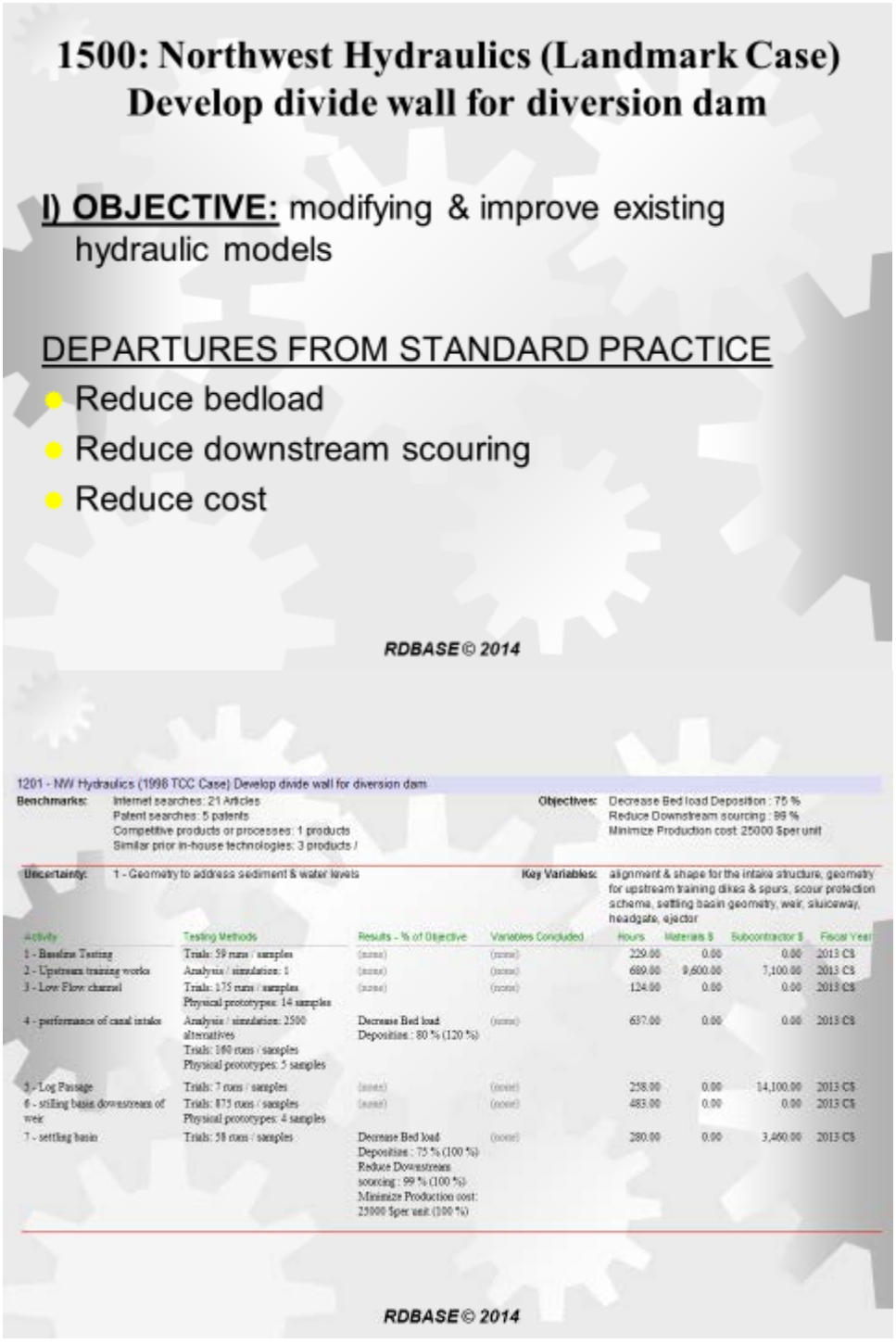
# D Sample Project descriptions and cost summary


| Project | | | Employee Wages | | Subcontractor Costs | | Material Costs | | |
|---|---|---|---|---|---|---|---|---|---|
| Number / Name | Timeline | | Specified | Other | Arms-length | Related | Consumed | Transformed | Total |
| Canada | | | | | | | | | |
| Ontario | | | | | | | | | |
| 1401 Minutes Printer - TAX CASE (6579249 Canada Inc.) | 2014-01 | 2015-09 | 266,949.15 | 0.00 | 0.00 | 0.00 | 0.00 | 14,000.00 | 280,949.15 |
| 1500 Engineering - Tax Case (Northwest Hydraulics) | 2012-01 | 2016-10 | 0.00 | 58,252.12 | 50,000.00 | 0.00 | 22,000.00 | 0.00 | 130,252.12 |
| 1501 Software R&D - International Guidelines (OECD) | 2014-01 | 2016-10 | 0.00 | 32,627.12 | 0.00 | 0.00 | 0.00 | 0.00 | 32,627.12 |
| 1502 Software - TAX CASE (ACME) | 2015-01 | 2016-06 | 63,559.32 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 63,559.32 |
| | | | 330,508.47 | 90,879.24 | 50,000.00 | 0.00 | 22,000.00 | 14,000.00 | 507,387.71 |

## D.1 1401: Miniature Printer design case


## D.2 1500: NW Hydraulics (1998 TCC Case) Develop divide wall for diversion dam




1201 - NW Hydraulics (1998 TCC Case) Develop divide wall for diversion dam

**Benchmarks:** Internet searches: 21 Articles
Patent searches: 5 patents
Competitive products or processes: 1 products
Similar prior in-house technologies: 3 products /

**Objectives:** Decrease Bed load Deposition : 75 %
Reduce Downstream sourcing : 99 %
Minimize Production cost: 25000 $per unit

**Uncertainty:** 1 - Geometry to address sediment & water levels

**Key Variables:** alignment & shape for the intake structure, geometry for upstream training dikes & spurs, scour protection scheme, settling basin geometry, weir, sluiceway, headgate, ejector

| Activity | Testing Methods | Results - % of Objective | Variables Concluded | Hours | Materials $ | Subcontractor $ | Fiscal Year |
|---|---|---|---|---|---|---|---|
| 1 - Baseline Testing | Trials: 59 runs / samples | (none) | (none) | 229.00 | 0.00 | 0.00 | 2013 C$ |
| 2 - Upstream training works | Analysis / simulation: 1 | (none) | (none) | 689.00 | 9,600.00 | 7,100.00 | 2013 C$ |
| 3 - Low Flow channel | Trials: 175 runs / samples<br>Physical prototypes: 14 samples | (none) | (none) | 124.00 | 0.00 | 0.00 | 2013 C$ |
| 4 - performance of canal intake | Analysis / simulation: 2500 alternatives<br>Trials: 160 runs / samples<br>Physical prototypes: 5 samples | Decrease Bed load Deposition : 80 % (120 %) | (none) | 637.00 | 0.00 | 0.00 | 2013 C$ |
| 5 - Log Passage | Trials: 7 runs / samples | (none) | (none) | 258.00 | 0.00 | 14,100.00 | 2013 C$ |
| 6 - stilling basin downstream of weir | Trials: 875 runs / samples<br>Physical prototypes: 4 samples | (none) | (none) | 483.00 | 0.00 | 0.00 | 2013 C$ |
| 7 - settling basin | Trials: 58 runs / samples | Decrease Bed load Deposition : 75 % (100 %)<br>Reduce Downstream sourcing : 99 % (100 %)<br>Minimize Production cost: 25000 $per unit (100 %) | (none) | 280.00 | 0.00 | 3,460.00 | 2013 C$ |

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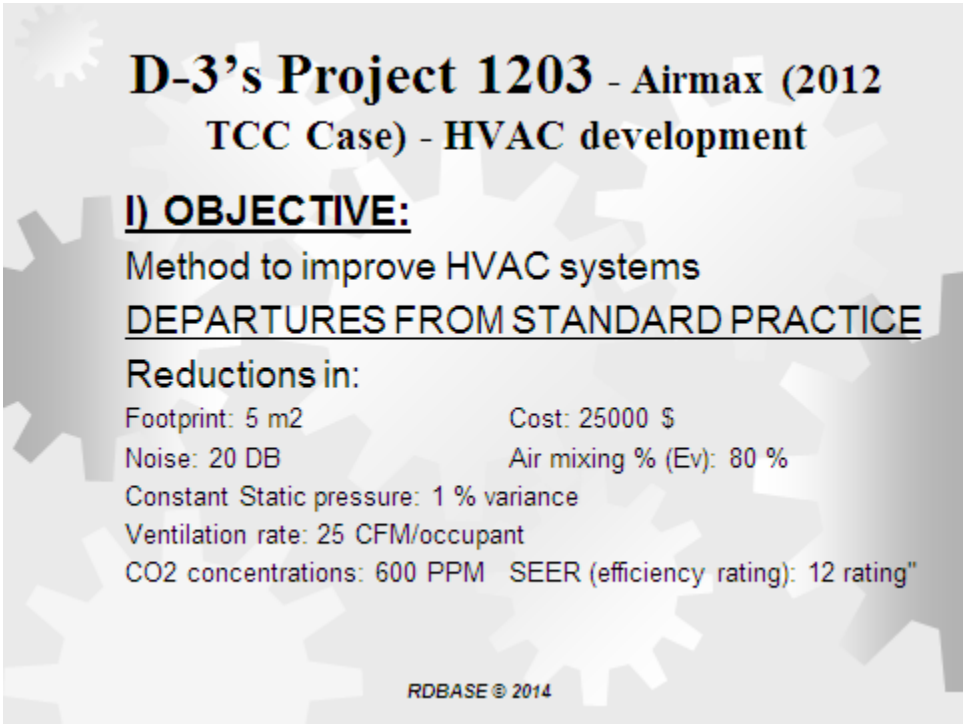
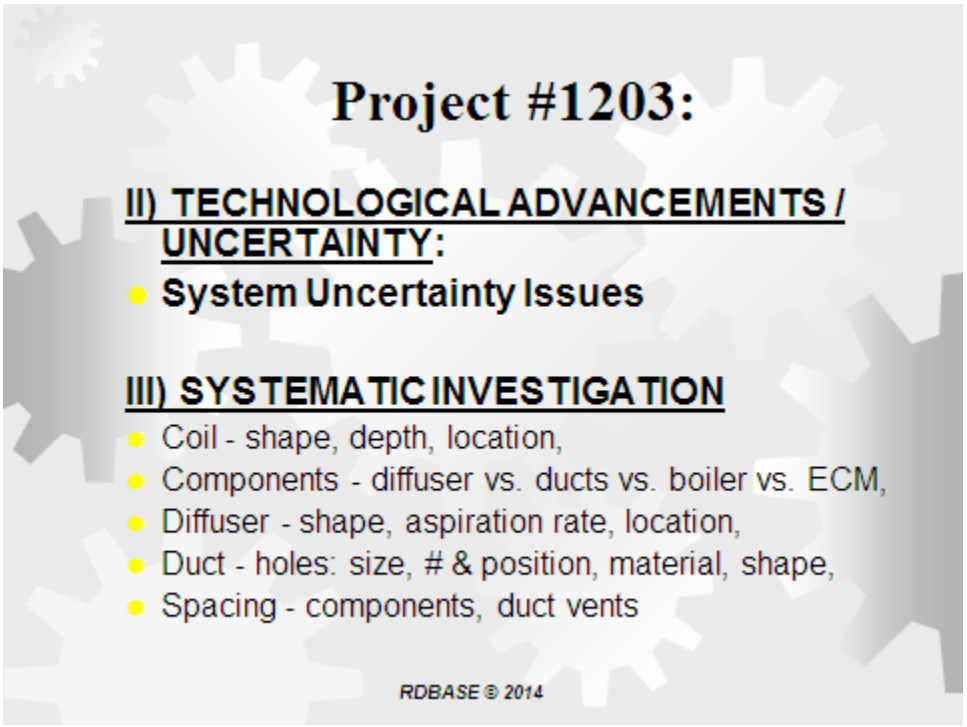
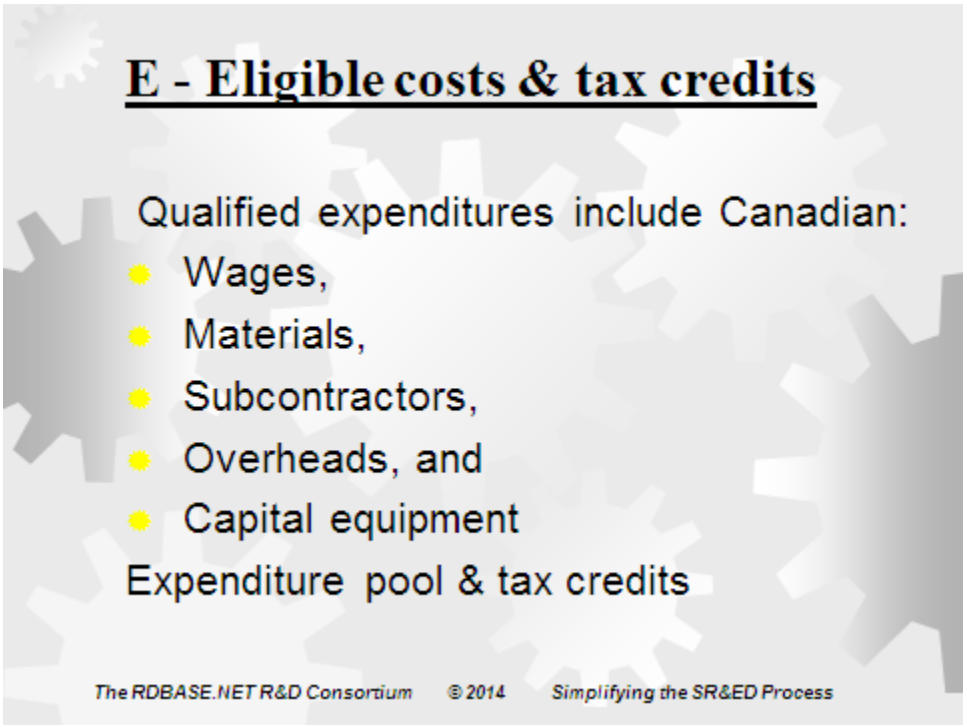
## D.3 Software R&D – International Guidelines (OECD)



## D.4 Software - TAX CASE (ACSIS)

# E Eligible costs & tax credit rates

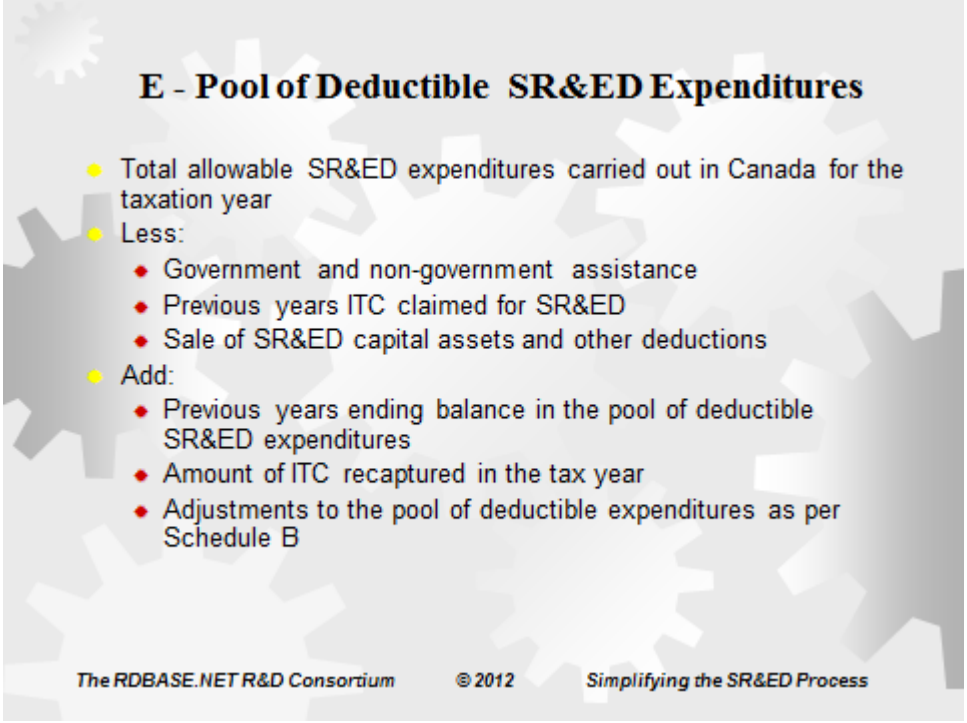



## E.1 Qualified SR&ED expenditures

Qualified SR&ED expenditures include Canadian:

- Wages,
- Materials,
- Subcontractors,
- Overhead and
- Capital equipment

to the extent that they are, "consumed through SR&ED performed in Canada."

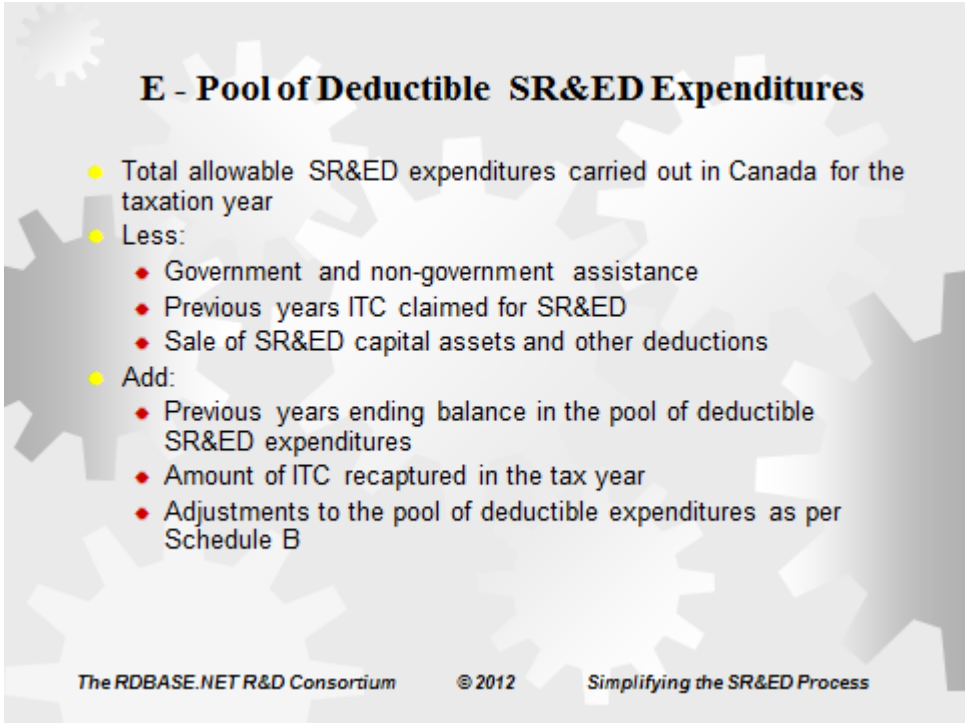



Generally speaking the SR&ED program's requirements for financial information include:

| **Report:** | **Example:** |
|---|---|
| • **SR&ED Man hours/project /person** | ***F*** |
| • **Materials consumed/project** | ***G*** |
| • **Subcontractor Expenditures/project (Including Third-party/University Payments)** | ***H and I*** |

The federal and many provincial governments of Canada provide tax incentives for scientific research and experimental development which creates one of the lowest net research costs in the world.[54] At the federal level, these tax incentives are generally comprised of two separate tax components: SR&ED Tax Deductions and SR&ED Tax Credits.

[54] Department of Finance, October 2007, Consultation Paper - Tax Incentives for Scientific Research and Experimental Development http://www.fin.gc.ca/activty/consult/sred_1e.html accessed August 24, 2008



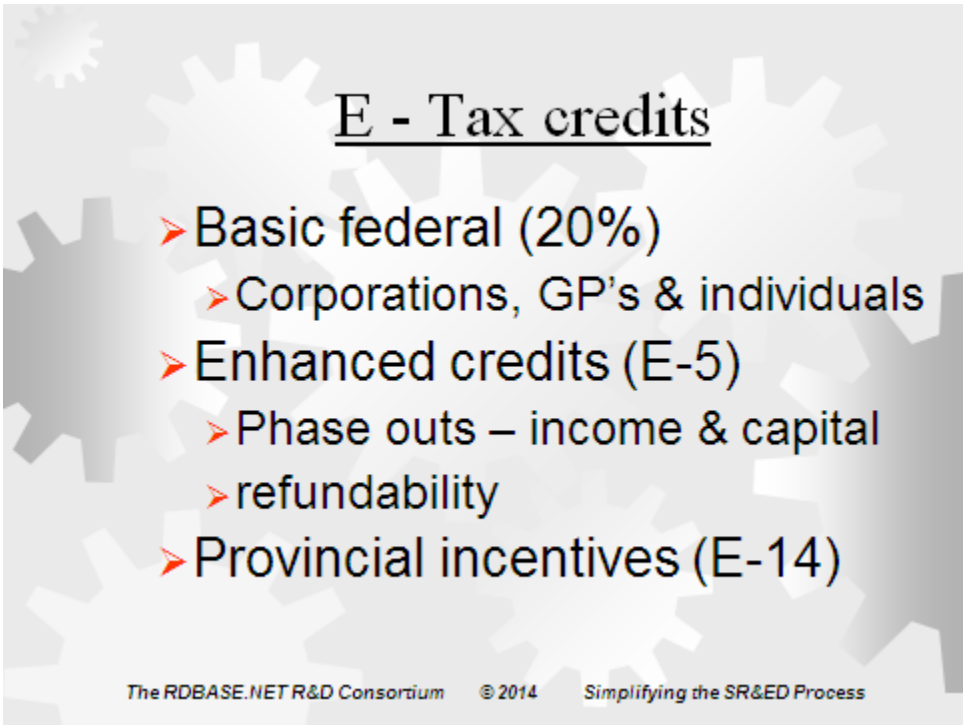

## E.2 Tax Deductions – The SR&ED expenditure pool

Taxpayers are allowed to **fully deduct** eligible current and capital expenditures in respect of SR&ED incurred in the year. There are two key differences between these income tax deductions for eligible SR&ED expenditures and most other types of expenditures:

- SR&ED capital expenditures can be fully deducted in the year incurred – capital expenditures are normally deductible over time through the capital cost allowance system; and

- SR&ED current expenditures can be carried forward indefinitely – current expenditures are normally deductible only in the year incurred, and may create a non-capital loss which can generally be carried back three years or forward from seven to ten years. [see Expenditure pool carry forward mechanics on page T-1.3].

SR&ED expenditures that are not deducted in a year can be carried forward indefinitely. This is accomplished through the use of an SR&ED expenditure pool with an unlimited carry-forward period. SR&ED expenditures incurred in a year are added to the expenditure pool and can be deducted to the extent desired by the taxpayer. The pool balance remaining at the end of a year becomes the opening balance of the subsequent year.




## E.3 Federal SR&ED tax credits

There are currently two rates of federal investment tax credit for SR&ED in Canada:

- a general rate of 20 per cent and
- an enhanced rate of 35 per cent for qualified CCPCs (Canadian-controlled private corporations)

Generally speaking,

- CCPCs have <=50% of their shares controlled by "public corporations" or "foreign parties"
- "qualified" CCPCs are those with
    - prior-year taxable income under $ 400,000 and
    - prior-year taxable capital employed in Canada under $10 million.

## E - Investment Tax Credit Rates - CCPC

- 35% ITC rate on all qualified expenditures up to the expenditure limit
- 20% ITC rate on all qualified expenditures in excess of the expenditure limit

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## E - Investment Tax Credit Rates

Individuals and Certain Trusts

- ITC rate - 20% on all qualified expenditures
- Refundable - 40% of both current and capital ITC

Corporations (other than a CCPC)

- ITC rate - 20% on all qualified expenditures
- No refund

All Other Taxpayers

- ITC rate - 20% on all qualified expenditures
- No refund

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## Federal SR&ED tax credit rates and rates of refundability (%)

| Business Type | Credit Rates | Refundability Rates | |
|---|---|---|---|
| | | Current Expenditures | Capital Expenditures |
| **Unincorporated Businesses** | 20 | 40 | 40 |
| **CCPCs with prior-year taxable income,**<br>**- of $500,000 or less:**<br>Expenditures up to expenditure limit[1]<br>Expenditures over expenditure limit<br>- **between $500,000 and $800,000:**<br>Expenditures up to expenditure limit[2]<br>Expenditures over expenditure limit | <br><br>35<br>20<br><br>35<br>20 | <br><br>100<br>40<br><br>100<br>0 | <br><br>40<br>40<br><br>40<br>0 |
| **CCPCs with prior-year taxable capital employed in Canada between $10 million and $50 million:**<br>Expenditures up to expenditure limit[3]<br>Expenditures over expenditure limit | <br><br>35<br>20 | <br><br>100<br>0 | <br><br>40<br>0 |
| **All Other Corporations**<br>Expenditures up to Dec 31, 2013[3]<br>Expenditures after Dec 31, 2013 | <br>20<br>15 | <br>0<br>0 | <br>0<br>0 |

1. Expenditure limit is generally $3 million per annum for the "associated group of companies" (i.e. all companies under common control).

2. Expenditure limit for CCPCs is phased out for prior-year "group" taxable income between

- $500,000 and $800,000 – see chart over page

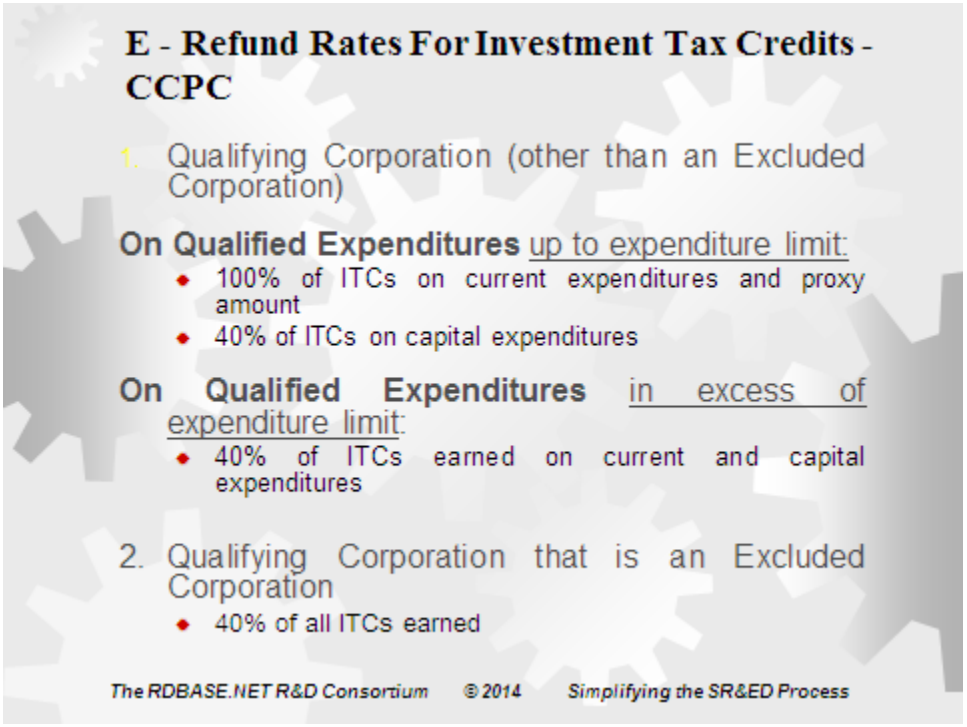
3. Expenditure limit for CCPCs is phased out for prior-year taxable "group" capital employed in Canada between

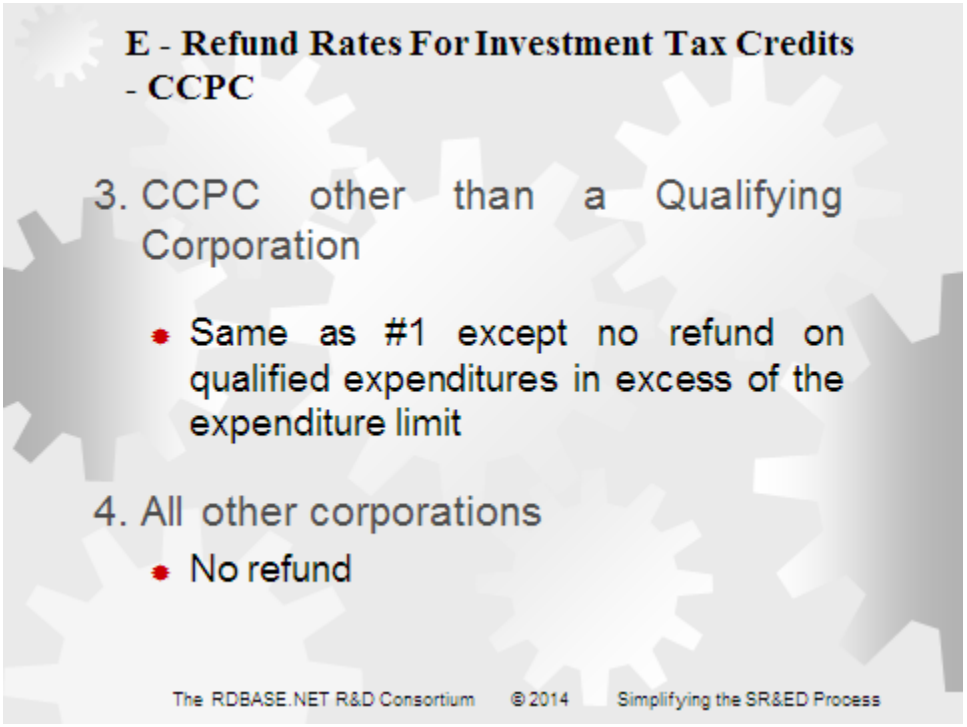
- $10 million and $50 million – see chart over page

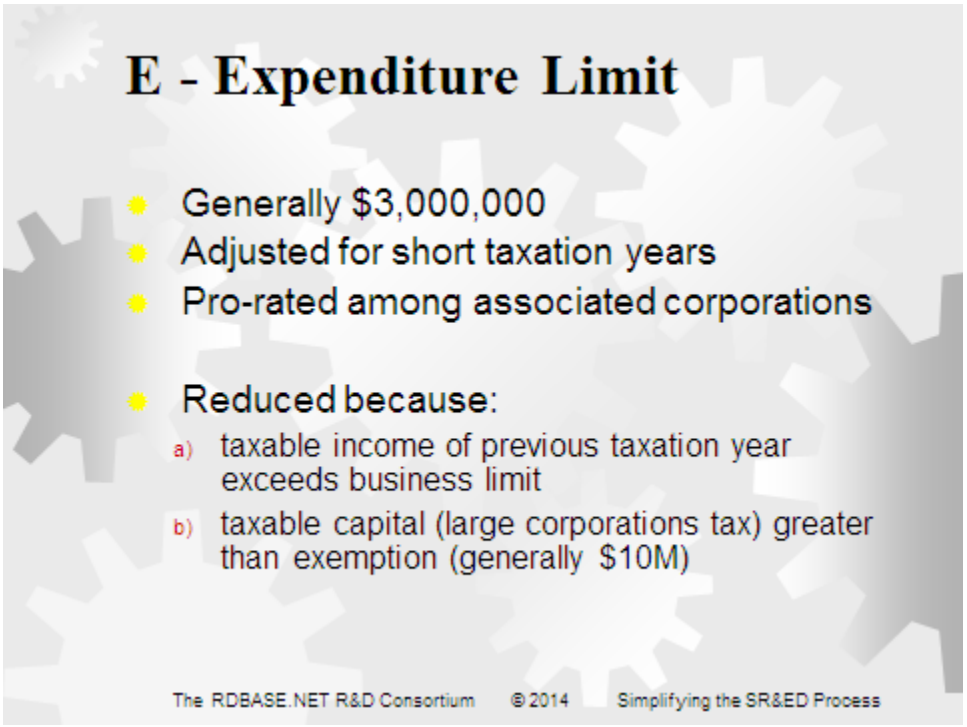
4. ITC rate for large corporations reduced from 20% to 15% after 2013.

## E.3.1 Mechanics to determining expenditure limits for enhanced credits

The specific mechanics of the current phase-out formula are provided in the *Income Tax Act*





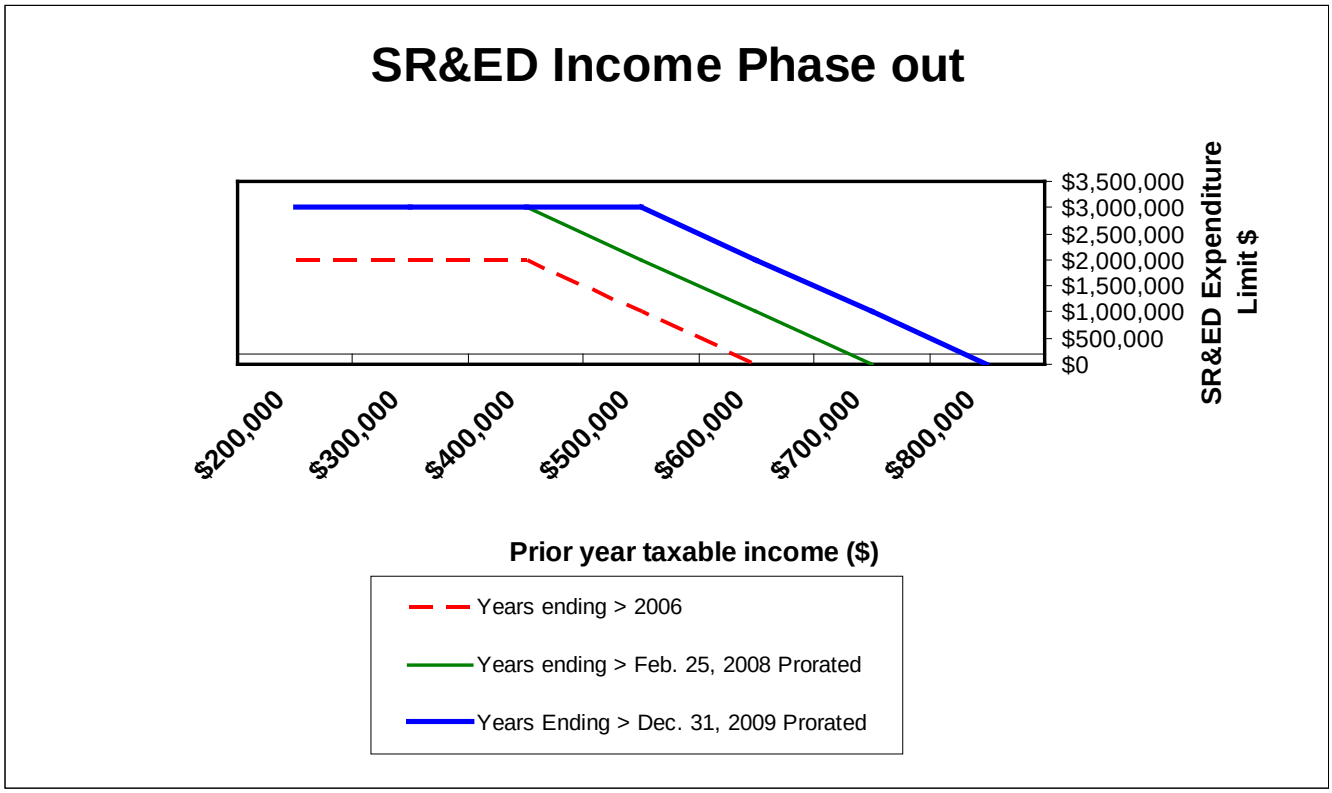

The amount of SR&ED expenditures that can earn tax credits at the enhanced rate is referred to as the expenditure limit. The expenditure limit is generally $3 million for CCPCs with prior-year taxable income of $500,000 or less. This expenditure limit is reduced on the basis of the following two criteria[55].

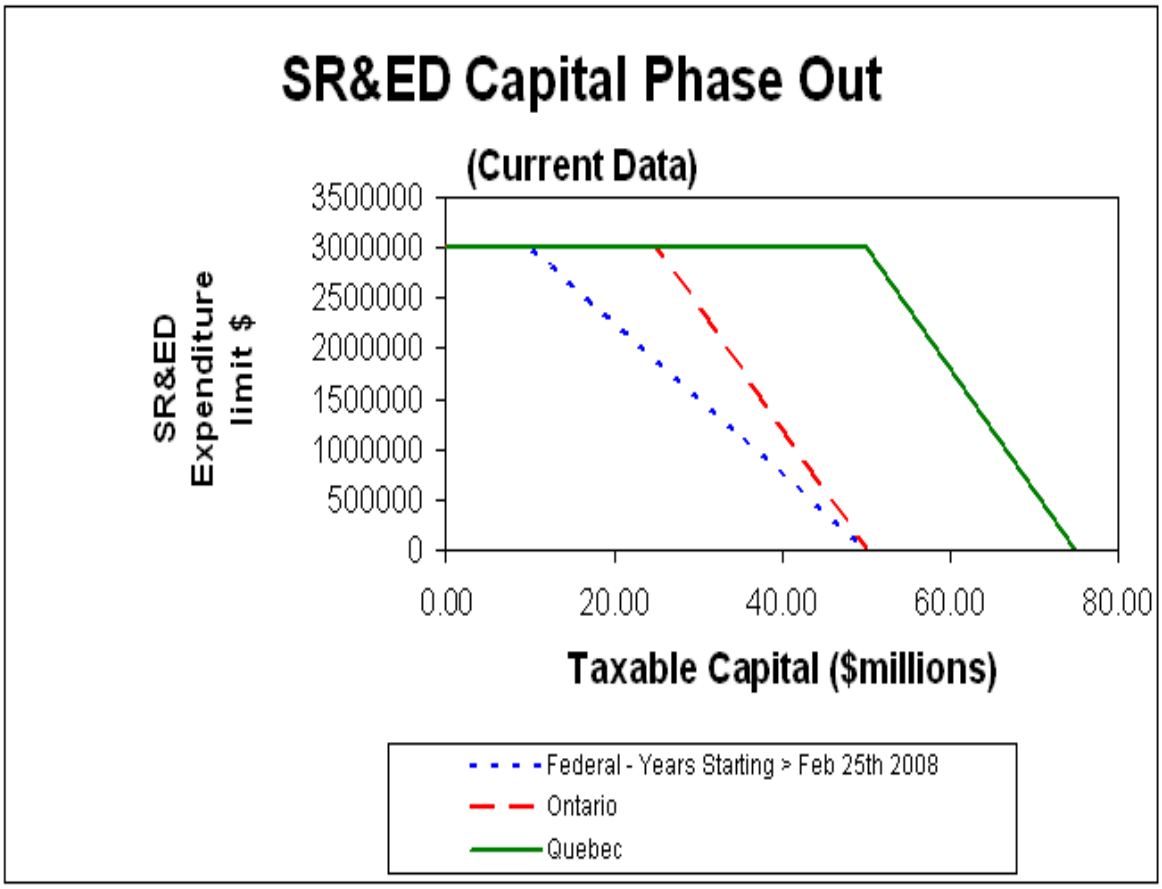
1. First, the expenditure limit is phased out for CCPCs with prior-year taxable income between $500,000 and $800,000.
    - For each dollar by which taxable income for the prior year exceeds $500,000,
    - the SR&ED expenditure limit for the year is reduced by $10.

2. In addition, the expenditure limit is phased out for CCPCs with prior-year taxable capital employed in Canada between $10 million and $50 million.
    - For every $10 by which taxable capital employed in Canada for the prior year exceeds $10 million,
    - the SR&ED expenditure limit for the year is reduced by $0.75 .

In a worst case scenario, the loss of this enhanced status could cost a company $700,000 annually in lost cash flows from the phase-out of the enhanced Federal Investment Tax credits. This loss becomes significantly higher in provinces where additional ITCs are provided to small businesses based on their eligibility for the enhanced Federal credits.

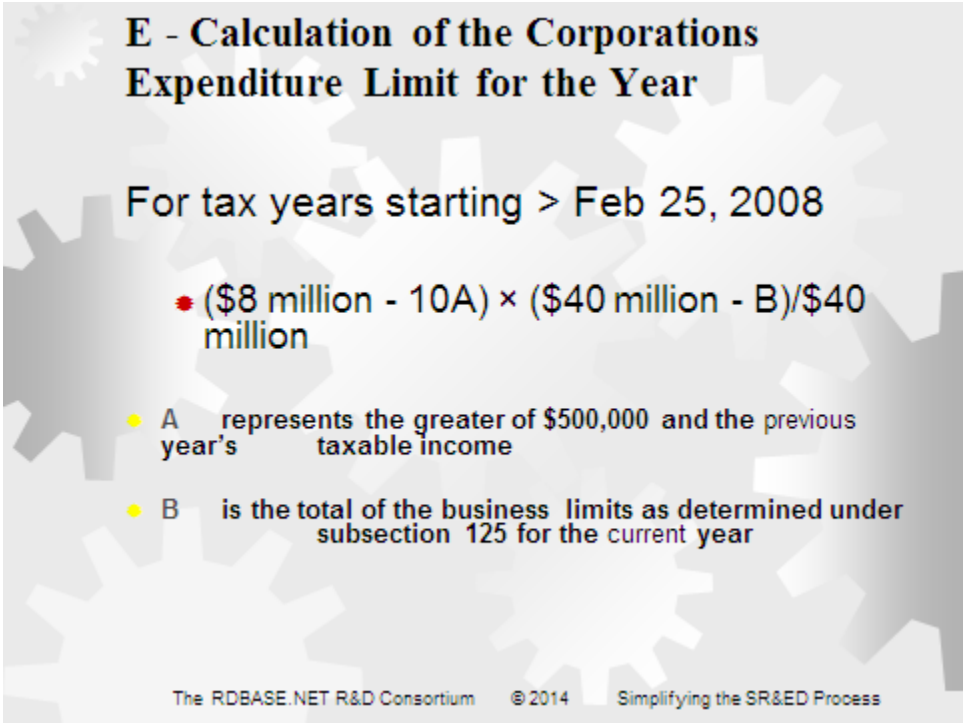
[55]ITA subsection 127(10.2)


SR&ED Income Phase out
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
SR&ED Expenditure Limit $
$200,000
$300,000
$400,000
$500,000
$600,000
$700,000
$800,000
Prior year taxable income ($)
Years ending > 2006
Years ending > Feb. 25, 2008 Prorated
Years Ending > Dec. 31, 2009 Prorated


SR&ED Capital Phase Out
(Current Data)
3500000
3000000
2500000
2000000
1500000
1000000
500000
0
SR&ED Expenditure limit $
0.00
20.00
40.00
60.00
80.00
Taxable Capital ($millions)
Federal - Years Starting > Feb 25th 2008
Ontario
Quebec

**Mechanics of the phase-out formulas**

## E.3.2 2009+ expenditure limit phase-out increased to 500-800K




The proposed legislation[56] provides the following formula;
"…a particular corporation's **expenditure limit for the 2010 and subsequent taxations year** is the amount determined by the formula

**($8 million - 10A) × ($40 million - B)/$40 million where**

**A is the greater of**

(a) $500,000, and

(b) the amount that is

(i) …..the particular corporation's **taxable income** for its immediately **preceding taxation year** …

**B is**

(a) nil, if the following amount is less than or equal to $10 million:

(i) …the amount that is its taxable capital employed in Canada … for its immediately preceding taxation year" or

(b) in any other case, the lesser of $40 million and the **amount by which** the amount determined under subparagraph (a)(i) **[i.e taxable capital]… exceeds $10 million.**

[56] ITA proposed subsection 127(10.2)

## E.4 Income – Expenditure limit phase out example

**E - CCPC Investment Tax Credit on $3M of current expenditures – (assumes taxable capital in prior year was below $10M)**

| 2009 Taxable income (Preceding Year) | 2010 Expenditure Limit | 2010 Current SR&ED Expenditures | 2010 Refundable ITC | 2010 Non-Refundable ITC |
|---|---|---|---|---|
| $400,000 | $3,000,000 | $3,000,000 | $1,050,000 | Nil |
| $550,000 | $2,247,945 | $3,000,000 | $937,192 | $150,411 |
| $700,000 | $ 747,945 | $3,000,000 | $261,781 | $450,411 |
| $800,000 | Nil | $3,000,000 | Nil | $600,000 |

Maximum Efficient Use of Knowledge Corporation © 2010 ME + U = Knowledge

**Example of related mechanics – for $3 million scenario above**

The next 3 pages illustrate:

- how the tax form (Sch. 31)
- phases out the Expenditure limit and related ITCS
- using a threshold of $550,000 prior year taxable income &
- $10 million prior year taxable capital

## E.5 Capital - Expenditure limit Phase out example

### E - CCPC Investment Tax Credit - $3M Current Expenditures

| 2009 Taxable Income (Preceding Year) | 2009 Taxable Capital ($ million) | 2010 Expenditure Limit | Total Credit Earned | Maximum refundable ITC | Non-refundable ITC |
|---|---|---|---|---|---|
| $400,000 | $10.0 | $3,000, 000 | $1,050,000 | $1,050,000 | NIL |
| $400,000 | $20.0 | $2,250,000 | $850,500 | $787,500 | $150,000 |
| $400,000 | $35.0 | $1,125,000 | $768,750 | $393,750 | $375,000 |
| $400,000 | $50.0 | Nil | $600,000 | Nil | $600,000 |
| >=$700,000 | N/A | Nil | $600,000 | Nil | $600,000 |

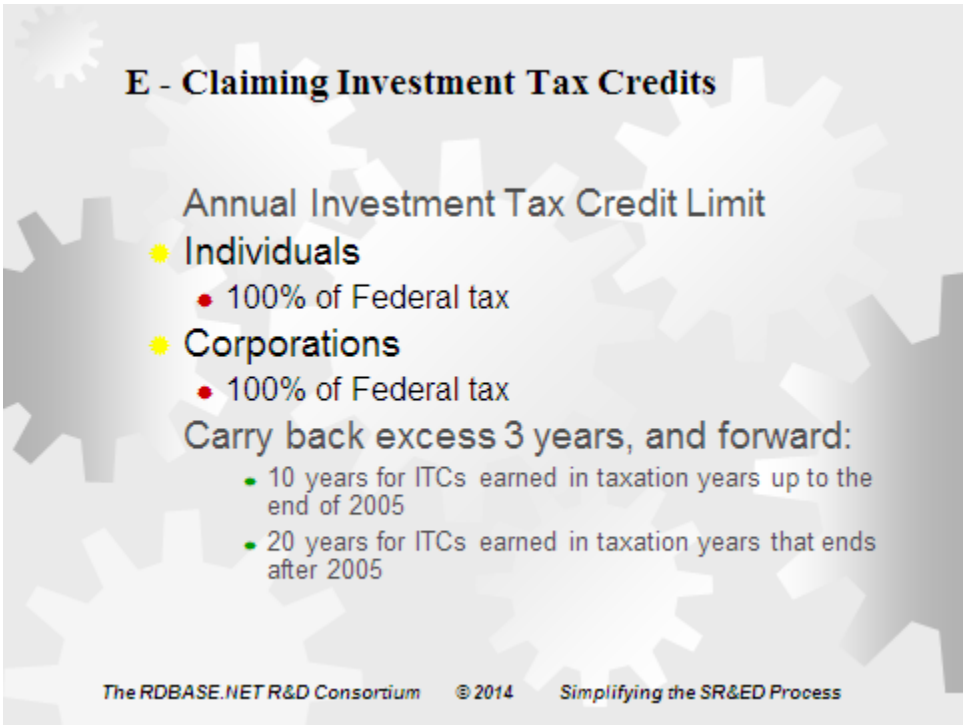
Maximum Efficient Use of Knowledge Corporation © 2010 ME + U = Knowledge

**Example of related mechanics – for $3 million scenario above**

The page above illustrates:

- how the tax form (Sch. 31)
- phases out the Expenditure limit and related ITCS
- using a threshold of $35 million prior year taxable capital &
- $500,000 prior year income.

It should be noted that the calculation is close (but not exactly equal to) that proposed in the legislation.



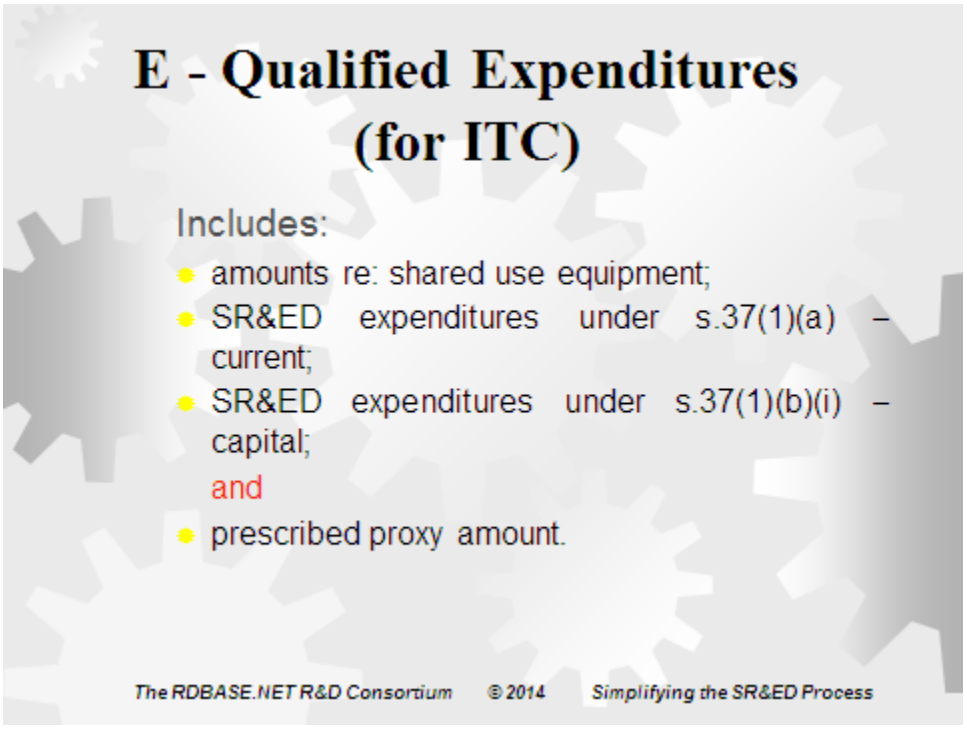

## E.6 Methods of using SR&ED tax credits

Investment tax credits may be deducted from federal taxes otherwise payable. Prior to 2006 unused tax credits can be carried back three years (to the extent that they were not deductible in the year they were earned) or carried **forward 10 years.**

To increase the ability of these companies to use these balances the **2006 budget** extended the non-capital loss and ITC **carry-forward period to 20 years.**[57] This measure will apply to non-capital losses and **ITCs earned for SR&ED in taxation years that end after 2005**.

Corporations can also assign expected refunds of SR&ED tax credits to lenders as security for bridge financing for their operations. Such assignments, however, are not binding on the Crown.

[57] Notices of Ways and Means Motions March 2006 paragraph 28


E - Qualified Expenditures (for ITC)
Includes:
amounts re: shared use equipment;
SR&ED expenditures under s.37(1)(a) – current;
SR&ED expenditures under s.37(1)(b)(i) – capital;
and
prescribed proxy amount.
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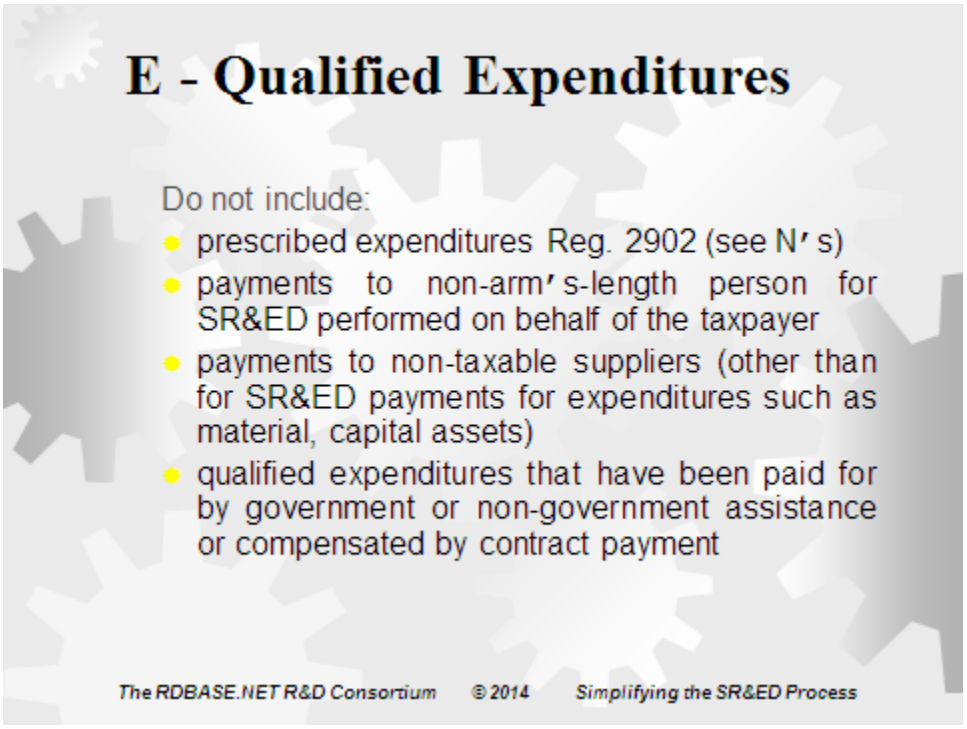
E - Qualified Expenditures
Do not include:
prescribed expenditures Reg. 2902 (see N's)
payments to non-arm's-length person for SR&ED performed on behalf of the taxpayer
payments to non-taxable suppliers (other than for SR&ED payments for expenditures such as material, capital assets)
qualified expenditures that have been paid for by government or non-government assistance or compensated by contract payment
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### E.6.1 Inclusion of SR&ED tax credits in current and future taxable income

Both federal and provincial SR&ED ITCs are subsequently included in the calculation of federal taxable income as well as that of each of the provinces, except for the provinces of Ontario and Quebec. The taxation of SR&ED investment tax credits from current expenditures is performed through the SR&ED expenditures pool. Provincial credits are taxed on an accrual basis however, federal credits are only taxed the year after their use.

To the extent that an investment tax credit deducted or refunded may reasonably be considered to relate to a shared use credit on capital equipment, it will reduce the capital cost[58] of the separate prescribed class of the property acquired.

The mechanics of this add back to the expenditure pool are illustrated on working paper T-1.3 of the case study. In this example the company had no prior year investment tax credits and therefore the pool has only been reduced by the current year provincial credits. In this case, the company has also elected to defer a large amount of the expenditure pool in order to avoid the creation of "non capital losses" for the purposes outlined above.

## E.7 Administration of the SR&ED tax incentives – Federal vs. Provincial

The CRA is responsible for administering the SR&ED tax incentives provided by the federal government and, in accordance with the Tax Collection Agreements, the tax incentives for research and development provided by Manitoba, New Brunswick, Newfoundland and Nova Scotia.

Ontario and Quebec do not have agreements with the federal government for administering their provincial corporate income tax and, accordingly, administer their own research and development tax incentives.

A summary of the Federal and Provincial incentives is provided on the next page. Specific details with respect to additional Ontario and Quebec legislation have also been outlined in this section.

### E.7.1 Overview of Federal & Provincial credits

Currently all but one province and two territories offer additional tax incentives to attract SR&ED work. The resulting effects on claimants can be illustrated by the following tables.

[58] under paragraph 13(7.1)(e)

| Qualified CCPC* | | | | |
|---|---|---|---|---|
| Provinces & Territories | Prov./Terr. Credit | Prov./Terr. Refundable? *(Federal is refundable)* | Federal Credit Refundable (reduced by Prov./Terr. credit) | Combined |
| AB | 10% | Yes | 31.50% | 41.50% |
| BC | 10% | Yes | 31.50% | 41.50% |
| MB | 20% | No | 28.00% | 48.00% |
| NB | 15% | Yes | 29.75% | 44.75% |
| NL | 15% | Yes | 29.75% | 44.75% |
| NS | 15% | Yes | 29.75% | 44.75% |
| **ON** | **10%** | **Yes** | | |
| **ON** | **4.5%** | **No** | **29.93%** | **44.43%** |
| PEI | 0% | N/A | 35.00% | 35.00% |
| QC | 20% | Yes | 28.00% | 48.00% |
| SK | 15% | No | 29.75% | 44.75% |
| YK | 15% | Yes | 29.75% | 44.75% |
| NWT | 0% | N/A | 35.00% | 35.00% |
| NV | 0% | N/A | 35.00% | 35.00% |

| Other companies (non Qualified CCPC) | | | | |
|---|---|---|---|---|
| Provinces & Territories | Prov./Terr. Credit | Prov./Terr. Refundable? *(Federal is non-refundable)* | Federal Credit Non-refundable (reduced by Prov./Terr. credit) | Combined |
| AB | 10% | Yes | 18% | 28% |
| BC | 10% | No | 18% | 28% |
| MB | 20% | No | 16% | 36% |
| NB | 15% | Yes | 17% | 32% |
| NL | 15% | Yes | 17% | 32% |
| NS | 15% | Yes | 17% | 32% |
| **ON** | **10%*** | **Yes** | | |
| **ON** | **4.5% **** | **No** | **17.10%** | **31.60%** |
| PEI | 0% | N/A | 20% | 20% |
| QC | 10% | Yes | 18% | 28% |
| SK | 15% | No | 17% | 32% |
| YK | 15% | Yes | 17% | 32% |
| NWT | 0% | N/A | 20% | 20% |
| NV | 0% | N/A | 20% | 20% |

Notes to the above tables:

1) The federal tax credit is reduced by the provincial tax credit receivable.
2) Ontario and Quebec offer additional SR&ED incentives, which are not covered within this table.

## E.8 Lists of SR&ED schedules by province – see section Y at back or course:

For simplicity the current case study illustrates the interaction of the provincial incentives assuming that all costs were incurred in one province (Ontario) however, the mechanics of the calculations would similar for each of the other provinces (expect Quebec) as follows:

- Claim Qualified (Current & Capital) expenditures incurred in the province (T661 line #'s 557 + 558 - not reduced by the provincial ITCs themselves - see WP T-1.4)
- Deduct resulting government assistance to reduce the (T661 line #'s 430 (pool) & 534/536 (qualified expenses) - see WP T-1.3)
- Claim the related ITC via the province (see forms in section Y)

| **Province** | | **Form** |
|---|---|---|
| Quebec | a's | RD-222-V Deduction Respecting SR&ED |
| | b's | RD-1029.7-T Tax Credit for Salaries and Wages (R&D) |
| | c's | RD-1029.8.6-T Tax Credit for University Research |
| | | Additional schedules available for pre-competitive research |
| BC | | Schedule 666 |
| MB | | Schedule 380 |
| NB | | Schedule 360 |
| NL | | Schedule 301 |
| NS | | Schedule 340 |
| ON | | OITC - See case study (T-5-7's) |
| SK | | Schedule 403 |
| YK | | Schedule 442 |
| NWT | | NONE |
| NV | | NONE |
| PEI | | NONE |
| AB | | |

# SR&ED changes in March 29 ,2012 Federal budget

| | Year change proposed to start (prorate) | 2012 current | 2013 | 2014 full effect |
|---|---|---|---|---|
| 1) | Federal ITC rate (non-CCPC) | 20 | 20 | 15 |
| 2) | Subcontractor costs (% eligible) | 100 | 80 | 80 |
| 3) | Rate to calculate proxy (overhead) | 65 | 60 | 55 |
| 4) | Capital equipment (% eligible) | 100 | 100 | 0 |

## E.9 NWMM – Federal Budget, March 29, 2012

**Scientific Research and Experimental Development Program**[59]

That,

(*a*) for taxation years that end after 2013, the reference to "20%" in paragraph (*a.1*) of the definition "investment tax credit" in subsection 127(9) of the Act be replaced with "15%", except that for taxation years that include January 1, 2014, it shall be read as a reference to the percentage that is the total of

(i) 20% multiplied by the proportion that the number of days that are in the taxation year and before 2014 is of the number of days in the taxation year, and

(ii) 15% multiplied by the proportion that the number of days that are in the taxation year and after 2013 is of the number of days in the taxation year;

(*b*) for taxation years that end after 2013, the reference to "15%" in subsection 127(10.1) of the Act be replaced with "20%", except that for taxation years that include January 1, 2014, it shall be read as a reference to the percentage that is the total of

(i) 15% multiplied by the proportion that the number of days that are in the taxation year and before 2014 is of the number of days in the taxation year, and

(ii) 20% multiplied by the proportion that the number of days that are in the taxation year and after 2013 is of the number of days in the taxation year;

[59] Federal Budget 2012 Notice of Ways & Means Motion http://www.budget.gc.ca/2012/plan/anx4-2-eng.html

(*c*) for expenditures incurred after 2012, subparagraph (*a*)(ii) of the definition "qualified expenditure" in subsection 127(9) of the Act be amended to include only 80% of an expenditure that

(i) would otherwise be included under that subparagraph,

(ii) is for scientific research and experimental development performed for or on behalf of the taxpayer by another person or partnership with whom the taxpayer deals at arm's length, and

(iii) has been reduced to exclude any amount of a capital nature incurred by the other person or partnership in the performance of the scientific research and experimental development;

(*d*) the percentage at which the prescribed proxy amount, for a taxation year, referred to in paragraph

(e) of the definition "qualified expenditure" in subsection 127(9) of the Act is calculated be, for taxation years that end after 2012, the percentage that is the total of

(i) 65% multiplied by the proportion that the number of days that are in the taxation year and before 2013 is of the number of days in the taxation year,

(ii) 60% multiplied by the proportion that the number of days that are in the taxation year and in 2013 is of the number of days in the taxation year, and

(iii) 55% multiplied by the proportion that the number of days that are in the taxation year and after 2013 is of the number of days in the taxation year;

and

(*f*) for expenditures made by a taxpayer after 2013,

(i) section 37 of the Act be amended to exclude an expenditure in respect of the use or the right to use property that would, if it were acquired by the taxpayer, be capital property of the taxpayer,

(ii) paragraph 37(1)(*b*) of the Act be repealed,

(iii) subparagraphs (*a*)(i) and (iii) of the definition "qualified expenditure" in subsection 127(9) of the Act be repealed, and

(iv) section 127 of the Act be amended to exclude from the SR&ED qualified expenditure pool an expenditure in respect of the use or the right to use property that would, if it were acquired by the taxpayer, be capital property of the taxpayer.

# F SR&ED Labour Cost Summary

## F SR&ED Labour Cost Summary

| # | Project | | Wages | (Specified Employee) Wages | Total Wages | |
|---|---|---|---|---|---|---|
| 1202 | Jentel (2011 TCC Case) with "What if" analysis | | $ 65,000 | $ 35,000 | $ 100,000 | |
| 1201 | NW Hydraulics (1998 TACC Case) Develop divide wall for diversion dam | | $ 75,000 | $ 25,000 | $ 100,000 | ***D-0*** |
| 1203 | Airmax (2012 TCC Case) - HVAC development | | $ 41,447 | $ 47,491 | $ 88,938 | |
| 1301 | HVAC - How cost contraints affect a project | * | $ 62,073 | $ 42,510 | $ 104,582 | |
| | ASA adjustment | ***F-7*** | $ 6,480 | $ - | $ - | |
| | | | **$ 250,000** | **$ 107,491** | **$ 357,490** | |

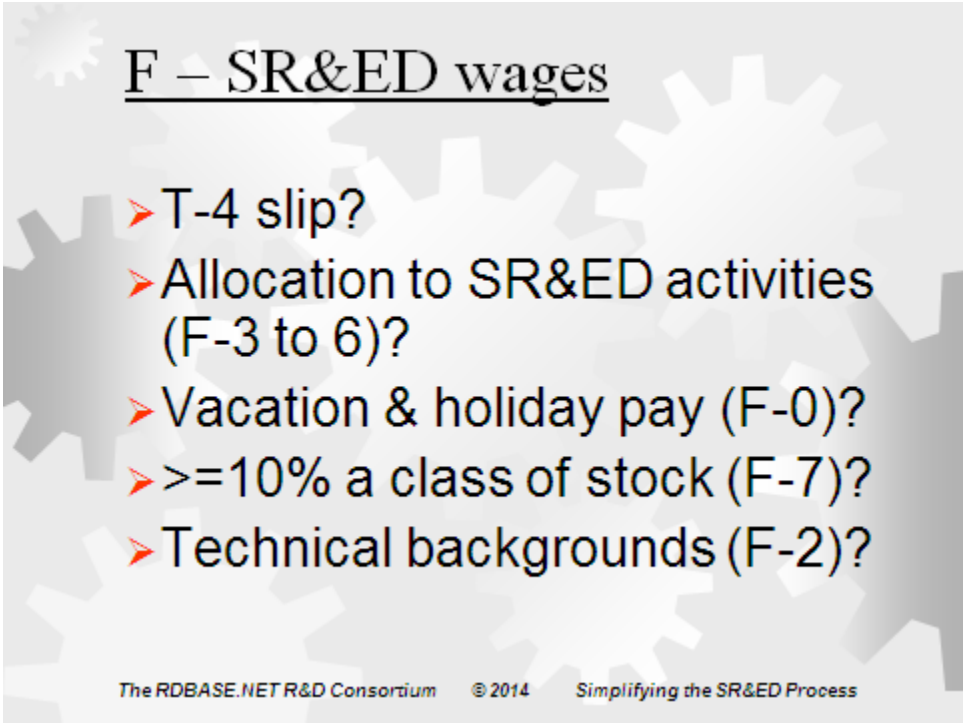
**Notes:**
The CRA requires timesheet documentation from the company's accounting records. Ideally the information would provide evidence of regular time accumulations with respect to eligible activities.

*** For EACH project**

**Example - project 1101 allocation**

| Employee | Nature of Work | SR&ED Hours *from time system* | Hourly Wage ** | SR&ED Labour Cost | |
|---|---|---|---|---|---|
| Specified employees: | | | | | |
| Issac Newton | Design | 180 | $ 48.00 | $ 8,638 | |
| Al Einstein | Engineering | 521 | $ 65.00 | $ 33,872 | |
| | | | | $ 42,510 | * |
| Other employees: | | | | | |
| Al Nobel | Prototyping | 880 | $ 36.00 | $ 31,680 | |
| Lou Pasteur | Materials testing | 179 | $ 27.00 | $ 4,840 | |
| Nick Tesla | Prototype testing | 255 | $ 33.50 | $ 8,543 | |
| Prototype line | Prototyping | 126 | $ 135.00 | $ 17,010 | |
| | | | | $ 62,073 | * |

** The definition of "salary or wages" (ITA subsection 248(1)) includes vacation and holiday pay. Claimants should ensure that their wage allocations include these amounts.


F – SR&ED wages
T-4 slip?
Allocation to SR&ED activities (F-3 to 6)?
Vacation & holiday pay (F-0)?
>=10% a class of stock (F-7)?
Technical backgrounds (F-2)?
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## F.1. Decision tree SR&ED labour issues

| | Question: | Issue: | Result(s) if NO | ITA section | See WP |
|---|---|---|---|---|---|
| **if YES** | | | | | |
| 1 | Does the employee receive a T4 slip? | employee vs. subcontractor status | treat as subcontractor payment | 248(1) | ***I-'s*** |
| 2 | Can you allocate labour hours to specific SR&ED activities? | timesheet support | need to correlate man hours claimed with resolution of specific technical uncertainties | Regs. 2900(2)(b) & 2900(4) | ***F-4*** |
| 3 | Do cost allocations include estimates for vacation & holiday pay? | ITA definition of salary & wages | ensure labour cost base contemplates the full cost of R&D labour | 248(1) | ***F-3/ F-7*** |
| 4 | Do you or a related person own >=10% of any class of stock? | specified employee status | limits on R&D labour & salary base for proxy calculation | 37(9.1) | ***F-6*** |
| 5 | Are all amounts paid within 180 days after the fiscal year-end? | deferred inclusion | it deems the expense not to have been incurred in the year, but rather in the year it is paid. Note: deferred salary and wages are not included in proxy overhead calculation. | 78(4) | ***L-0*** |
| 6 | Have you filed CRA Schedule 32 (aka form T661)? | claim for R&D wages | complete R&D wages portion of the claim | 37(11) | ***T-1's*** |

# Employee List

R&D Base demo

| Employee Name | Designations | T661 Class* | Employment Period | | Practicing Since | Discipline |
|---|---|---|---|---|---|---|
| ADMINISTRATOR, RDBASE | | C | 2012-09-01 | 2015-09-02 | | |
| Einstein, Al | PhD. | A | | | 1938 | Physics |
| Frail, Debbie | | A | 2013-10-01 | | | |
| Kilburn, Colin | BSc. | A | | | 1995 | |
| Newton, Isaac | MASc. | A | | | 1974 | Mechanical engineering |
| Nobel, Al | P.Eng. | A | | | 1989 | Chemical Engineering |
| Pasteur, Lou | BSc. | A | | | 1996 | Chemistry |
| Prototype line 1, Heating elements | PHD | D | 2000-12-14 | | 1985 | Information Technology |
| Prototype Line 2, Motors | n/a | D | | | | n/a |
| Rutter, John Nicholas | Master of Mathematics | A | | | 2000 | Computer science |
| Tesla, Nick | CET | B | | | 2002 | Electrical technology |
| Tuli, Raja | BASc. | A | 2013-12-01 | | 1988 | Computer Engineering, 100+ patents held |
| Wierzbica CRA RTA, Ted | PhD | A | 2013-11-01 | | 1980 | Metrology |

* Definitions of T-661 employee classifications:

| | |
|---|---|
| Class A | Scientists and engineers (B.Sc. Or equivalent) |
| Class B | Technologists and technicians (CET, etc.) |
| Class C | Non technical, administrative staff (CGA, etc.) |
| Class D | Other (e.g. prototype labor) |

# SR&ED Salary & Wage inclusions

| | | Specified employees* | Non-specified employee | ITA section |
|---|---|---|---|---|
| **1** | **R&D labour for the:** | | | |
| | ***a)*** **R&D expenditure pool (for deduction), &** | | | 37(1) |
| | ***b)*** **Qualified expenses (for ITC calculation)** | | | 127(9) |
| | **Type of expense:** | | | |
| | **· salary & wages** | **In** | **In** | (5-8) |
| | **· bonuses or profit based $** | **Out** | **In** | 37(9) & 5(1) |
| | **· Expenses paid > 180 days** | **Out** | **Out** | 78(4) |
| | **Maximum** | **5 x [YMPE]** | **N/A** | 37(9.1) |
| **2** | **Salary base for proxy amount (for ITC calculation)** | | | |
| | **Type of expense:** | | | |
| | **· Income from employment** | **In** | **In** | 5 to 7 |
| | **· bonuses/profit based $** | **Out** | **Out** | 5(1) & 37(9) |
| | **· Expenses paid > 180 days** | **Out** | **Out** | 78(4) |
| | **Maximum** | **2.5x [YMPE]** | **N/A** | Reg. 2900(7) |

| SR&ED wages - annual limits | | | Specified employees | | Non-specified |
|---|---|---|---|---|---|
| **SR&ED labour:** | | **YMPE** | **Wages** | **Proxy Base** | |
| 2014 | $ | 52,500 | $ 262,500 | 131,250 | No limit |
| 2015 | $ | 53,600 | $ 268,000 | 134,000 | No limit |
| 2016 | $ | 54,900 | $ 274,500 | 137,250 | No limit |

**'*Specified employees own >=10% any class of stock (or related to such shareholders).**

## F.1 SR&ED labour hours and allocation methods

### F.1.1 Requirement to keep reasonable" time records

For audit purposes, the CRA requires that the company keep a detailed account of SR&ED time allocations for each individual claimed. Generally, they request that this be performed either via regular time sheets and/or completion of activity costs templates on a regular (at least monthly) basis.

We recommend using a cost tracking methodology that is designed to ensure that all labour allocations for each employee as well as material and subcontractor payments can be correlated to specific uncertainties and their related activities.

As previously mentioned, the main criteria in determining whether any activity is eligible SR&ED is whether it was required in order to remove a technical uncertainty. These issues become more complicated if you choose to use the proxy" method of overhead allocation (described on the following pages and in section ***N***).

The chart on the following page provides a detailed breakdown of the CRA's positions and related *Income Tax Act* sections supporting treatment of various types of SR&ED labour.

## F.1.2 CRA guidance - whether directly engaged in SR&ED[60]

| Duty | Direct SR&ED | Eligible Overhead expenditures | Non-SR&ED expenditures |
|---|---|---|---|
| Experimentation and analysis | x | | |
| Technical-support work (under paragraph 248(1)(d) of the definition of SR&ED | x | | |
| Non-specialized employees:<br>■ operating a machine for the purposes of an experiment that requires the use of this machine<br>■ feeding raw materials into a machine<br>To be eligible, the non-specialized employee's work must be supervised by staff with scientific or technological qualifications. | x | | |
| Direct supervision of employees performing experimentation and analysis (directing the ongoing SR&ED work) | x | | |
| Technological planning for ongoing SR&ED projects you claimed in the year, such as planning for:<br>■ assignment of technological personnel<br>■ job priorities<br>■ development of technological strategies<br>■ quality of material used | x | | |
| Long-term planning for future SR&ED projects, for example:<br>■ planning for prototype vs. commercial scale<br>■ project selection | | x | |
| Human-resource activities such as technological staffing | | x | |
| ***SR&ED contract administration (technical input only)*** | | x | |
| Technological training for ongoing SR&ED projects you claimed in the year | | x | |
| Administrative training | | | x |
| Technological documentation for internal use | x | | |
| Preparation of user manuals | | | x |
| Clerical and other administrative support (e.g., in personnel, accounting, maintenance, and purchasing) if the functions performed are non-technological and aid the ongoing SR&ED you claimed in the year, and if the salaries and wages of the employees providing the support are:<br>■ directly related and incremental to the prosecution of SR&ED<br>■ not directly related and not incremental to the prosecution of SR&ED | | x | <br><br><br><br>x |
| Other support (e.g., equipment maintenance or repairs) if the functions performed are non-technological and aid the ongoing SR&ED work you claimed in the year, and the salaries and wages of the employees providing the support are directly related and incremental to the prosecution of SR&ED | | x | |
| Preparation of Form for SR&ED projects carried out in the current year | | x | |
| ***Sales and marketing activities*** | | | x |

*Source: Canada Revenue Agency form T4088(E) Rev. 04 - Claiming Scientific Research and Experimental Development Guide to Form T661.*

[60] Source: Canada Revenue Agency form T4088(E) Rev. 04 - Claiming Scientific Research and Experimental Development Guide to Form T661.

## F.1.3 Specified Employees

Generally speaking, a specified employee includes any employee who owns 10 per cent or more of any class of stock of the Corporation, or any individual who is related to such an employee. In other words, this may include the president's son or daughter, where the president is a specified shareholder.

### F.1.3.1 Implications for specified employees

Being deemed a specified employee results in certain restrictions on SR&ED labour inclusions and limits. The major effects are:

**a) Limit on SR&ED wages**

- The maximum amount of salaries and wages for a specified employee is limited to 500% of YMPE (yearly maximum pensionable earnings)[61].

**b) Limit on SR&ED proxy amount**

- The maximum amount of salaries and wages for a specified employee for calculation of the salary base used in the proxy allocation cannot exceed 250% of YMPE.

**c) Exclusion of bonuses from SR&ED wages**

- Bonuses or remuneration based on profits should not be included in the R&D hourly rate calculation or in the R&D expenditure pool[62].

The amount which may be claimed as SR&ED expenditures in respect of salary or wages incurred for a specified employee is the amount allocated among associated corporations. The amount may not exceed five times the year's maximum pensionable earnings (YMPE) for the calendar year in which the taxation year-ends.

[61] as defined in ITA Regulation 8500(1)
[62] as stated in ITA subsection 37(9) & Regulation 2900(9)

## F - Example Of Labour Cost Calculation

Hourly rate = (A+B+C)/D

A = annual base salary including statutory holidays & vacation pay

B = bonus (unless specified employee)

C = eligible taxable benefits incurred by employer

D = hours available to work

*The RDBASE.NET R&D Consortium © 2014 Simplifying the SR&ED Process*

## F - SR&ED Wages for Specific Employees

- Limited to 5 times YMPE (5 x $ 53,600 = 268,000) for 2015
- Example - owner manager working 80% on eligible projects
  - Annual Salary (includes taxable benefits) of $400,000 limited to SR&ED wages $ 268,000 in 2015.
- SR&ED wages before the limit = 80% x $400,000 = $320,000
- The maximum amount of eligible wages for this specified employee is $268,000.

*The RDBASE.NET R&D Consortium © 2014 Simplifying the SR&ED Process*

**The YMPE is set annually under the Canada Pension Plan**

Form for allocation of SR&ED wages of specified employees

Form T-1174 – "Agreement among associated corporations to allocate salary wages of specified employees for SR&ED." As the title of this form indicates it is used to ensure that the total claims made for:

- SR&ED salary and wages do not exceed 5 times, and
- proxy allocations do not exceed 2 1/2 times,

YMPE (yearly maximum pensionable earnings) for each of the specified employees.

## F.2 Recommend details for SR&ED timesheet templates

| Project details | |
|---|---|
| # | Name |

| FISCAL YEAR ENDED: | |
|---|---|

**Employee Man-Hours & Cost Summary**

| Employee details | | | Linking work to SR&ED | | | | SR&ED wages | |
|---|---|---|---|---|---|---|---|---|
| First Name | Last Name | Hours Worked | Type of work Drop down | Variables of research (If possible link work to "Variables" of uncertainty) | Comments | *location of work* | *hourly $ rate* | *SR&ED $* |
| | | | 1) Design<br>2) Testing<br>3) Programming<br>4) Supervision | *OPTIONAL - Link to the variables in the project* | *OPTIONAL - should be completed by the more senior people if possible.* | | | |
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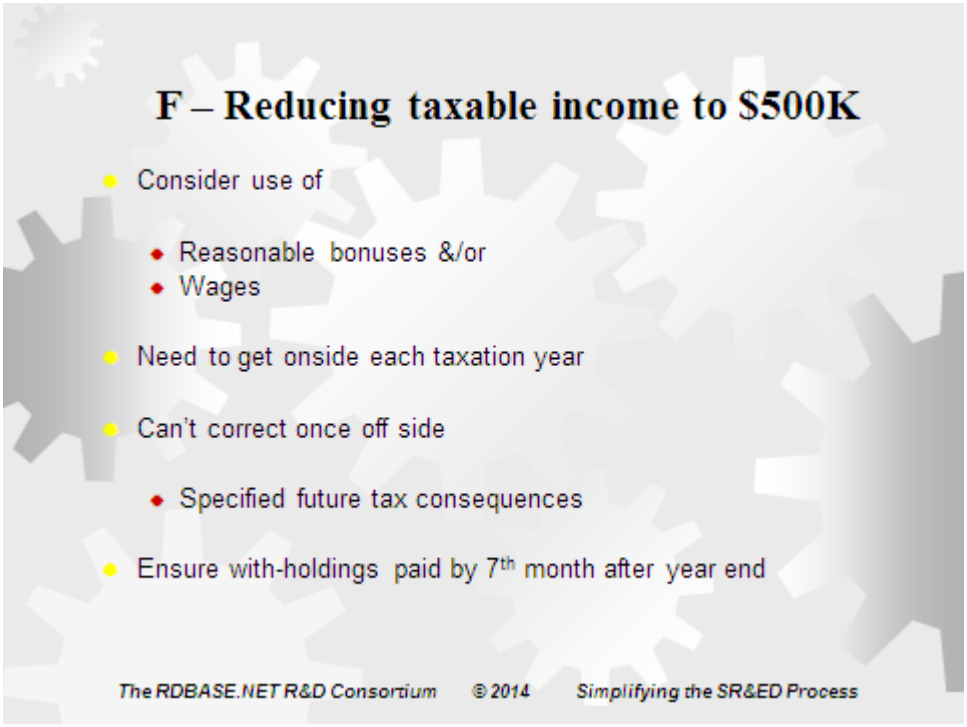
| NEED TOTALS BY STATE / PROVINCE | | | | | | | | $ - |

## F.3 SR&ED planning – keeping income <$500,000




The amount of SR&ED expenditures that can earn **"refundable" tax credits at the enhanced rate is referred to as the "expenditure limit**." The expenditure limit is generally $3 million for CCPC's with prior-year taxable income of $500,000 or less.

This **expenditure limit and refundability of the credits is reduced or "phased out"[63] for CCPC's with prior-year taxable income between $500,000 and $800,000**. In a "worst case" scenario, the loss of this enhanced status could cost a company over $1,000,000 annually in lost cash flows. As a result most CCPC's will "bonus" out year end profits to achieve these levels.

## F.4 Reasonableness of Shareholder/Manager Remuneration[64]

At the 2001 Canadian Tax Foundation conference, the CRA discussed its long-standing policy on when shareholder /manager remuneration will be considered reasonable[65] (deductible) for tax purposes.

The CRA stated it, "**would not challenge the reasonableness of remuneration that was paid by a Canadian-controlled private corporation (CCPC) to an individual who is a shareholder of the corporation, provided the individual is active in the business operations and resident in Canada**."

[63] ITA subsection 127(10.2) - For each dollar by which taxable income for the prior year exceeds $300,000, the SR&ED expenditure limit for the year is reduced by $10.
[64] Income Tax - Technical News No. 30, May 21, 2004
[65] for purposes of section 67 of the Income Tax Act (the Act)

The CRA clarified, that **this policy would NOT apply where, "the income used to pay the remuneration is not derived from the normal business operations of the CCPC**." This creates two levels of potential problems:

## 1) Eligible payments from the CCPC

Includes salary and wages only (no management fees, or payments to retirement plans)

## 2) Source of income for the CCPC

Includes active business income and certain "incidental" capital transactions (no investment or passive income)

Question 4

Can you give us some examples of situations that the CRA would consider to be beyond the intent of the policy?

Response 4

> Yes. **We would consider a situation in which a CCPC pays the remuneration out of the proceeds generated from a major a sale of business assets, including the sale of the entire business assets or those of a large division, to be beyond the intent of the policy.** This would encompass all sources of income triggered by the proceeds, including capital gains, recapture of capital cost allowance, and income arising from the disposition of eligible capital properties. **We would not generally be concerned with situations where there is a sale of some of the assets, which is incidental to the normal business operations.**
>
> Since the conference, the CRA has provided a number of **advance income tax rulings** on the issue. In one of the first rulings[66] the assets of a CCPC including fixed assets, working capital, and goodwill were sold generating taxable amounts - some related to goodwill[67].
>
> The CCPC had **six shareholders, three of whom were active** in the day-to-day management of the operations of the business prior to its sale. Subsequent to the sale, the corporation **declared a bonus payable to the three active shareholders.**
>
> In the ruling, it was stated that the purpose of the payment of the bonus was to remunerate the owner-managers for their contribution towards the successful management of the corporation. Based upon the facts at hand, **the CRA ruled the Act[68] would not apply to prohibit the corporation from deducting the amount of the bonus** in computing its business income for the applicable taxation year.

[66] Ruling 2004-0060191R3.
[67] Subsection 14(1) of the Act will tax amounts that are dispositions of eligible capital property (franchise rights goodwill )
[68] section 67 and paragraphs 18(1)(a) and 18(1)(e)

### F.4.1 Author's commentary – tax advisors beware!

Being one of the first advance tax rulings on reasonableness of remuneration it provides some direction for treatment of "passive" income" however, in the author's opinion it still leaves tax planners in **doubt with respect to defining what might be deemed a "major" sale** of business assets and outlines **dangers of earning "non-active" income**.

In the author's opinion, this problem compounded by the fact that these **decisions are all based on CRA administrative procedures** (i.e. rather than any specific legislation).

**Since the CRA has no authority to create legislation (only to follow it)** this means that, **in the event of a disagreement, the taxpayer has NO recourse through the tax courts.**[69]

As a result, **until our "elected officials**" (or at least the tax courts) **provide legislation** (or precedence) on this issue, tax advisors will live with **considerable uncertainty**.

[69] Other than as a general appeal under section 67 which refers to "fair market values" and therefore may not provide "clear" relief.

# G R&D materials consumed in experimentation

## Material Costs - by Project

R&D Base demo

Thursday, Dec 31, 2015

### 1401 Miniature Printer - TAX CASE (6379249 Canada Inc.)

| Supplier / Materials | Use | Timeline | | Log | Description | Adjustment | Amount |
|---|---|---|---|---|---|---|---|
| **1-3 Variables cited in tax case / New print driver** | | | | | | | |
| Unknown (ON): Unknown | Trans. | 2015-01-01 | 2015-09-30 | 1 | -prototype components | | 14,000.00 |
| | | | | | | **Total:** | **14,000.00** |

### 1500 Engineering - Tax Case (Northwest Hydraulics)

| Supplier / Materials | Use | Timeline | | Log | Description | Adjustment | Amount |
|---|---|---|---|---|---|---|---|
| **1-2 Geometry to address sediment & water levels / Upstream training works** | | | | | | | |
| Unknown (ON): Unknown | Cons. | 2015-01-01 | 2015-12-31 | 1 | -prototype structures / no scrap value | | 22,000.00 |
| | | | | | | **Total:** | **22,000.00** |

# Decision Tree
# SR&ED Materials Issues

| | Question: | Issue: | if NO | Result(s) | ITA section | See WP |
|---|---|---|---|---|---|---|
| **if YES** | | | | | | |
| 1 | Were any prior year prototypes or experimental production sold? | recapture of previously claimed ITC | | NO repayment of previously claimed SR&ED ITC's at historic ITC rate | 127(27) | ***G-3*** |
| 2 | Were materials "consumed" during any part of the experimentation process? | materials consumed = "used up" | | Can NOT claim as materials "consumed" on T661 form | Reg. 2900(2)(a) | ***G-2*** |
| 3 | Were materials "transformed" during any part of the experimentation process? | materials transformed = "contained in prototypes" | | NO claim for materials "transformed" on T661 form | Reg. 2900(2)(a) | ***G-2*** |
| 4 | Have you completed and filed form T661to claim expenses? | claim for R&D materials | | include brief statements of R&D & cross reference to project descriptions | 37(11) | ***J-0 / T-1.3*** |

## G.1 Materials consumed or transformed


### G.1.1 Materials consumed

The phrase **materials consumed in the prosecution of SR&ED** basically means that you destroyed the material or rendered it virtually valueless as a result of the SR&ED.

The CRA provides the following example situations, in which they believe not all materials were consumed in the prosecution of SR&ED[70]:

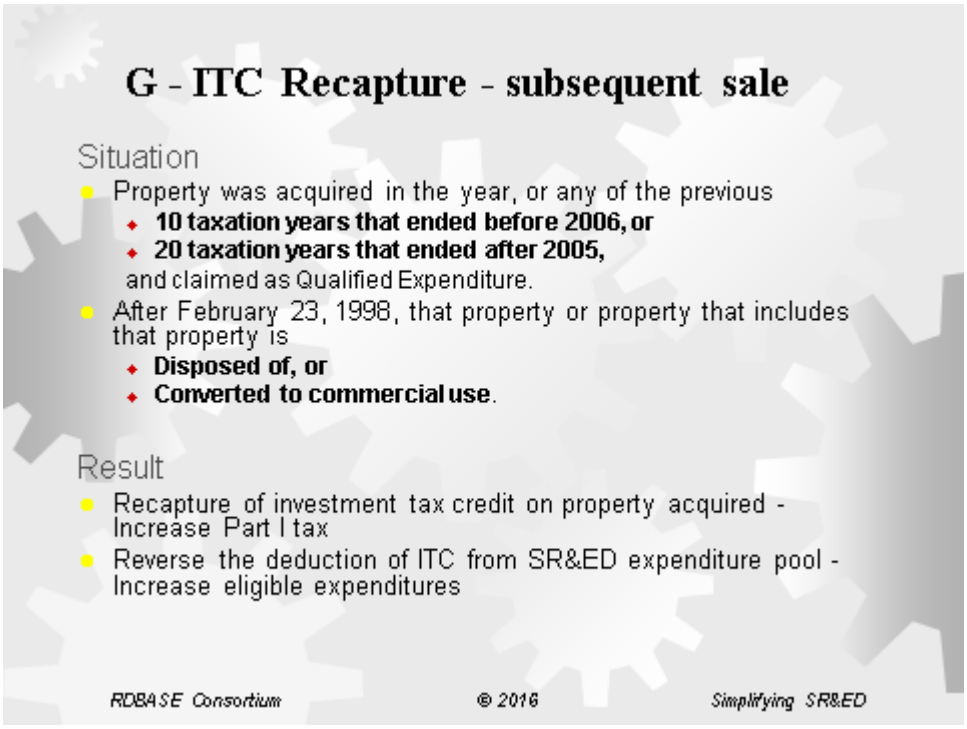
- developing assets to sell (custom products);
- developing assets to use in the commercial operations of the performer (commercial assets); and
- developing a commercial-scale plant to use for SR&ED and commercial operations.

### G.1.2 Cost of materials transformed into another product

The meaning of transformed was explained in the Supplementary information to the February 24, 1998 Budget:

> "The cost of materials used in SR&ED does not generally qualify for the SR&ED tax incentives unless it is consumed in the course of performing the SR&ED. At the outset of an SR&ED project, a taxpayer may not know whether materials used in a project will be consumed or will instead **be incorporated into a product that has some value either to the taxpayer or to another party."**

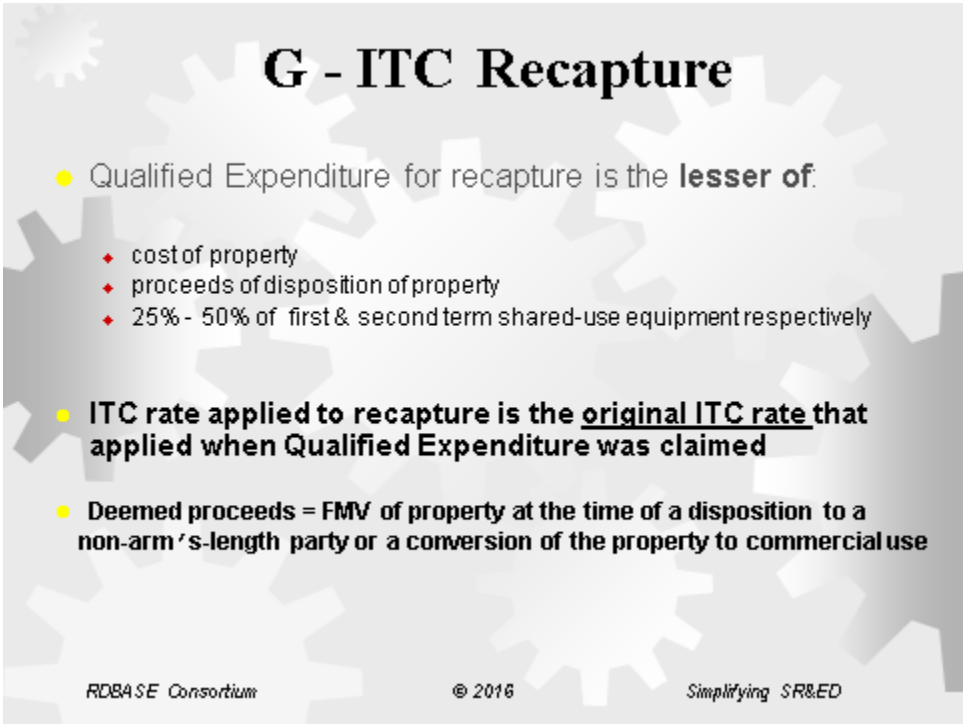
[70] Form T4088 – Guide to form T661




Previously, only if you used the **traditional method** of overhead allocation, could you **claim the costs of materials transformed** into another product[71]. This would typically include materials where there is a strong likelihood of the expenditure being consumed in SR&ED rather than commercial use.

Currently, if you use the **proxy method** of overhead allocation**, you can also now claim** expenditures for **materials transformed** in the prosecution of SR&ED[72].

[71] Amended paragraph 2900(2)(a) of the Regulations - costs incurred after February 23, 1998
[72] subclause 37(8)(a)(ii)(B)(V) of the Act provides for "cost of materials consumed or transformed" – drafted Feb. 27, 2004


G - ITC Recapture
Qualified Expenditure for recapture is the lesser of:
cost of property
proceeds of disposition of property
25% - 50% of first & second term shared-use equipment respectively
ITC rate applied to recapture is the original ITC rate that applied when Qualified Expenditure was claimed
Deemed proceeds = FMV of property at the time of a disposition to a non-arm's-length party or a conversion of the property to commercial use
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Simplifying SR&ED

### G.1.2.1 Subsequent sale of product or conversion to commercial use

In the event that the product containing the material is subsequently sold or converted to commercial use, there will be a SR&ED ITC pool reduction in the fiscal year of sale or conversion. There will not however be any reduction to the SR&ED expenditure pool, which is deductible for tax purposes.

The addition to Income Tax otherwise payable for the year is the lesser of two amounts[73]:

1) the original ITC claimed, and
2) the proceeds of disposition (if sold at arm's-length) or fair market value of the asset (if converted to commercial use) multiplied by the original ITC rate.

**Example - SR&ED material treatment**

| | Cost | ITC rate | Federal Tax Credit |
|---|---|---|---|
| **Material "transformed"** | **$100** | **35%** | **$35** |
| **Subsequent disposition** | **Proceeds** | | **Tax Credit Repayment** |
| **1) Gain scenario** | **$500** | **35%** | **$35** |
| **2) Loss scenario** | **$50** | **35%** | **$18** |

Where the company converts the asset to commercial use or disposes of it to a non-arm's length party the proceeds are deemed to be fair market value. The CRA will generally accept a fair market value estimate of the property equal to its estimated UCC[74] for tax purposes if treated as machinery (Class 43 which yields a 30% declining balance rate of annual CCA[75] ) or other appropriate type of asset.

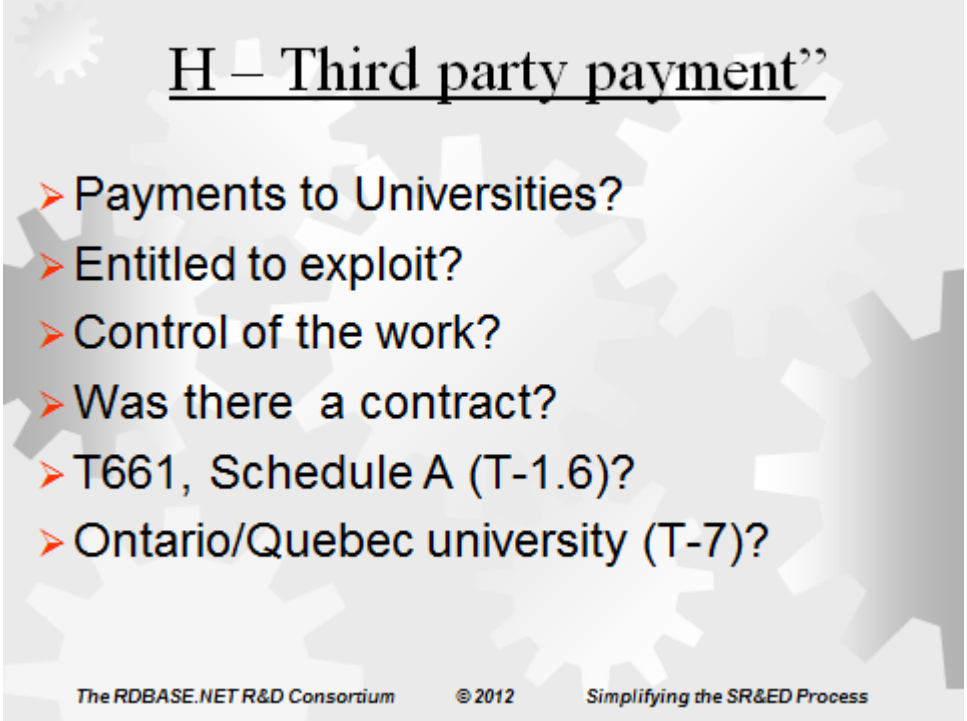
The reduction to the SR&ED ITC pool will be made on Schedule T2S (32) as applicable (line number 440 per WP ***T-1.3***). Additional details with respect to the CRA's proposed treatment of dispositions of SR&ED materials and conversion to commercial use are provided in their Application Policy Papers (discussed further in section J of this case study).

#### G.1.2.1.1 General recommendations regarding transformed materials

Generally, the author finds it easier to restrict SR&ED claims for materials to those which are intended to be consumed entirely in SR&ED. Reasons for this are simplicity and streamlining of the audit process however, where considerable amounts of material are transformed into potentially experimental production, this may indicate the benefits of evaluating a claim for these amounts.

[73] ITA paragraphs 127(27)(e & f)
[74] Undepreciated Capital Cost = Net book value for income tax purposes
[75] Capital costs allowance = depreciation rate for income tax purposes per ITA Regulations, Schedule II

# H Third-party payments



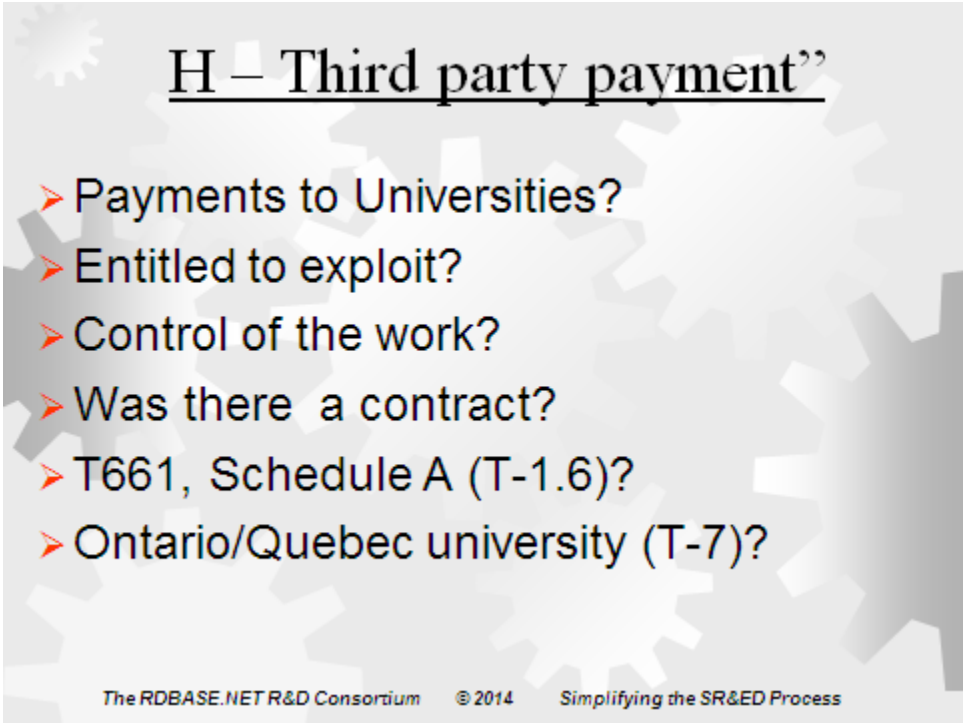
**Decision tree**

## H.1 SR&ED Third-party payments - definition & related issues

→ **if NO**

| | Question: | Issue: | Result(s) | ITA section | See WP |
|---|---|---|---|---|---|
| **if YES** | | | | | |
| 1 | Were any payments made to universities or government research institutions? | recognition of potential third party payments | third parties = universities or government research institutions | 37(1)(a)(ii & iii) | ***H-0*** |
| 2 | Was the taxpayer entitled to preferentially exploit the results of any developments made? | required for SR&ED eligibility | No claim without entitlement | 37(1)(a)(ii) | ***H-2*** |
| 3 | Did the "third party" control the direction & nature of the work? | whether third party vs. subcontractor payment | subcontractor payment if the third party not in charge of work * | | ***H-2*** |
| 4 | Was there a contract governing the nature this work? | basis of information for form T661 Schedule A | | N/A | |
| 5 | Have you completed and filed form T661, Schedule A to claim expenses? | claim for Third Party Payments | receive Federal tax credits - no further project write-ups required | 37(11) | ***H-0 / T-1.6*** |
| 6 | Were any of these payments to Ontario or Quebec universities? | potential for additional provincial credits | file Ontario and Quebec SR&ED forms | N/A | ***H-0*** |

* Note: this "control" issue is a CRA criteria which does not have any direct legislative support Additional details on their control opinions are provided in IC 86-4R.




## H.2 Eligible payments - universities & public research institutions

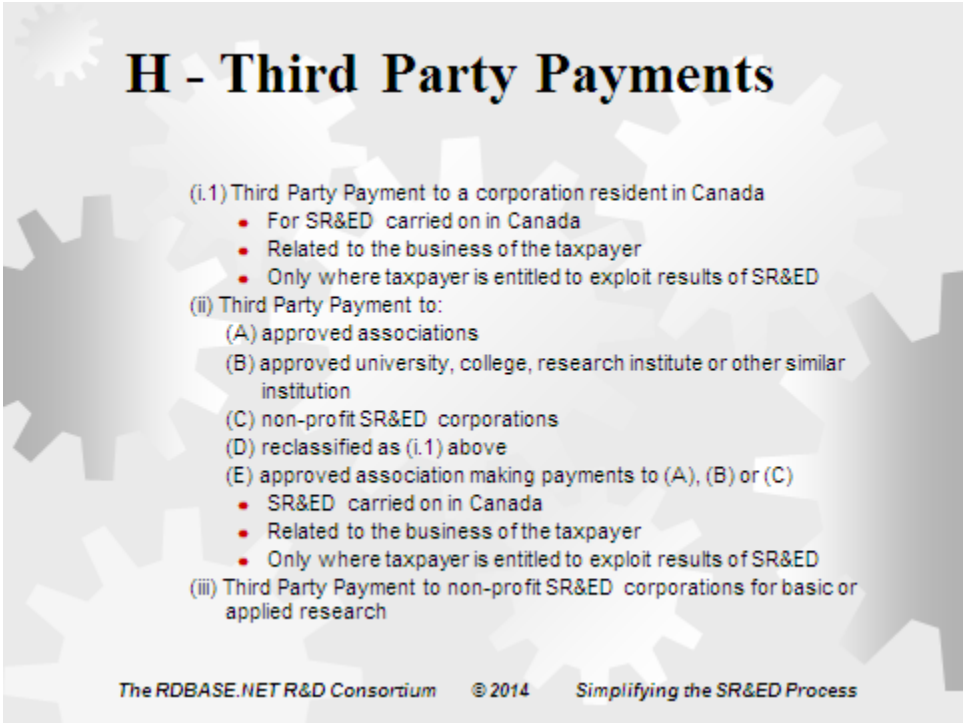
Qualifying SR&ED expenditures include payments made to the following organizations[76]:

(1) an approved university, college, research institute, or other similar institution;
(2) non-profit SR&ED corporations resident in Canada; and
(3) granting councils.

The amounts paid to these organizations are considered third-party payments for SR&ED but do not include payments made to subcontractors for SR&ED undertaken on your behalf which are reported on T661-Sch B.

The legislation requires that the SR&ED be related to your business and that you are entitled to exploit the results:[77] Generally speaking this would be the case in most industrial SR&ED contracts. Expenditures which do not meet these criteria might be seen in circumstances where straight donations or other contributions are made to public institutions without the corresponding requirement for any accountability on the research performed.

[76] ITA subparagraphs 37(1)(a)(ii & iii)
[77] ITA subparagraph 37(1)(a)(i.1)




## H.2.1 Taxpayer does not control nature of third-party work

It should be noted that the CRA takes the position:

"When payments are made to these organizations, the payer does not control the overall direction of the SR&ED work unlike subcontract payments. These payments are reported on T661-Sch A."

There does not appear to be any such requirement in the *Income Tax Act* legislation and therefore, in the author's opinion, the interpretation of third-party payments" may be larger than the CRA currently provides for.

## H.3 Entitlement to Exploit results

Canada Customs and Revenue Agency | Agence des douanes et du revenu du Canada

NO.: **IT-151R5** DATE: October 17, 2000

SUBJECT: INCOME TAX ACT

**Scientific Research and Experimental Development Expenditures**

### *Entitlement to Exploit the Results*

¶ **37.** The determination of whether a taxpayer is "entitled to exploit the results" of SR&ED is a question of fact that can only be determined on a case-by-case basis. For example, this requirement is **considered to be met in cases where the taxpayer has the right to use a patent that results from the SR&ED project even if the taxpayer is charged a royalty or similar fee** for the use of the patent. **This requirement is also considered to be met in cases where the taxpayer is entitled to distribute and market any product that results from the SR&ED project.**

In addition, when a taxpayer makes a payment for SR&ED to a corporation described in subparagraph 37(1)(*a*)(i.1) or to an approved university or other entity described in subparagraph 37(1)(*a*)(ii) and it is likely that the SR&ED project will not result in a product or patent, the taxpayer will be considered to have **met this requirement if** it can be established that the taxpayer has, as a consequence of the payment, been granted a **preferential right to use the results** of the SR&ED in its business.

# I R&D subcontractor expenditures

## Subcontractor Costs - by Project

R&D Base demo

Thursday, Dec 31, 2015

**1500 - Engineering - Tax Case (Northwest Hydraulics)**

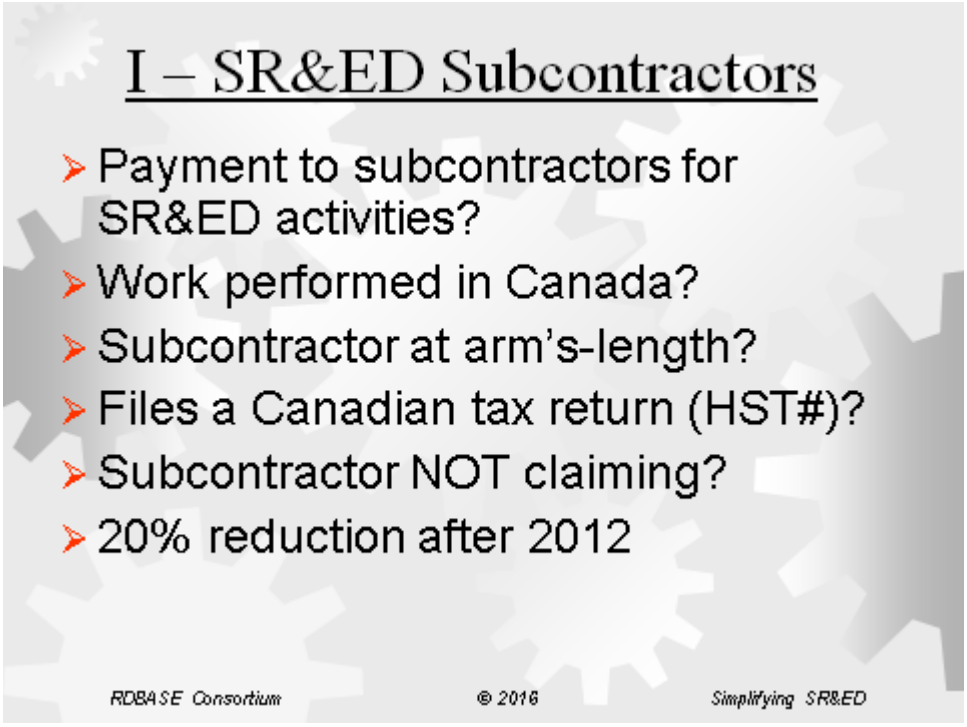
| Subcontractor | Timeline | | Log | Description | Adjustment | Amount |
|---|---|---|---|---|---|---|
| **1 - Geometry to address sediment & water levels / 1 - Geometry to address sediment & water levels** | | | | | | |
| 123 consultants (ON): -base measurements | 2015-01-01 | 2015-12-31 | 1 | -base measurements | | 50,000.00 |
| | | | | | **Total:** | **50,000.00** |

**Decision tree**

## I.1 SR&ED subcontractor issues

→ **if NO**

| | Question: | Issue: | Result(s) | ITA section | See WP |
|---|---|---|---|---|---|
| **if YES** | | | | | |
| 1 | Was any payment made to subcontractors for SR&ED activities? | potential SR&ED subcontractor claim | no claim for SR&ED subcontractors | 37(1)(a)(i.1) | ***I-0*** |
| 2 | Was this work performed in Canada? | foreign SR&ED | full deductions however no SR&ED tax credit for foreign expenses | 37(2) | ***M-0*** |
| 3 | Do the Corporation and subcontractor deal at arms length? | non-arms length costs | File T661 Schedule B, Section C to claim expenses | 37(11) | ***T-1.9*** |
| | | | Form T-1146 required to prevent any markup on non-arm's length costs | 127(13-16) | ***I-3 / T-4.1*** |
| 4 | Does the subcontractor file a Canadian income tax return? | definition of a "taxable supplier" | no claim if performer not a "taxable supplier" | 127(9) | ***T-1.9 /M-1*** |
| 5 | Have you confirmed that subcontractor is NOT planning to claim SR&ED credits on any of the work? | potential "doubled dip" | need subcontractor agreement -- only incremental costs can be claimed net of "contract payments" | 127(18-22) | ***I-2 & 3*** |
| 6 | Have you completed and filed form T661, Schedule B, Section C to claim expenses? | claim for R&D subcontractors | File T661 Schedule B, Section C to claim expenses. Include 'statement of work'. | 37(11) | ***T-1.9*** |
| | | | SIN# or BN# required for any contractors over $30,000 | 127(18-22) | |




## I.2 SR&ED performed on your company's behalf

Qualifying SR&ED contract payments are expenditures incurred for subcontractors carrying on SR&ED on the company's behalf, assuming that the company is entitled to exploit the results of the SR&ED.[78]

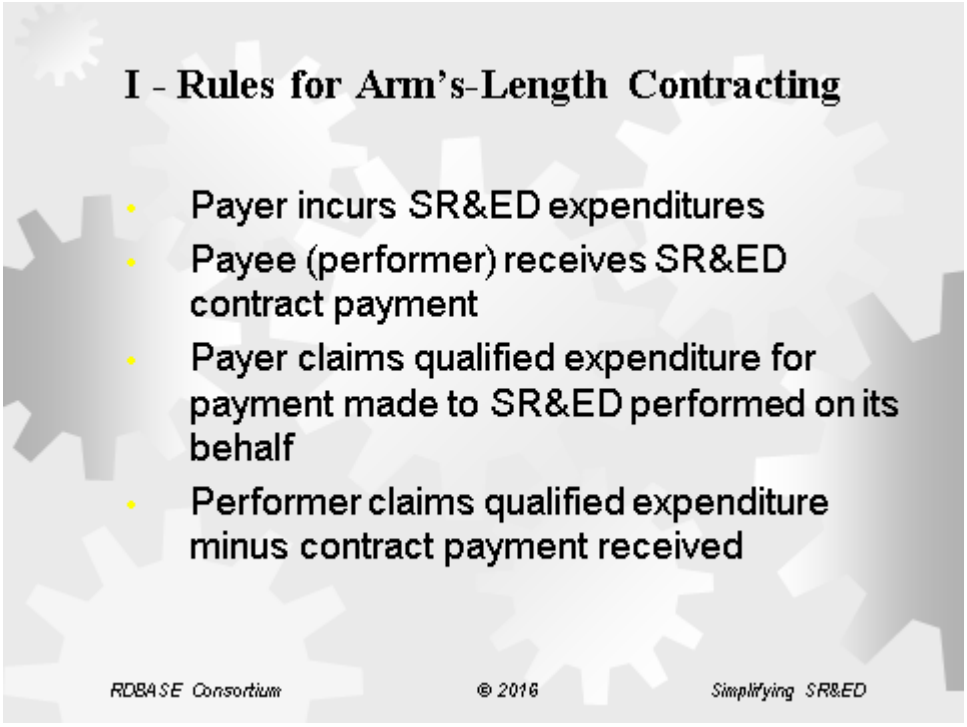
### I.2.1 SR&ED payment must be related to a business

Canadian income tax legislation specifies that an expenditure of a current nature made by a taxpayer on SR&ED carried on in Canada, that is directly undertaken by or on behalf of the taxpayer, must also be related to a business" of the taxpayer.[79]

"related to a business" includes:

> "any SR&ED that may lead to, or facilitate, an extension of that business. For SR&ED to be related to a business carried on by a taxpayer, it is necessary to have some interconnection or link between the SR&ED activities and the taxpayer's business. This requirement will generally be satisfied when the results of the SR&ED, if successful, have a direct and beneficial application in the business that is carried on by the taxpayer."[80]

[78] ITA subparagraph 37(1)(a)(i)
[79] ITA Subparagraph 37(1)(a)(i)
[80] Paragraph 37(7)(d)




## I.3 Definition and implication of being arm's-length"

The current version of Interpretation Bulletin IT-419, *Meaning of Arm's-Length*, expresses in general terms the criteria we consider when determining whether or not persons deal with each other at arm's-length.

### I.3.1 No double dips on payments to other subcontractors

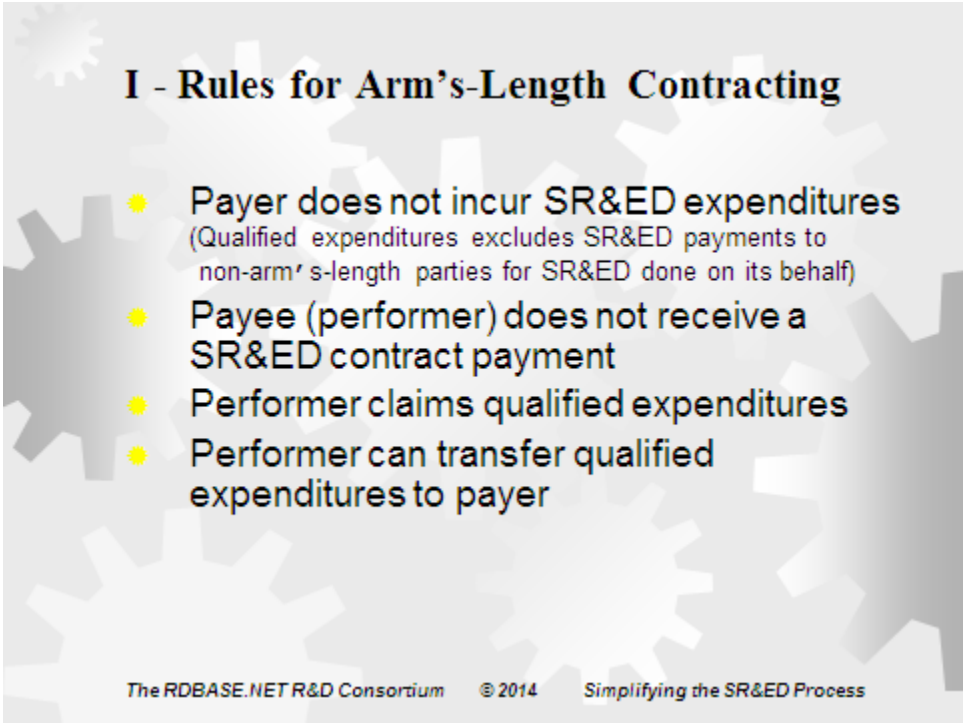
The SR&ED tax credit form[81] requires disclosure of the business BN# (corporations) or SIN # (for individuals) number of any taxable supplier being claimed as his SR&ED subcontractor to the extent that they were paid more than $30,000 during the taxation year. This information allows the CRA to ensure that:

- Significant payments were made to suppliers for work done in Canada and
- there is no double claiming of investment tax credits on the same work.

To the extent that a subcontractor has claimed SR&ED tax credits on any of the work performed, the company may be prevented from claiming tax credits. These types of arrangements generally require an agreement as to who owns the rights of the SR&ED and who will claim any related credits.

Where the company paying the fees owns the rights to the tax credits, the subcontractor will only be able to claim its actual, eligible expenses to the extent that they exceed contract payments" on the project. This issue is further illustrated in section ***K***.

[81] schedule 32 - B




**Maintaining entitlement to credits via contracts:**

To ensure that your company maintains its right to claim credits and work performed, we recommend the following wording be added to the contracts:

a) you perform in your behalf and /or
b) which you perform for others:

**"In the event of any of the development activities performed (by/for) X Co., are eligible for Canadian SR&ED tax credits, X Co. reserves the right to claim these credits."**

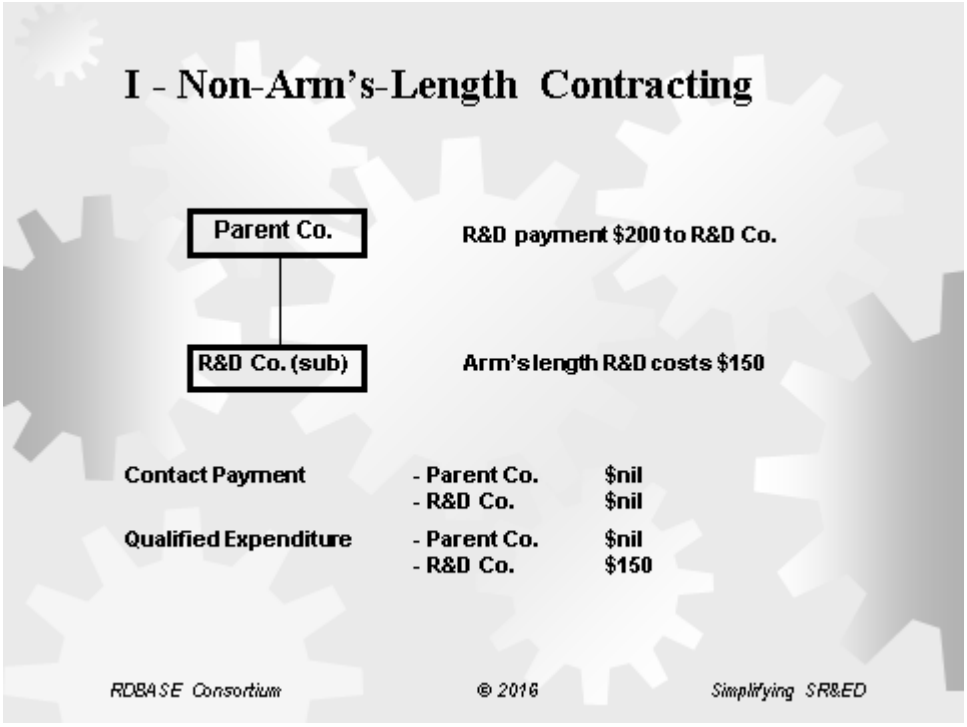
Note: You should also ensure that your company meets the eligibility criteria for claiming the SR&ED work per their Application Policy 94-04.

## I.3.2 Non-arm's-length contract payments

The SR&ED claim requires that you distinguish between arm's-length contractors and non-arm's-length" contractors. In general terms, non-arm's-length" contractors are those who are controlled by the same person or related group of persons who control the corporation in question. These definitions are further detailed in Chapters C & Q of this service.

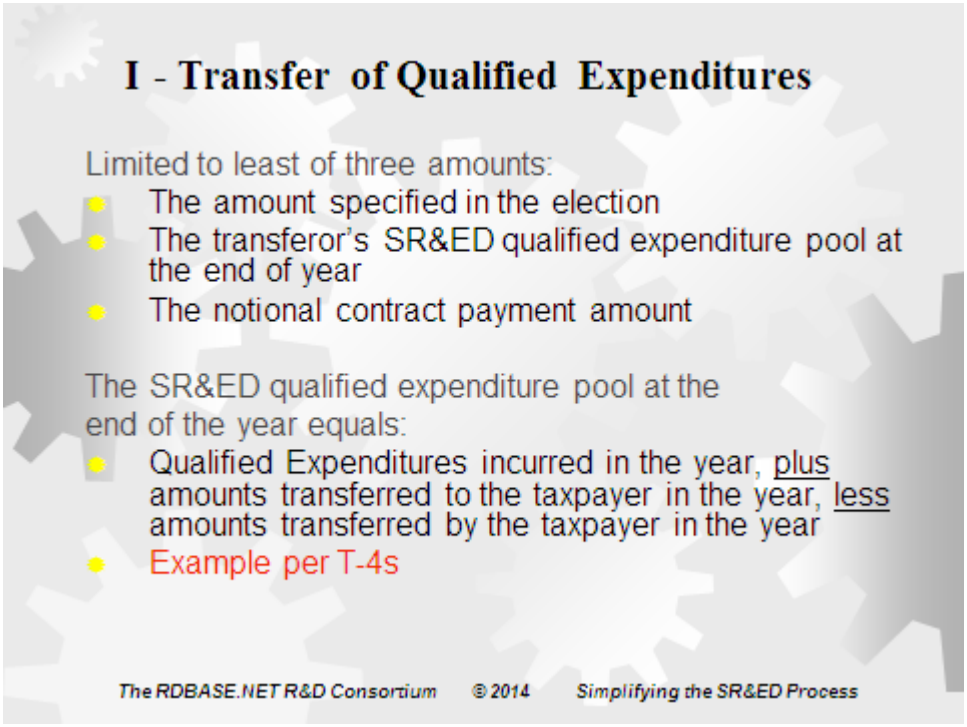
Effective for taxation years that begin after 1995, expenditures you incur for SR&ED performed on your behalf by a performer at a time when you and the performer do not deal with each other at arm's length are not "immediately" qualified expenditures for ITC purposes.[82] However, the performer can elect to transfer qualified expenditures to you up to a maximum of the qualified expenditures they actually incurred.[83]

[82] ITA paragraph 127(9)(f) in the definition of "qualified expenditures"
[83] form T1146 – ITA subsection 127(13)




The election must be done in prescribed form by both parties by filing a joint agreement on Form T1146 (Agreement to Transfer Qualified Expenditures Incurred in Respect of SR&ED Contracts). The amount that the performer can transfer for a taxation year is the least of the following amounts[84]:

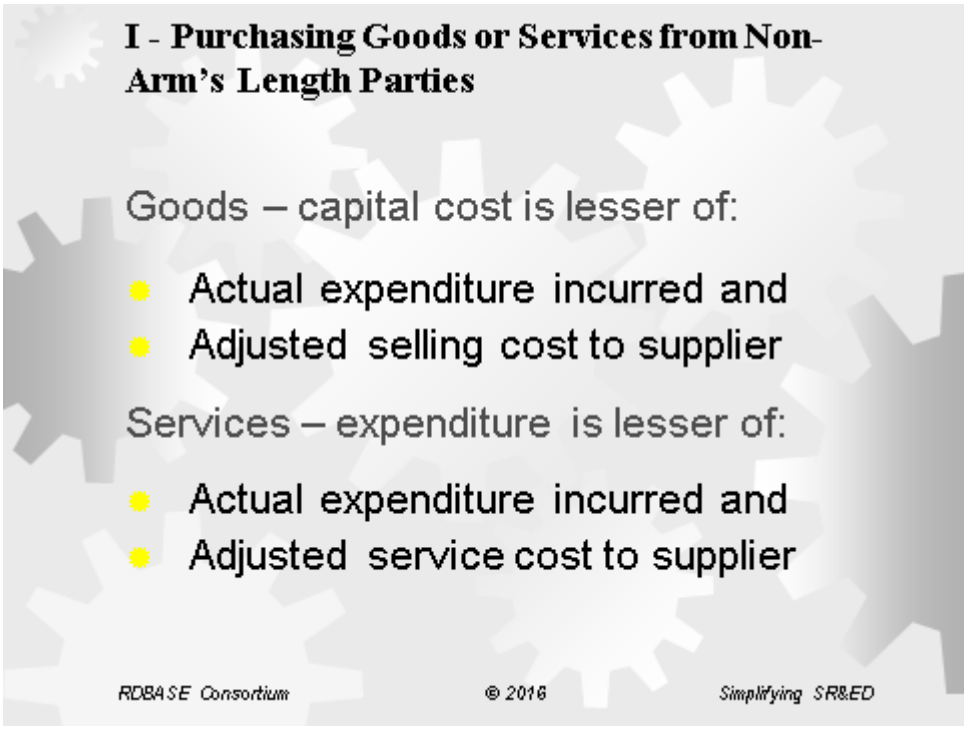
(1) The amount specified by the transferor (performer) and the transferee (you) in their agreement
(2) The transferor's SR&ED qualified expenditure pool at the end of the year
(3) The total of all amounts that would be contract payments if the two parties were dealing at arm's length (notional contract payments)




[84] ITA subsection 127(13) – Agreement to transfer qualified expenditures

### I.3.3 Business carried on by a related corporation

Where a corporate taxpayer performs SR&ED that is related to a business actively carried on by another corporation that is related, the SR&ED is considered to be related to a business of the taxpayer. Thus, for example, if the taxpayer performing SR&ED is a wholly-owned subsidiary of another corporation, the subsidiary's SR&ED will be considered to be related to a business of the taxpayer if the SR&ED is related to a business carried on by the parent.[85]




## I.4 Non-arm's-length SR&ED expenses: related tax forms and guides

T1145 - Agreement to allocate assistance for SR&ED expenditures between non-arm's length parties

T1146 - Agreement to Transfer Qualified Expenditures Incurred in Respect of SR&ED Contracts *

T1174 - Agreement among associated corporations to allocate salaries or wages of specified employees for SR&ED. *

***See T-4's of this case study for examples of these forms***

[85] ITA subsection 37(1.1) & Interpretation Bulletin 151R-4, paragraph 9

# J SR&ED capital assets

## J.1 SR&ED Capital issues

| | | | | | |
|---|---|---|---|---|---|
| | | **if NO** | | | |
| | **Question:** | **Issue:** | **Result(s)** | **ITA section** | ***See WP*** |
| **if YES** | | | | | |
| 1 | Is the property "depreciable" property | land & other non-depreciable properties excluded | excluded from eligible SR&ED expenses and tax credits | 37(1)(b) | |
| 2 | Is the property other than a "building", "leasehold interest in a building," or intangible "right" (e.g. a patent) arising from previous SR&ED? | "buildings" and intangible "rights" excluded (per ITA 37(8) & 37(4), respectively) | excluded from eligible SR&ED expenses and tax credits | 37(1)(b) | |
| 3 | Is the asset intended to be used > 50 % of its economic life in Canadian SR&ED activities? | Intent - primarily SR&ED asset | excluded from eligible SR&ED expenses and tax credits | Regulation 2902(b)(i) | |
| 4 | Is the asset intended to be used > 90 % of its economic life in Canadian SR&ED activities? | Intent - ASA SR&ED asset | excluded from eligible SR&ED expenses but, | Regulation 2902(b)(i) | |
| | | | potential SR&ED credits on shared used equipment (SUE) over the next 24 months | 127(11) | *J-0* |
| 5 | Is the property available for use at year-end? | availability of SR&ED ITC | SR&ED expenditures deemed not made until property is "available for use" | 37(1.2) | |
| 6 | Is the property new? | no ITC's on "used equipment" | excluded from "qualified SR&ED expenses" used for calculating tax credits but still part of R&D expenditure pool | Regulation 2902(b)(iii) | |
| 7 | Have you completed and filed form T661 to claim expenses? | claim for R&D capital | Include brief statements of long term R&D intent at time of purchase & summary of shared use %'s | 37(11) | *J-0 / T-1.3* |
| 8 | Have you subsequently disposed of the asset or converted it to commercial use? | repayment of ITC earned | Repayment based on current value of asset at historic ITC rate | 127(27 to 35) | *J-4* |

## J.2 Requirement for intended use > 90% or >50% in SR&ED

## J.2.1 Eligible SR&ED capital expenditures (>90% SR&ED intent)

A SR&ED capital expenditure is an expenditure made to acquire a depreciable property which you intended to use or consume (ASA) all or substantially all" (=>90%)[86] of its economic life in the "prosecution of SR&ED in Canada.

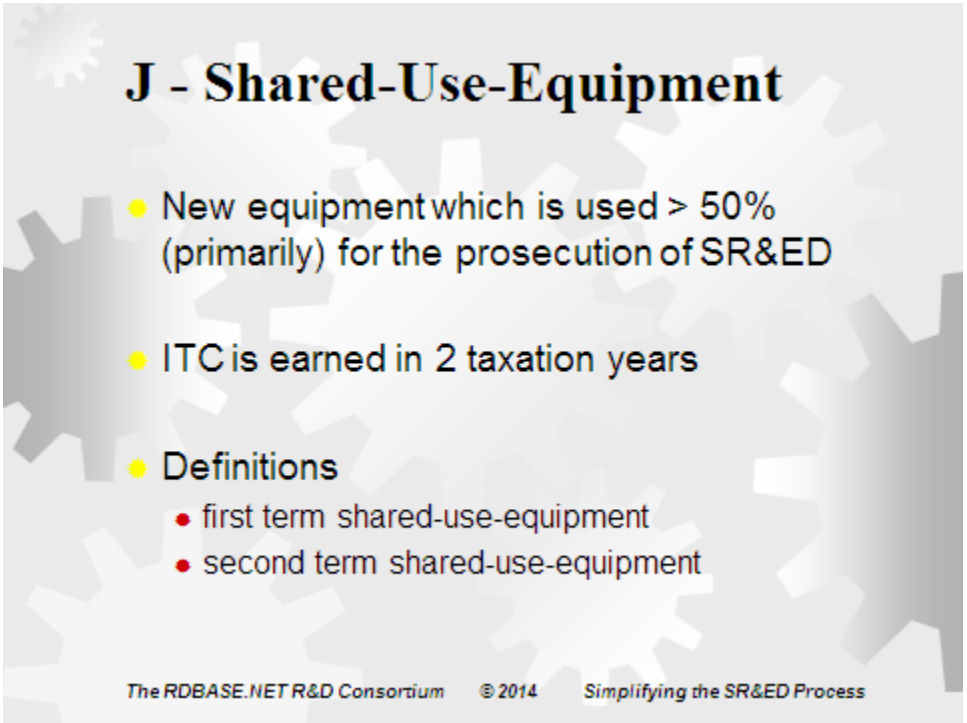
You determine a property's eligibility based on its long term SR&ED intent at the time you make the expenditure. An ideal R&D accounting system will provide some level of post-purchase R&D usage evidence to substantiate the percentage of time you use the asset for SR&ED.

Where the assets are in a dedicated SR&ED environment this intent will be relatively easy to substantiate. Where the assets are used in other environments, examples of reasonable evidence might include correlations to the R&D labour claims of the equipment users, direct machine logs or any other reasonable documentation method.

### J.2.1.1 Full tax deduction in year of purchase

You may claim in your R&D expenditure pool and as a qualifying expenditure for ITC purposes any capital expenditures (purchased new) for SR&ED carried on in Canada and related to a business of yours. In effect, this allows a full write-off of the cost of the asset in the year of acquisition or any future year at the choice of the taxpayer.[87]

## J.2.2 Shared-use equipment (SUE)- (>50% SR&ED intent)




Assets purchased new and used primarily (>50%)[88] but not all or substantially all for the prosecution of SR&ED qualify for partial credits.

[86] Interpretation bulletin 151R-4 paragraph 29 – ASA > 90%
[87] ITA paragraph 37(1)(b)
[88] CRA form T4088 – Guide to form T661 – line 504 – primarily >50%

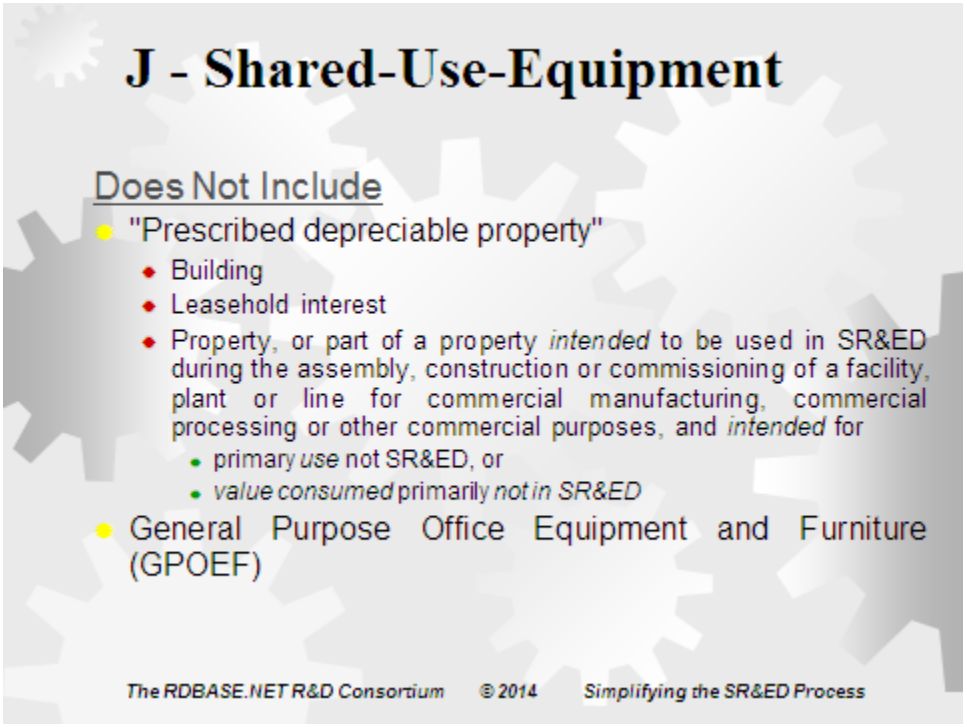
The cost of the asset does not form part of the R&D expenditure pool and one-half of the expenditure qualifies as an expenditure for ITC purposes. One-half of the credit is earned at the end of the first taxation year of acquiring the asset and the other half of the credit is earned after the second taxation year.

Since the cost of the asset is not included in the expenditure pool, CCA (capital cost allowance) is claimed under the regular rates and rules.

### J.2.3 Summary of ASA vs. SUE SR&ED equipment rules

The following chart summarizes issues & related tax credit effects between ASA and SUE SR&ED equipment.

| ASA equipment (>90%) | SUE (>50%) |
|---|---|
| ▪ relates to equipment intended to be used in SR&ED throughout its useful life;<br>▪ included in subsection 37(1) expenditure pool and earns ITC;<br>▪ ITC is earned when you make the capital expenditure;<br>▪ you earn ITC on full cost;<br>▪ includes general purpose office equipment or furniture under the traditional method only;<br>▪ eligibility is based on intent. | ▪ relates to equipment you use for SR&ED and some other purpose;<br>▪ only earns ITC – capital cost is included in CCA schedule in usual manner;<br>▪ you earn the partial ITC over time;<br>▪ you earn ITC on one-half of the cost;<br>▪ excludes general purpose office equipment or furniture under both the traditional and proxy methods;<br>▪ eligibility is based on actual use & intent. |



Before we can perform any specific tax credit calculations, we need to determine the intended SR&ED use of the asset over its estimated economic life, which can result in three potential classes of assets:

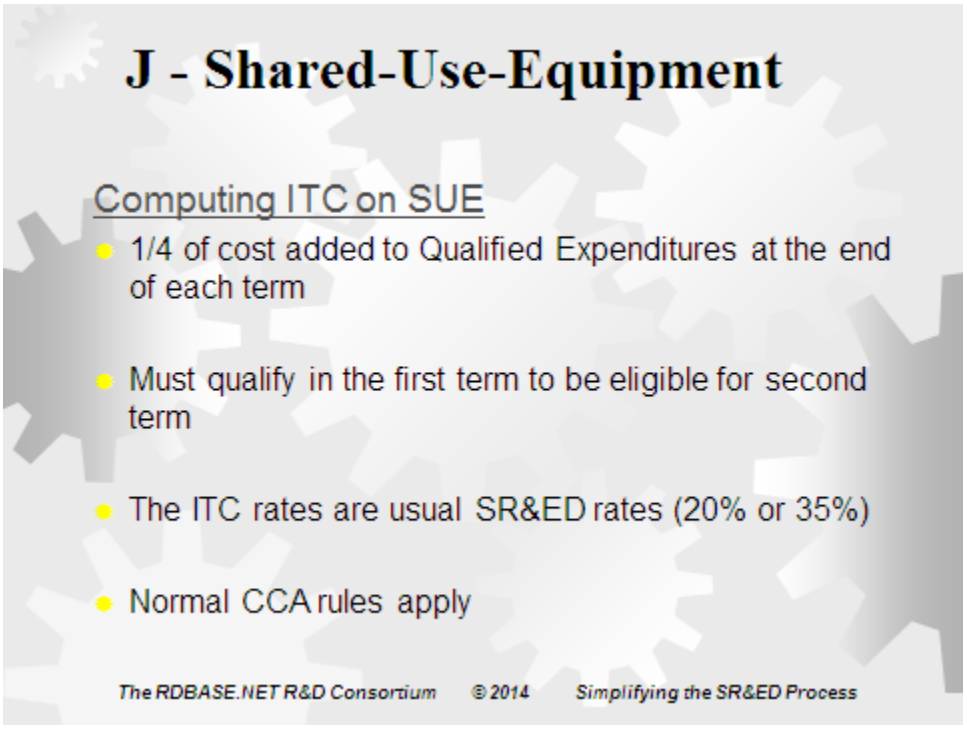
1) **> 90% SR&ED intent (ASA – All or substantially all)**
If we can argue > 90% SR&ED intent we will earn the credit on the capital cost of the equipment in the year of acquisition OR,
full credits on lease payments when paid.

2) **> 50 % but <90% SR&ED intent (Primarily)**
If we can argue > 50 % but <90% SR&ED intent we will earn either: a deferred credit (over three years) on 50% of the lease payments or capital cost of the asset OR,
the actual percentage of lease payments we can allocate to SR&ED if we use the traditional method of overhead allocation.

3) **> 0 % but < 50% SR&ED intent**
If we can argue > 0 % but < 50% SR&ED intent we will only earn credits on the actual percentage of lease payments we can allocate to SR&ED. Furthermore these credits will only be earned if we use the traditional method of overhead allocation.

## J.3 Subsequent dispositions/commercial use

Quite often the experimental prototypes may eventually be used in commercial production. In these cases a portion of the ITC earned may need to be repaid. The CRA confirms that the Undepreciated Capital Cost (UCC) for tax purposes can be used as an estimate of the Fair Market Value (FMV) of the asset. This repayment concept is clarified in an example recently released by the CRA:



## J.4 Strategies in documenting long-term SR&ED intent

It should be noted that it is the CCRA who deems the terms, “ASA” and “primarily” to represent >90% or >50%, respectively. The income tax act does not specifically define these terms and therefore, taxpayers may wish to reconsider these amounts where this treatment can be supported. For example, if an employee spent 88% of her time in SR&ED during the year, the company might argue that the intent was for her computer to be an ASA SR&ED asset.

## J.5 Subsequent dispositions/commercial use

Quite often the experimental prototypes may eventually be used in commercial production. In these cases a portion of the ITC earned may need to be repaid. The CCRA confirms that the Undepreciated Capital Cost (UCC) for tax purposes can be used as an estimate of the Fair Market Value (FMV) of the asset. This repayment concept is clarified in an example recently released by the CCRA:

### J.5.1 Example - (change to commercial use) [89]

Corporation A gives a contract to Corporation B (arm's length) for the construction of equipment to meet unique performance criteria. The contract requires that Corporation B perform SR&ED on behalf of corporation A in the development of the equipment.
The total amount of the contract is $1,000,000. All of the work was completed at the end of year 1, at which point Corporation A started using the new equipment in its operations.

For purposes of claiming the allowable SR&ED expenditures, Corporation A identified the SR&ED and non-SR&ED and allocated the costs accordingly. The SR&ED portion of the contract was estimated at $800,000. The $200,000 not claimable is a cost relating to expenditures incurred on the commercial portion of the equipment. The CCRA's Research and Technology Advisor found the allocation to be reasonable.

Corporation A entered $800,000 on line 340 of form T661 as expenditures for arm's length SR&ED contract. When Corporation A starts using the equipment in its operations, there is a conversion to commercial use and the ITC recapture rules will apply.

The FMV of the equipment at the time of conversion to commercial use is $500,000. For the purpose of determining the FMV, the claimant has used the cost of producing a second unit if the technology had already existed.

For the purposes of the ITC recapture rules, using a prorated amount (see Note) as FMV would be acceptable as it is reasonable to apportion the FMV between the SR&ED costs and other costs. Since the ITC on the particular equipment was claimed using a 20% rate, the ITC recapture will be calculated as follows:

**The recapture amount is the lesser of:**

i) the ITC earned in respect of the particular property (the portion of the contract in respect of the SR&ED is part of the cost of acquiring the property)

$160,000 (i.e., $800,000 @ 20%) and

[89] CCRA Application Policy SR&ED 2000-04R2, June 18, 2002, Recapture of Investment Tax Credit – Example 7

ii) the amount determined by applying the percentage which was used in calculating the ITC on the property to the Fair Market Value of the property at the time of its conversion to commercial use

$80,000 (i.e. [$500,000 X 800,000/1,000,000] @ 20%)

**The ITC recapture will be $80,000, the lesser of $80,000 and $160,000.**

[Note: Any other reasonable apportionment of the FMV would be acceptable if it is based on the facts of the case, and is supportable] – see planning example!

## J.5.2 Author's commentary and related tax planning

This example could be misleading since only the "materials" vs. "labor related" portions of the payments need to be repaid. The method illustrated is often referred to as the **"carve-out" method** since it "carves-out" the cost to redo the work and effectively allows only the incremental costs. **As a result an opportunity has been missed!** Consider the following additional CCRA pronouncements[90]:

**SR&ED "Labour" costs not reduced**
Labour costs incurred for an employee directly undertaking, supervising or supporting (traditional method), or for an employee directly engaged in (proxy method), the required experimental production, are allowable SR&ED expenditures. **No portion of such labour costs should be allocated to the commercial production**. This is the case whether the experimental production results from the operation of a pilot plant or a prototype, or it is produced in a commercial plant.

**Sale of experimental production**
The ITC recapture rules[91], will apply to recapture all or a portion of the ITC relating to the cost of materials transformed when experimental production is sold or converted to commercial use after February 23, 1998. Note that **these rules do not apply to recapture ITC in respect of SR&ED labour costs** and overhead expenditures incurred by the claimant to carry out the experimental production.

The **reduction of the costs** of the experimental production by the proceeds from the sale of experimental production, or the expenditure **carve-out approach** used in the past to estimate SR&ED expenditures relating to the experimental production, are **not methods founded in law.** These methods **should not be used** for estimating the costs of the experimental production.

## J.5.3 Example - revisited & optimized

Based on the above analysis the author proposes that a more correct method would be to **have the contractor separately identify and invoice the "labour" vs. the "material or capital**" portions of the work. **Examples of potentially eligible "labour" component**s within the contractor's fee could be the costs **to assemble, test and replace** components. These could then be removed from the $800,000 base used for the "carve-out" in the previous example.

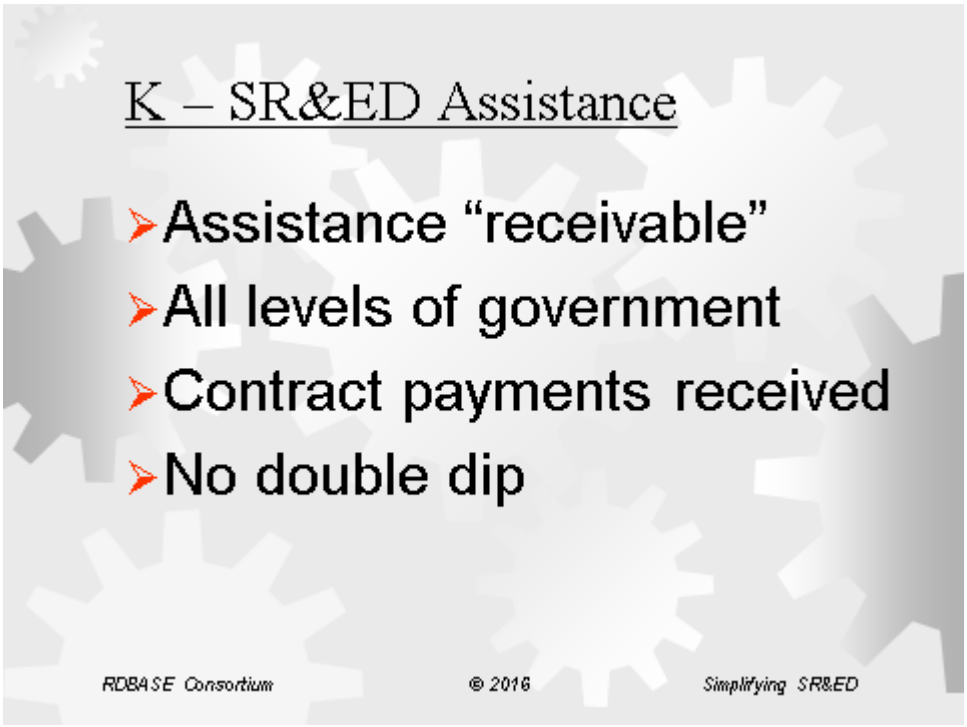
[90] CCRA Application Policy SR&ED 2002-02, July 17, 2002, Experimental Production - Allowable SR&ED Expenditures
[91] recapture rules in subsections 127(27) to (35) of the Income Tax Act

# K Financial assistance/contract SR&ED

In order to streamline the examples, the **current case study makes the assumption** that all SR&ED costs were internally funded (i.e. **no assistance received**). The federal government considers any provincial credits to represent government assistance. The related interactions of these credits and related calculations have been disclosed per working paper ***T-0 & T-1.3***. As a result the full costs of SR&ED expenses incurred in Canada will be eligible for SR&ED credits.

In reality, this is often not the case and claims are therefore required to be reduced by the amounts of the related assistance. An overview and example of these rules and related tax planning opportunities is provided in this section.

## K.1 Financial assistance receivable for SR&ED



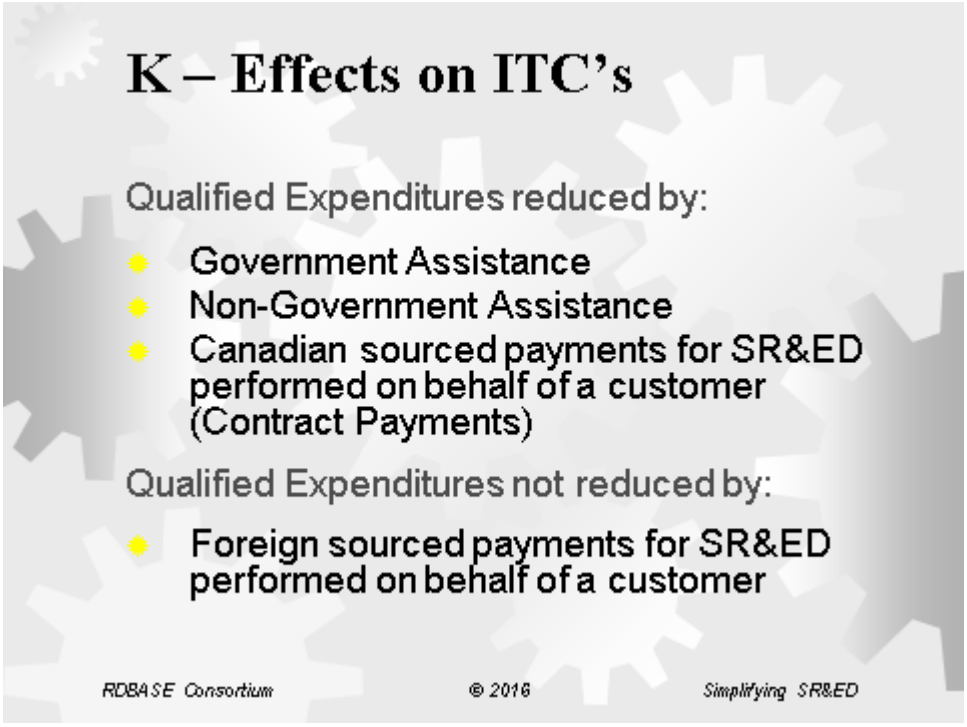

### K.1.1 Rules for reducing eligible and qualified SR&ED expenditures

#### K.1.1.1 Assistance receivable

The tax legislation applies to reduce qualified expenditures of a taxpayer (including a partnership) by any government assistance, non-government assistance, or contract payments received or receivable directly. It applies when,

> "on or before the filing-due date for a taxation year … the taxpayer has received, is entitled to receive, or can reasonably expect to receive … assistance that can reasonably be considered in respect of SR&ED.[92]"

[92] Subsection 127(18)




### K.1.1.2 Government assistance

Government and non-government assistance for SR&ED reduces the company's qualified expenditures for ITC purposes.

Government assistance includes grants, subsidies and deductions from tax, investment allowances, or any other form of assistance, excluding the federal ITC. This also includes provincial SR&ED tax credits as outlined above (see ***T-0 & T-1.3***).

### K.1.1.3 Non-government assistance/contract payments

Non-government assistance or contract payments for SR&ED reduce the company's qualified expenditures for ITC purposes only to the extent that[93]:

1. it is from a taxable supplier (i.e. another taxable Canadian company)[94],
2. the supplier intends to claim SR&ED tax credits, and
3. the taxpayer and that person are dealing at arm's-length.

Issues relating to payments received from non-arm's-length parties for SR&ED on their behalf are discussed in section ***I***.

To the extent that payments are received in the contract for SR&ED from foreign parties, these receipts will not reduce eligible or qualified SR&ED expenses.

[93] Subsection 127(9) - definition of "contract payment"
[94] as opposed to a foreign controlled Corporation

#### K.1.1.3.1 Summary of issues and related disclosures when receiving contract payments

To the extent that a contractor receives payments **from another Canadian taxpayer** we must ensure that there is no double dip of SR&ED claims on these expenses. To accomplish this the SR&ED tax credit form[95] requires disclosure of the business or GST number of any taxable supplier being claimed as an SR&ED subcontractor, to the extent that they were paid more than $30,000 during the taxation year. This information allows the CRA to ensure that:

- significant payments were made to suppliers for work done in Canada and
- there is no double claiming of investment tax credits on the same work.

Where the company paying the fees owns the rights to the tax credits, the subcontractor will only be able to claim its actual, eligible expenses to the extent that they exceed the SR&ED related contract payments" received on the project.

To the extent that payments are received for the SR&ED from Canadian taxpayers who do **not** intend to claim SR&ED credits, the payments will not be treated as contract payments, provided the performer meets the requirements mentioned in section I.3.1. This underlines the importance of communicating on this issue with any Canadian customers who you have performed SR&ED for during the year.

It should also be noted that only "SR&ED related"[96] payments are treated as subcontractor payments. Therefore if part of any such payment can be attributed to non-SR&ED (e.g. marketing) efforts, these amounts will not meet the definition of a "contract payment" and therefore will not reduce that qualified SR&ED expenditures.

## K.1.2 Tax planning example – contract payments or government assistance

| | Cost | SR&ED? | Gov't $Eligible SR&ED | |
|---|---|---|---|---|
| Project 701 | $10,000 | No | $20,000 | - |
| **Project 702** | **$20,000** | **Yes** | **$10,000** | **$10,000** |
| Project 703 | $10,000 | Yes | $20,000 | - |
| | $40,000 | | $50,000 | $10,000 |

In the example shown above, if the projects were not separately disclosed, there would be no cost overruns and therefore no eligible SR&ED amount. This example illustrates some of the potential benefits available from "properly" negotiating the wording of SR&ED contracts at the outset of the work.

[95] Schedule 32 - B
[96] Subsection 127(9) - definition of "contract payment"

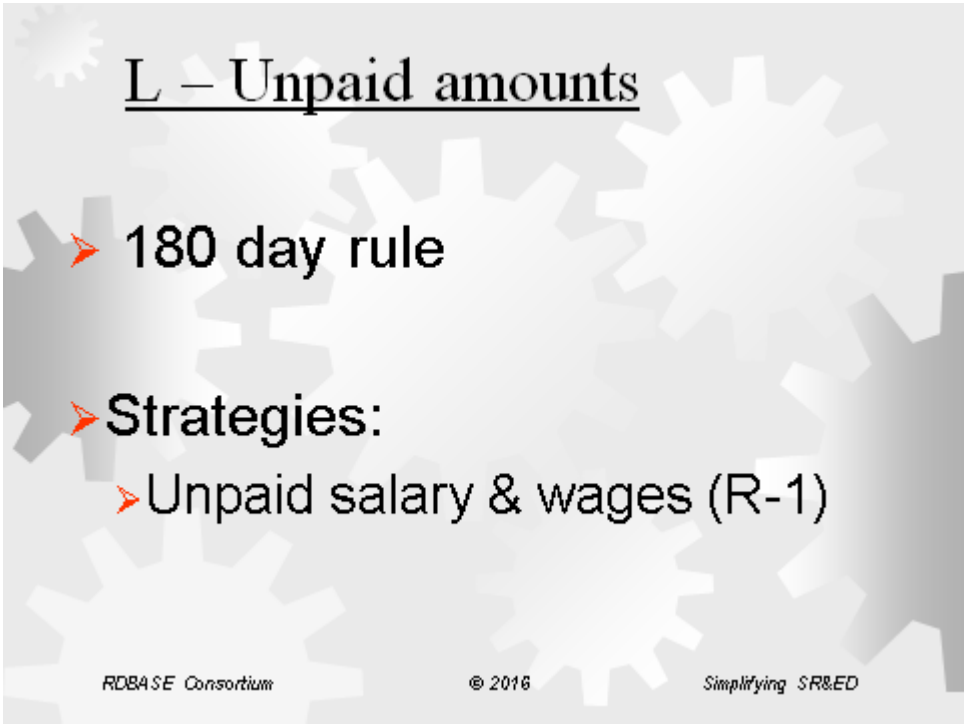
**Ensuring ability to claim via contract**

To ensure that your company maintains its right to claim credits and work performed, we recommend the following wording be added to the contracts:

a) you perform in your behalf and/or
b) which you perform for others:

**"In the event of any of the development activities performed are eligible for Canadian SR&ED tax credits, X Co. reserves the right to claim these credits."**

# L Unpaid & prepaid amounts




The **current case study makes the assumption** that all SR&ED costs were paid within 180 days of year-end (i.e. **no unpaid amounts**). As a result, the full costs of these SR&ED expenses incurred in Canada will be eligible for SR&ED credits in the year in which they are incurred.

Often, there are amounts which remain unpaid and which will become eligible for tax credits in the year in which they are actually paid.

### L.1.1.1 Unpaid salaries, wages, and other remuneration

Where accrued salaries, wages, and other remuneration remain unpaid 180 days after the end of the year in which you incurred the expense, the income tax legislation deems the expense,

> "not to have been incurred in the year, but rather in the year the amount is paid."[97]

Section ***R*** provides further examples of how the legislation surrounding **"unpaid amounts" can be used as a tax planning vehicle for cash strapped R&D companies** to maximize their investment tax credit claims.

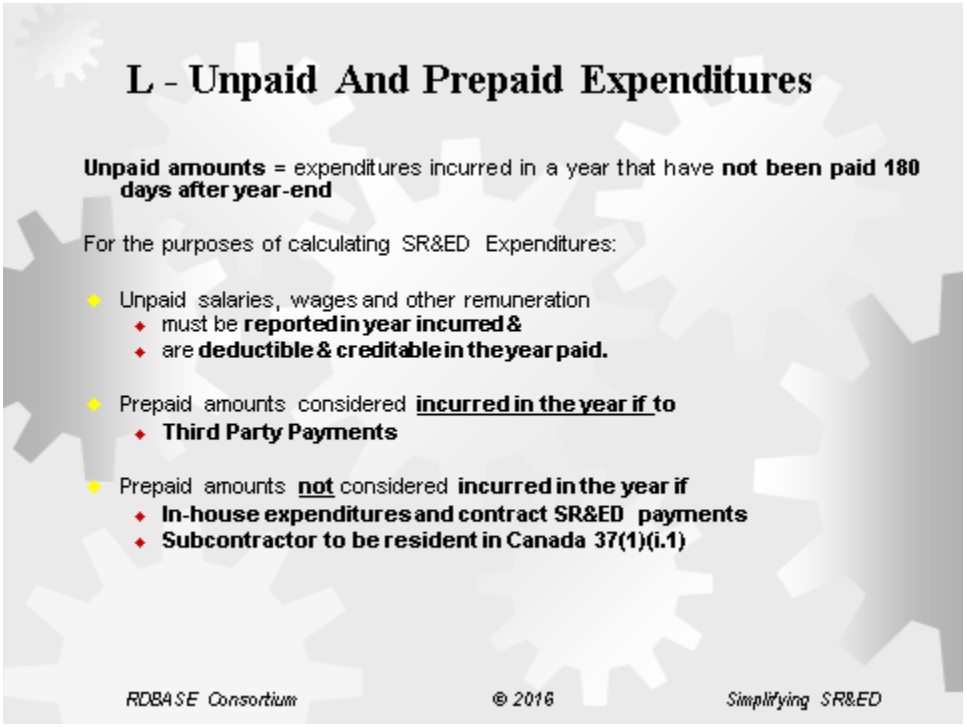
Note: If you are using the proxy method to determine overhead, unpaid salaries and wages are not included in that calculation.

[97] Subsection 78(4)

**Prepaid amounts:**

With the **exception of payment to universities and public research institutes**[98] SR&ED expenses are only claimable in the year they are incurred so prepaid expenses would need to be claimed in the year the amount was:

- consumed or transformed (for a material expense) or
- incurred (for a subcontractor expense).




[98] Prepayment for Third Party payments eligible per 37(1)(i.1)

# M Foreign SR&ED expenses

The **current case study makes the assumption** that **all SR&ED** costs were **incurred within Canada** (i.e. **no foreign expenses**). As a result, the full costs of these SR&ED expenses incurred in Canada will be eligible for SR&ED credits.

Basically, to be eligible SR&ED expenditures the Canadian SR&ED legislation requires that eligible activities be **performed in Canada** by a **taxable supplier,** which includes,

> "a non-resident person...by which the amount was payable…in the course of carrying on business in Canada through a permanent establishment."[99]

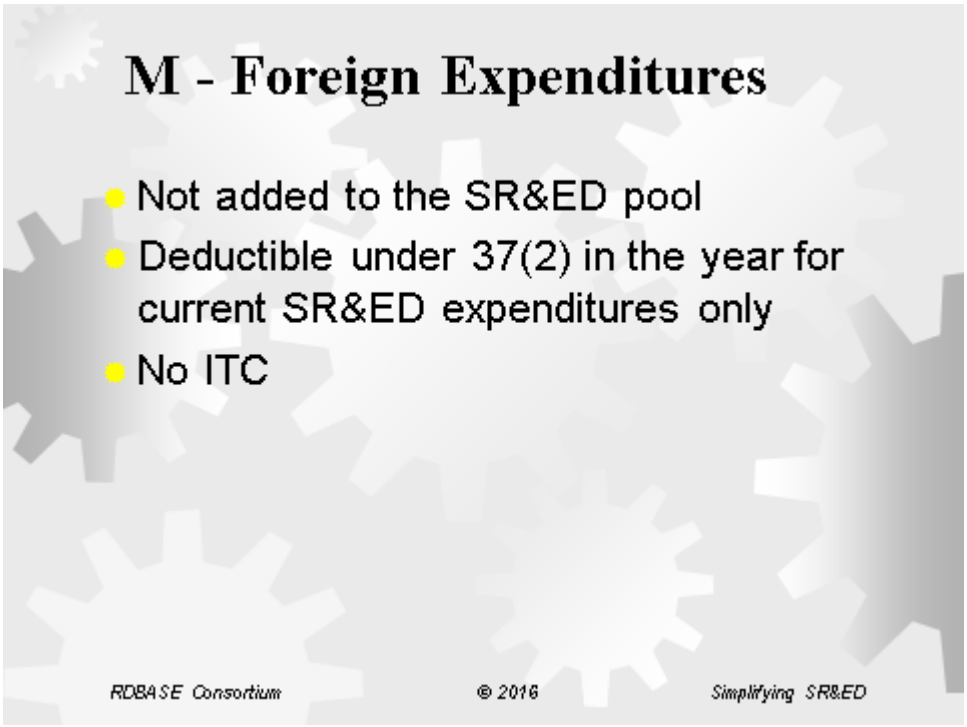
Often, performers will hire foreign contractors to assist with SR&ED work. In the author's experience, the eligibility of these payments for SR&ED tax credits is a source of major confusion among taxpayers. Generally speaking, the amounts are included to the extent that income tax withholdings have been taken.


## M.1 SR&ED wages outside Canada – eligible up to 10% - if no foreign taxes paid

Currently to be eligible SR&ED expenditures the Canadian SR&ED legislation requires that eligible activities be performed in Canada by a taxable supplier.

Based on the results of various tax cases , the CRA had taken the position that it will deny SR&ED credits eligibility on "salary and wages" of Canadian employees while abroad . This position had been softened by various administrative relief provisions but in the author's opinion remained a source of confusion for claimants & CRA staff alike.

[99] taxable supplier defined per ITA subsection 127(9)




One of the most compelling arguments to support the eligibility of SR&ED credits on salary and wages of Canadian employees while abroad is the fact that the Canadian employee remains taxable on his or her salary and wages regardless of where these duties are performed.

As a result, in most if not all cases, the CRA earns substantially greater tax revenues from the personal taxes of the individual employee than it pays out to the SR&ED performers (i.e. the employers) on these wages.

**The 2008 budget** legislation now proposes,

"The amount of a taxpayer's expenditure

(i) for **salary or wages paid to an employee who was resident in Canada** at the time the expense was incurred,

(ii) in **respect of SR&ED** that
(A) was **carried on outside Canada**,
(B) was directly undertaken by the taxpayer,
(C) related to a business of the taxpayer, and
(D) was **solely in support of SR&ED carried on in Canada by the taxpayer; and**

(b)"...**10 per cent of the total of all expenditures**, made by the taxpayer in the year, ... for salary or wages paid to an employee in respect of SR&ED that was **carried on in Canada**"

Furthermore the legislation requires that the,

"**salary or wages is not subject** to an income or profits **tax imposed,** because of the employee's presence or activity in a country other than Canada, by the government of that **other country**."[100]

There is an additional formula to **pro-rate this allocation for periods before Feb. 25, 2008.**

**Author's commentary:**

This legislation appears to positively address a significant issue of uncertainty which affected a majority of claimants. As a result it will likely have a **significant positive effect** on simplifying both the claim and audit processes.

## M.1.1 Becoming a taxable supplier

Basically, for a subcontractor to be a taxable supplier they must file a Canadian income tax return.

File a Canadian tax return

- If the subcontractor claims that they conducted work through a permanent establishment they could file a Canadian tax return and pay tax on its net, Canadian source income.

Effects:

SR&ED performer

- If the SR&ED subcontractor is a taxable supplier and performed the work in Canada, the payor would be eligible for SR&ED expenses.

Non-resident

- Would file a Canadian tax return and pay tax on its net, Canadian source income. This would most likely earn the subcontractor an equivalent foreign tax credit when filing returns in its country of residence.

Net result: If properly structured, this could represent a transaction which is tax neutral to the subcontractor, however, the payor would now be entitled to an investment tax credit on these payments.

[100] Proposed ITA 37(9)(b)

# N Overhead - traditional Vs. proxy election

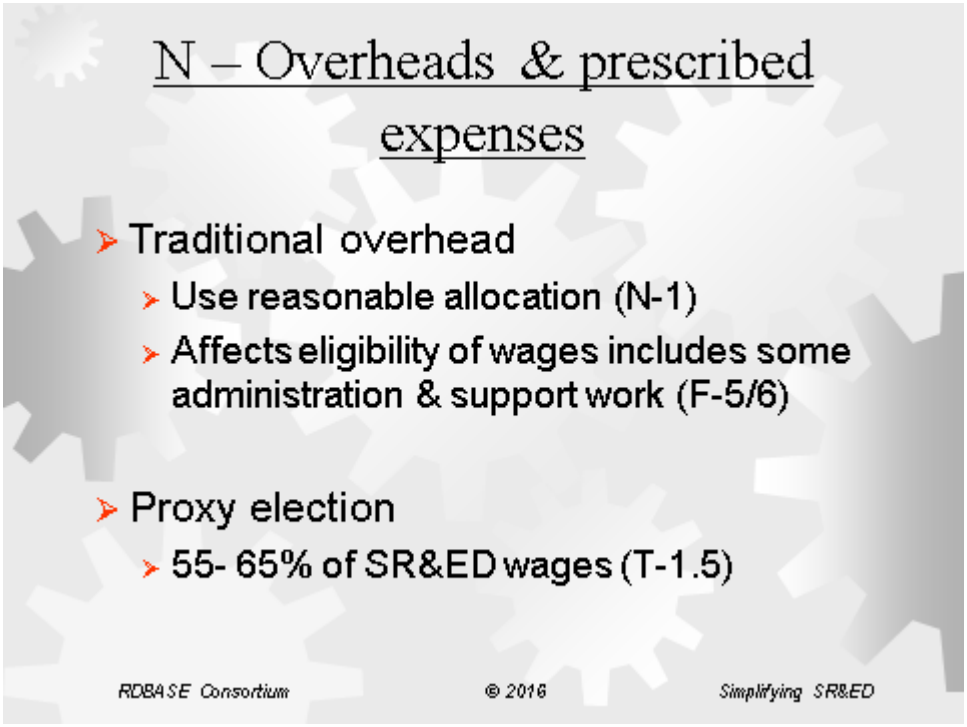
**Decision tree**

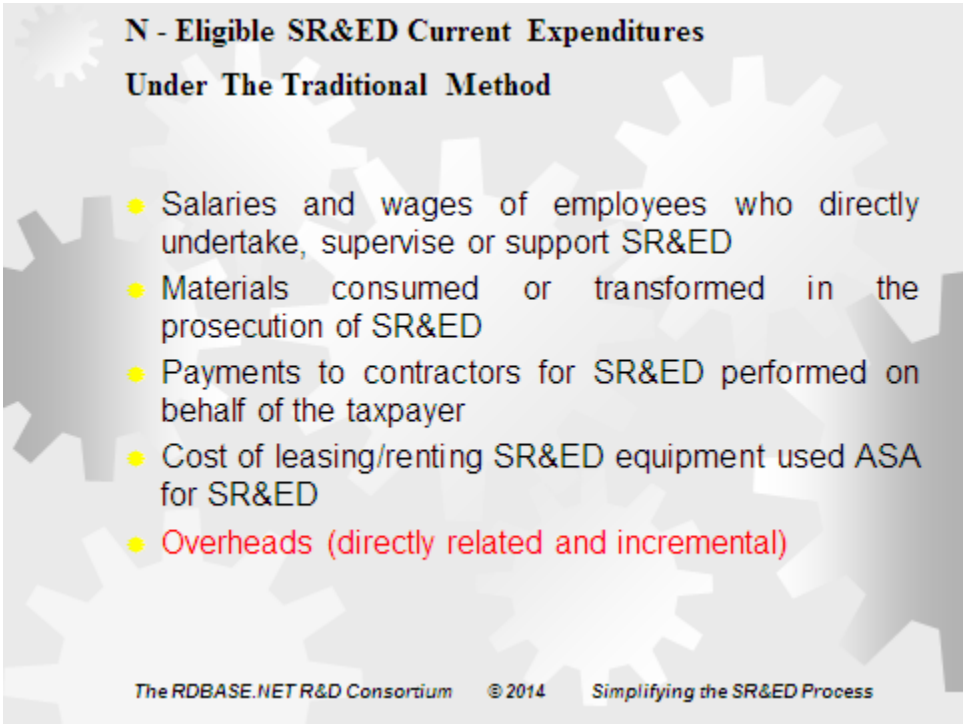
## N.1.1 SR&ED overhead allocation issues

**if NO**

| | Question: | Issue: | Result(s) | ITA section | See WP |
|---|---|---|---|---|---|
| **if YES** | | | | | |
| 1 | Can we provide a reasonable basis to allocate SR&ED overheads? | option for proxy method of overhead allocation | use proxy election: no claims for leased assets <50% or any other overheads | 37(1), Regulations 2900(6) & 2902 | ***N-2*** |
| 2 | Does traditional overhead amount exceed proxy allocation? | selection of traditional vs. proxy method | use proxy election | Regulations 2900 (4-10) | ***N-2*** |
| 3 | Have you completed and filed form T661to claim SR&ED overhead expenses - not to exceed overhead limit | impact of selecting traditional method | traditional overhead expenses form part of eligible SR&ED expenditure pool as well as qualified expenditures for ITC. | 37(11) | ***T-0*** |
| | | | overhead allocations should include reasonable amounts for administration | Regulation 2900(2) | ***N-2*** |

## N.2 Overhead allocation options and "prescribed" (ineligible) expenses



## N - Eligible Current SR&ED Expenditures

## Under The Proxy Method

- **Salaries and wages of employees** directly engaged in SR&ED
- **Materials consumed or transformed in the prosecution of SR&ED**
- **Payments to contractors for SR&ED performed on behalf of the taxpayer**
- **Cost of leasing SR&ED equipment (not general purpose office equipment and furniture GPOEF) used all or substantially all (at least 90%) for SR&ED**
- **50% of cost of leasing equipment (not GPOEF) used at least 50% for SR&ED**

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## N - Prescribed Proxy Amount (PPA)

- Proxy election is **optional & annual**
- Subsection 37(10)
  - election must be filed with first filing of the T661,
  - before deadline
  - cannot amend later
- Notional amount for overheads
  - For calculation of ITC only
  - Not treated as a SR&ED expenditure
  - Actual overheads deducted as business expense

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# N - Prescribed Proxy Amount

- 65% of salary base: salaries and wages of employees directly engaged in SR&ED

Reduced to

- 60% for 2014 &
- 55% for 2014+

Salary base:

- excludes taxable benefits under s.6 or s.7
- excludes bonuses or remuneration based on profits
- excludes deemed payments under s.78(4)



# N - Specified Employee

- In calculating the proxy amount, the salary of a Specified Employee is limited to the least of:
  - SR&ED portion of salary & wages
  - 2.5 times yearly maximum pensionable earnings &
  - 75% of total salary and wages
- Cap applies to the sum of salaries and wages received from an associated group of companies

## N.3 Differences between proxy election & traditional overhead treatments

Traditional overheads:

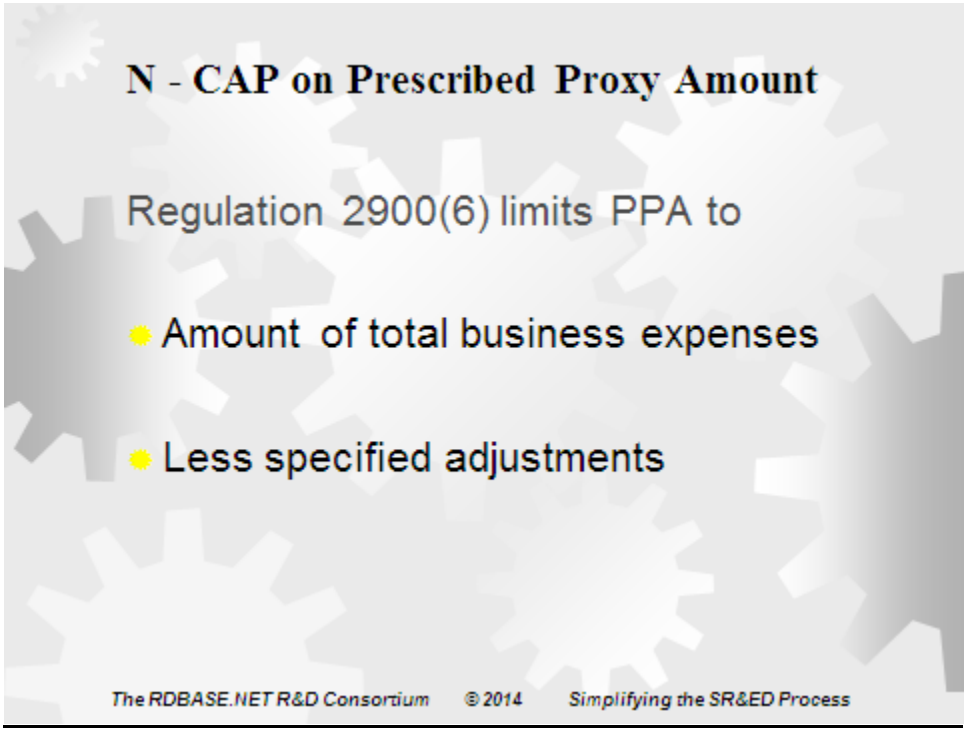
- Amounts form part of SR&ED expenditure pool & qualified expenditures for ITC purposes.
- This election will also allow companies to claim furniture and other office equipment that would not be allowed under the proxy method.

A comparison between the effects of these two methods has been provided below & on working paper ***N-0***.

### N.3.1 Excerpt from CRA form T4088(E) Rev. 04 – Guide to form T661

### N.3.2 Treatment of expenses under the proxy and traditional methods

| Expenditure | Traditional method | Proxy method |
|---|---|---|
| Direct SR&ED salaries or wages | ▪ eligible for ITC<br>▪ deductible 37(1)(*a*) (see line 300) | ▪ eligible for ITC and base for proxy amount (see line 502)<br>▪ deductible 37(1)(*a*) (see line 300) |
| ▪ Overhead expenditures directly related to SR&ED | ▪ eligible for ITC<br>▪ deductible 37(1)(*a*) | ▪ not specifically identified<br>▪ covered in prescribed proxy amount (see examples below)—PPA is eligible for ITC.<br>▪ deductible as regular business expenses only—not deductible under 37(1)(*a*) |
| Other expenditures claimed separately:<br>▪ materials consumed or transformed in performing SR&ED<br>▪ lease costs of SR&ED equipment<br>▪ expenditures for SR&ED directly undertaken on your behalf<br>▪ third-party payments | ▪ eligible for ITC<br>▪ deductible 37(1)(*a*) | ▪ eligible for ITC<br>▪ deductible 37(1)(*a*) |
| The **proxy amount covers** overhead expenditures such as:<br>▪ office supplies<br>▪ general purpose office equipment<br>▪ heat, water, electricity, and telephones<br>▪ support staff salaries or wages<br>▪ travel and training<br>▪ property taxes<br>▪ maintenance and upkeep of SR&ED premises, facilities or equipment<br>▪ any other eligible expenditures directly related to the prosecution of SR&ED that you would not have incurred if the SR&ED had not occurred | | |




**Summary of proxy inclusions:**

**Amounts included in the proxy amount:**

Generally speaking, the proxy amount represents an allocation for administrative activities above (i.e. clerical support, accounting, SR&ED contract administration, purchasing, training or maintenance) as outlined.

**Amounts NOT included in the proxy or traditional overhead amount:**

Costs ineligible per section 37:

- Materials in cost of goods sold (section 37(1))
- Rent (section 37(8))
- Land or buildings (section 37(4))
- Rights to existing SR&ED (section 37(4))
- Foreign labour (section 37(2))

**Recommendations for optimal allocations:**

In the author's opinion, the requirement to continually link eligible activities to technical uncertainties underlines the importance of documenting the relevant support activities throughout the research process, rather than at year-end, via judgmental allocations.

## N.4 Issue: timing of tax on proxy amount

### N.4.1 Tax mechanics of issue: received vs. receivable

Several tax programs defer taxation of the "proxy portion" of the Ontario Innovation Tax Credit (OITC) and the new Ontario research and development tax credit (ORDTC) until the subsequent taxation year.

What the program and CRA are doing is reducing the current year's government assistance for the amount of assistance earned on the **Prescribed Proxy Amount (PPA)** and treating it as income the following year by making the adjustment on schedule 1.

In other word the **government assistance on the PPA is being treated as taxable only when actually received.**

#### N.4.1.1 CRA – APP 2000-3

The CRA has gone further in SR&ED Application Policy Paper SR&ED 2000-03 to state the following:

> "In determining the amount of assistance in the pool of deductible SR&ED expenditures the amount of provincial or territorial tax credits which relates to the PPA is not considered to be assistance that reduces the SR&ED allowable expenditures under paragraph 37(1)(d).
>
> As the PPA is not an expenditure under paragraphs 37(1)(a) or subparagraph (b)(i), but is a notional amount which is used in lieu of the actual overhead expenditures in the calculation of the ITC, the PPA is not added to the SR&ED expenditure pool.
>
> Consequently, the portion of the provincial or territorial tax credits which relates to the PPA should be included in income under section 9 or paragraph 12(1)(x) of the Act ..."

### N.4.2 Legislative support for deferral

#### N.4.2.1 Income Tax Act

The amount is taxable under paragraph 12(1)(x) of the *Income Tax Act*. When reading this section and comparing it to the definition of government assistance under 127(9) there is a strikingly similar set of words:

> "… grant, subsidy, forgivable loan, **deduction from tax**, investment allowance, or any other form …" that is "… from a government, municipality, or other public authority…"

Therefore, government assistance is always taxable, but what about the timing of when it is taxable?

The amount taxable under 37(1)(d) as a reduction to expenditures is to be reported on the basis of

> "… at the taxpayer's filing-due date for the year, the taxpayer has received, is entitled to receive, or can reasonably be expected to receive,"

the government assistance on the expenditures. Therefore, the amount is included in income as it is earned, as it is based on the amount receivable.

However, the wording of 12(1)(x) states that

> "… any particular **amount received** by the taxpayer in the year, in the course of earning income from a business or property, …"

The net result being that **government assistance on the PPA is only taxable when actually received.**

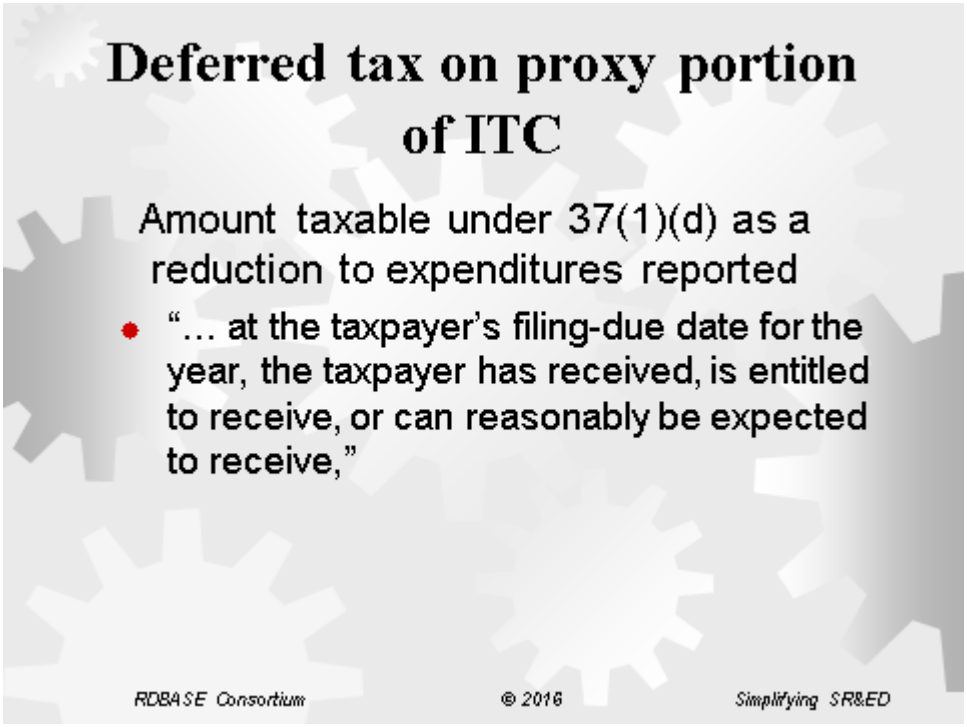
## N.5 Results & filing implications / planning

**As previously stated, the government assistance on the PPA is only taxable when actually received.** Note that the CRA and the **tax software will assume this amount is actually received the following year.** While this may not be the case (especially those that file their SR&ED claim close to the 18 month deadline)

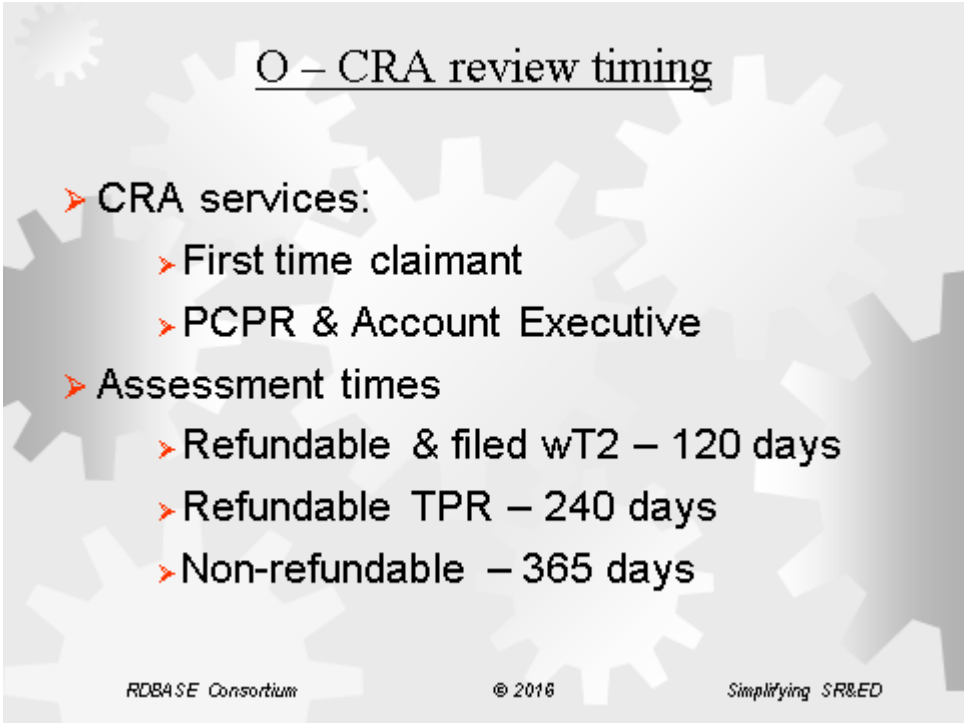
Example:

- For a 2008 claimed filed in 2009
- the amount may not be received until fiscal 2010 or even 2011 and
- the company would be entitled to defer recognition of the proxy related ITC until this time!.

This could be a major advantage to a firm who had exceeded income limits to the extent it faced a partial phase out its enhanced Investment Tax Credits (ITC's).



# o SR&ED – CRA assessment times & services




## O.1 Some of the services available to SR&ED claimants

**First-time claimant service** - puts new claimants in contact with an SR&ED representative who can provide the information, tools, and assistance needed to complete an SR&ED claim.

**Preclaim project review service** - gives clients a preliminary opinion about the eligibility of a project.

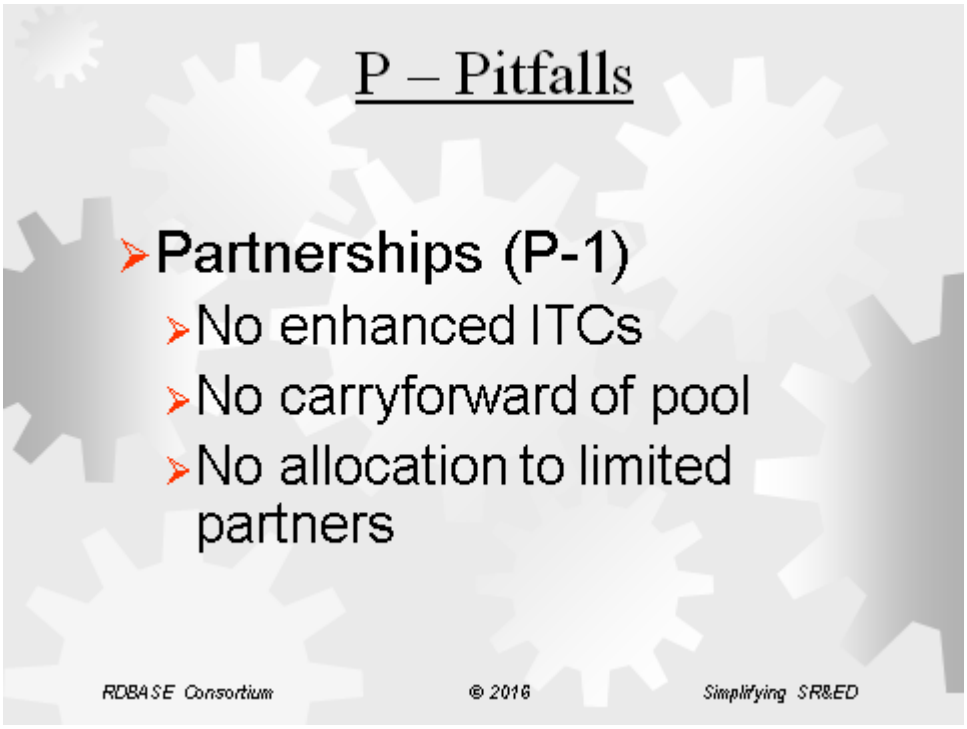
**Account executive service** - gives clients continuity and one-stop SR&ED information by assigning a designated contact person who can answer questions and give guidance on the SR&ED program.

## O.2 Service standards – time for CRA to assess a claim

**One of the goals of the SR&ED program** is to process claims in a timely, consistent, and predictable way. To support timely processing, the CRA has established service standards and has succeeded in meeting these standards.

- **Current-year refundable claims** (applies to Canadian-controlled private corporations) will be processed within **120 days**, 90% of the time.
- **Client-requested adjustments** of refundable claims will be processed within **240 days**, 90% of the time.
- **Non-refundable claims** will be processed within **365 days**, 90% of the time.

# P SR&ED tax pitfalls to avoid




## P.1 Use of partnerships for SR&ED

### P.1.1.1 Allocation of Investment Tax Credits must follow income allocations

The legislation provides for the allocation of the amount that may reasonably be considered to be a partner's share of the amount of investment tax credit of the partnership to a taxpayer that is a partner at the end of the fiscal period of the partnership. An allocation of investment tax credits is generally considered to be the partner's reasonable share of the investment tax credits if it is made in the same proportion in which the partners have agreed to share any income or loss[101].

### P.1.1.2 No carry forward of the SR&ED expenditure pool

In calculating a partner's share of the income or loss of a partnership for a taxation year the legislation[102] requires that the partnership income for the year be calculated as if the amounts available in its pool of deductible SR&ED expenditures were deducted by the partnership. Consequently, a partnership is unable to carry forward SR&ED expenditures for deduction in a subsequent year.

### P.1.1.3 No enhanced or refundable credits

As discussed in Section E, eligibility for enhanced and refundable credits is restricted to qualified corporations.

[101] As required per ITA subsection 127(8.1)
[102] under ITA paragraph 96(1)(*e*.1)

### P.1.1.4 All allocations to limited partners denied

In addition, in calculating the share of a partnership loss that is deductible by a "specified member" of the partnership for a taxation year, any loss allocation must be reduced by any amounts deducted through the R&D expenditures pool[103] in calculating the partnership income[104] from that source or sources in a particular place. For this purpose, the term "specified member" of a partnership is a "limited partner" [105] at any time in the period or year.

The legislation does however, provide that the amount by which certain of the partnership investment tax credits exceeds the total of the amounts determined to be a limited partner's share of those investment tax credits can be reallocated to partners who were members of the partnership throughout its fiscal period and who were not limited partners during that fiscal period[106]. The amount that may be reallocated to a particular partner that was not a limited partner is the portion that is reasonable in the circumstances considering the partner's investment in the partnership, including debt obligations of the partnership.

To be considered actively engaged in the activities of a partnership, the CRA states, "a partner would normally be expected to contribute time, labour and attention to the business of the partnership to a sufficient extent that such contributions would be a determinant in the successful operation of the business."[107]

## P.2 Partnerships - re-establishing entitlements to enhanced ITCs

Unlike corporations, partnerships are not provided with an ability to earn enhanced investment tax credits. This was illustrated in the **case of Allcolour Chemicals Ltd**.[108] where:
**two companies, which would have each been eligible for enhanced credits, were denied this incentive because, they performed the work within a partnership.**

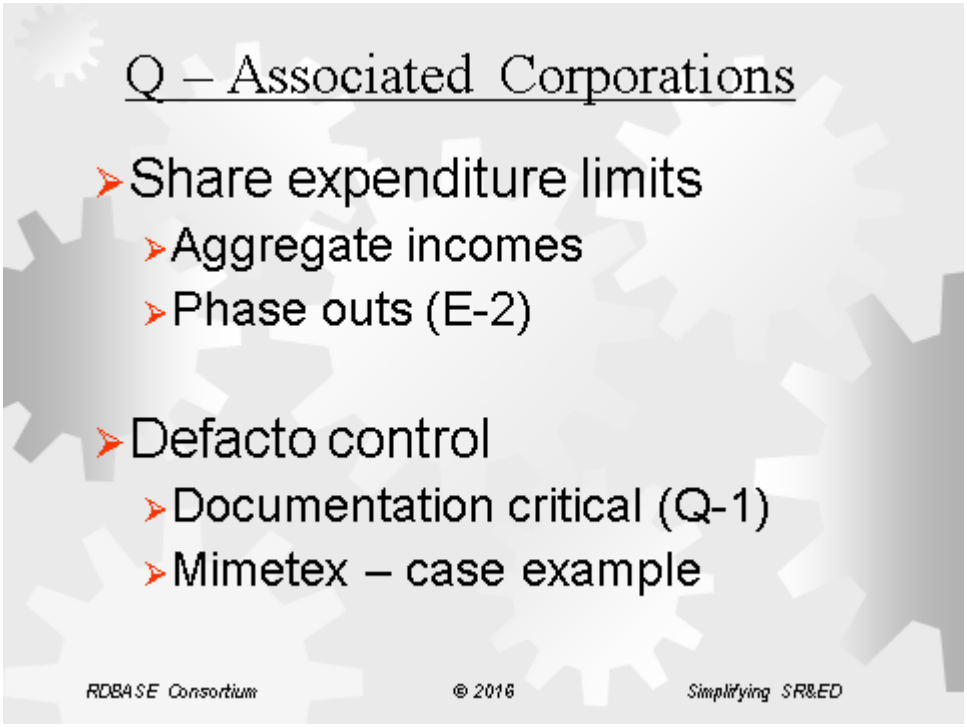
In general, three distinct legal requirements of a joint venture (as above) that required of a partnership are:

1) a joint legal interest in the properties in question,
2) a right to mutual control and management, and
3) a limitation of the objective to a limited timeframe or number of undertakings.

In the authors' opinion, if the transaction had been structured as a joint venture rather than a formal partnership these same costs may have been eligible for enhanced tax credits. Companies in position to form a potential partnership or joint venture should seek legal advice, while keeping in mind SR&ED tax implications.

[103] SR&ED expenditure pool as defined under section 37
[104] per ITA paragraph 96(1)(*g*)
[105] as defined in ITA subsection 96(2.4)
[106] as provided under ITA subsection 127(8.3)
[107] Interpretation Bulletin 151-R5, paragraph 95
[108] See Case of Allcolour Chemical Ltd. v. R [1993] 2 C.T.C 3050, D.T.C. 1194 (TCC)

# Q Associated corporations must share SR&ED expenditure limits




The *Income Tax Act* generally deems that, where a shareholder owns greater than 50% of the fair market value of the capital shares of a company it will be deemed to control it. If a person owns more than one company in this fashion the companies will be associated for taxation purposes. This association umbrella can be extended wherever related persons each control corporations and there is 25% cross-ownership of shares in either direction.

Since associated companies are required to share the various business[109] and expenditure[110] limits for reduced taxes and enhanced SR&ED incentives respectively, the legislation also allows rents received by an associated company to be deemed active rather than passive income. An example of the effects of association on the SR&ED expenditure limits is illustrated in Parts 8 & 9 of Federal Tax Schedule 31 (see working papers T-2.1).

## Q.1.1 Additional guidelines & factors to consider in evaluating defacto control

The CRA states that, "de facto control consists of all forms other than de jure control, by which a person may exercise control over a corporation." and provides the following examples:

Major factors:

1) The ability to change the Board of Directors or reverse its decisions,

2) Making alternative decisions concerning the actions of the corporation in the short, medium or long term,

[109] Business limit defined per ITA subsection 125(3)
[110] SR&ED Expenditure limit defined per ITA subsection 127(10.2)

3) The ability to directly or indirectly terminate the corporation or its business, or

4) The ability to appropriate its profits and property.

Additional general factors:

a) The percentage ownership of voting shares in relation to the holdings of other shareholders,

b) Ownership of a large debt or retractable preferred shares,

c) Shareholder agreements including the holding of a casting vote,

d) Commercial or contractual relationships of the corporation, for example, economic dependence on a single customer or supplier,

e) Possession of a unique expertise that is required to operate the business, and

f) The influence that a family member who is a shareholder, creditor, supplier, etc. may have over another family member who is a shareholder of the corporation.

### Q.1.2 Implications to corporate structure

This example illustrates that there are considerable pitfalls and potential opportunities to structuring ventures with foreign shareholders, public companies and other companies in a manner that maintains CCPC status and eligibility for enhanced tax credits. Some of the related opportunities are discussed further in the next section.

## Q.2 Mimetex Pharmaceuticals Inc. vs. The Queen[111]

**Facts:**

During the year in question, Mimetix (a foreign corporation) owned 50 common shares in the capital stock of the appellant, and two Canadian residents, who were also directors, owned 25 common shares each.

There were three directors elected to the Board, one a U.S. resident and the other two Canadians.

### Q.2.1 Issue(s): "de facto" control

Both parties agreed that no one had "de jure" (voting) control over the appellant. The issue is rather whether the appellant was controlled in fact, directly or indirectly in any manner whatever, by a non-resident. In other words, it has to be determined whether the non-resident corporation Mimetix Inc. ("Mimetix"), which owned 50 per cent of the voting shares of the appellant in 1996, exercised "de facto" control over the Canadian company.

The CRA's council pointed out that;

- The two Canadian directors, who, according to the appellant's argument, were supposed to control the appellant, in fact knew almost nothing about the appellant (for example one did not know at the time of his examination for discovery how many employees were working for the appellant, who had signing authority for the appellant, etc.).

[111] (TCC) Docket: 1999-4847-IT-G Date: 2001/11/08

- Mimetix had financial control over the appellant and had a controlling influence over the appellant's affairs. This is best illustrated, in his view, by the fact that a Canadian director of the appellant, had to leave following a conflict with another U.S. doctor, who was not a shareholder, director or officer of the appellant, but was hired by the U.S. director on his own decision, without any resolution of the board of directors.

**Relevant legislation and analysis:**

De facto control within the meaning of subsection 256(5.1) of the Act which reads as follows:

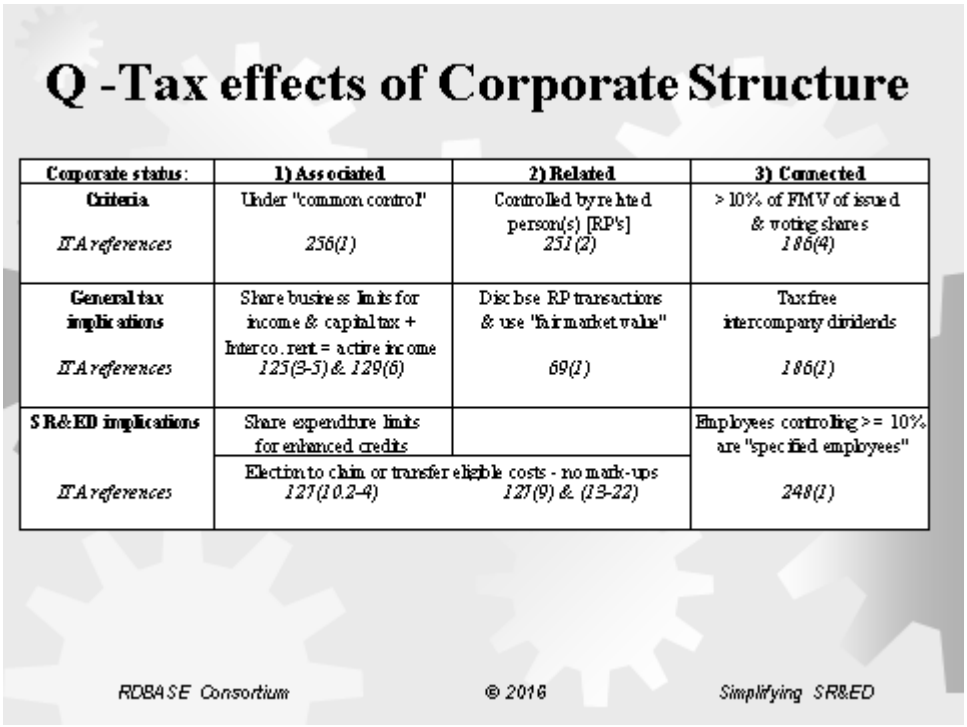
> "Control in fact. …, a corporation shall be considered to be so controlled by another corporation, person or group of persons (in this subsection referred to as the "controller") at any time where, at that time, **the controller has any direct or indirect influence that, if exercised, would result in control in fact of the corporation, except** that, where the corporation and the controller are dealing with each other at arm's length and
>
> the influence is derived from a franchise, license, lease, distribution, supply or management agreement or other similar agreement or arrangement, the main purpose of which is to govern the relationship between the corporation and the controller regarding the manner in which a business carried on by the corporation is to be conducted.."

**Ruling and rationale:**
Based on the facts provided, the judge concluded that,

> **"Indeed the evidence discloses that the only director that exercised such control and supervision was the non-resident director…<u>without</u> the approval of the board of directors."**

**Implications and author's commentary**
In the author's opinion this case underlines the importance of clearly considering "de facto" control issues whenever there are foreign shareholders or directors of a Qualified Canadian Controlled Private Corporation.

## Q.3 Organizing corporate ownership and structures to optimise credits




### Q.3.1 1) "Associated" corporations

The Income Tax Act generally deems that, where a shareholder owns greater than 50% of the fair market value of the capital shares of a company it will be deemed to control it.[112] If a person owns more than one company in this fashion the companies will be "associated" for taxation purposes. This "association" umbrella can be extended wherever "related persons"[113] each control corporations and there is 25% cross-ownership of shares in either direction[114].

Control of a corporation generally exists by reason of the ability to elect a majority of the directors of the corporation - *dejure* control. The concept of control also includes what is often referred to as *de facto* control. An example of *defacto* control might be a situation where a person held 49 per cent of the voting control of a corporation but held enough "other influence" so that the shareholder could force the corporation to act in accordance with his or her wishes.

"Whether a person can be said to be in actual control of a corporation, notwithstanding that he does not legally control more than 50 per cent of its voting shares, will depend in each case on all of the circumstances."[115]

In the authors' experience, and as illustrated in the previous case analysis of CDD-Rem, misunderstandings of the association and control "rules" and implications are common.

Since "associated" companies are required to share the various business[116] and expenditure[117] limits, for reduced taxes and enhanced SR&ED incentives respectively,

[112] Definition of control per ITA subparagraph 256(1.2)(c)(i)
[113] Related persons defined per ITA subsection 251(2) – includes parents, in-laws & siblings
[114] Definition of "Associated corporations" per ITA paragraphs 256(1)(c to e)
[115] Department of Finance technical notes to subsection 256(5.1)

the legislation also allows rents received by an associated company to be deemed "active" rather than passive income.

As a result, many readers will be familiar with the classic "creditor proofing" organizational structure in which a parent, "holding company," owns the land and building of the "operating companies."

## Q.3.2 2) "Related" corporations

Determination of whether corporations and subcontractors are dealing at "arm's length," requires an examination of the inter-relationship of several different terms within the income tax act:

Arms length:

> "Related persons shall be deemed not to deal with each other at arms length"[118]

Related persons include:

> "Individuals connected by blood relationship, marriage or adoption …. and any two corporations [controlled by related persons]"[119]

Blood relationship,

> "the child or other descendants … or brother or sister .. or, if one is married to the other or to a person who is so connected by the blood relationship to the other…" [120]

In more simple terms the term blood relationship generally includes parents, grandparents, brothers, sisters and in-laws however; it does not specifically include cousins, nieces and nephews.

### Q.3.2.1 Non-Arm's Length (related party) Contract Payments

The SR&ED claim requires that you distinguish between "arm's length" contractors and "non-arm's length" contractors. In general terms, "non-arm's length" contractors are those who are controlled by the same "person" or "related group of persons" as described above.

Effective for taxation years that begin after 1995, expenditures you incur for SR&ED performed on your behalf by a performer at a time when you and the performer do not deal with each other at arm's length are not "immediately" qualified expenditures for ITC purposes.[121] However, the performer can elect to claim or transfer the actual qualified expenditures incurred.[122] This prevents the company from unfairly marking up the costs on "non-arm's length" transactions.

---

[116] Business limit defined per ITA subsection 125(3)
[117] SR&ED Expenditure limit defined per ITA subsection 127(10.2)
[118] as defined in ITA subsection 251(1)
[119] as defined in ITA paragraphs 251(2)(a) & (c)
[120] as defined in ITA subsection 251(6)
[121] ITA paragraph 127(9)(f) in the definition of "qualified expenditures"
[122] form T1146 – ITA subsection 127(13)

## Q.3.3 3) "Connected" corporations

Typically, corporations will be, "connected," when one owns >10% of the fair market value of the shares in another. [123] This will result in an ability pay inter-company dividends in a tax-free manner.[124]

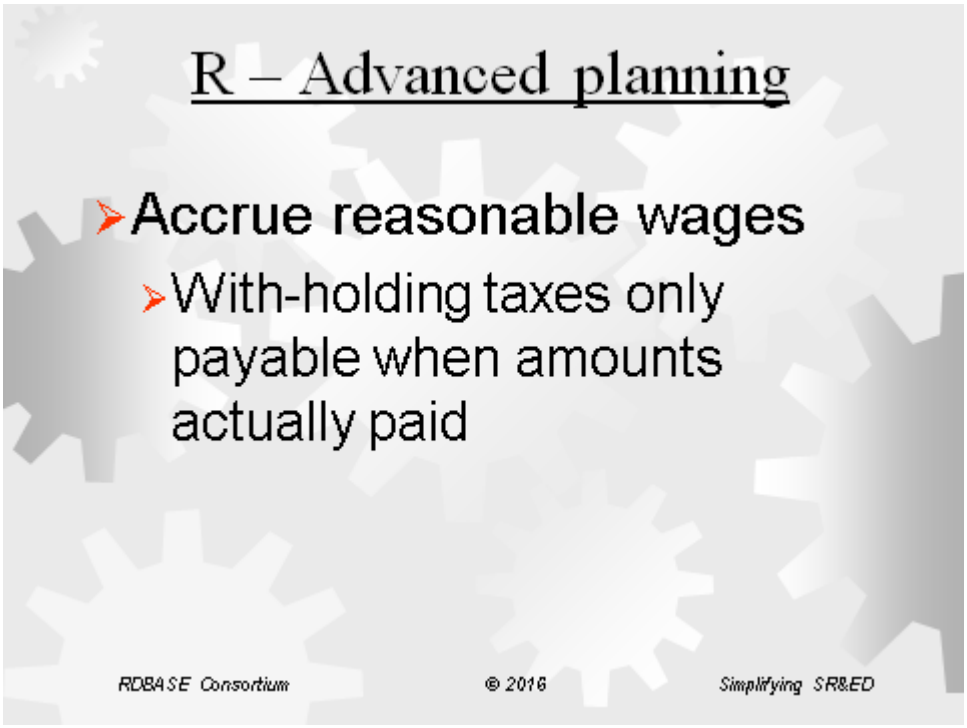
Though there are no other, significant, SR&ED tax implications resulting from corporations having "connected" status, further analysis of such "entities" may uncover the existence of "specified employees."

Generally, this is any employee who (directly or indirectly) owns 10% or more of any class of stock of the company. Further analysis of the "specified employee" rules and implications are outlined in the, "SR&ED strategies – eligible wages," section of this newsletter.

### Q.3.3.1 Summary and implications

In our experience, advance contemplation of these simple relationships is an important step in developing the "perfect" structure for your organization.

[123] as defined in ITA subsection 186(4)
[124] exclusion from Part IV tax per ITA section 186




# R Advanced SR&ED tax planning issues

## R.1 Accruing reasonable R&D wages when cash strapped

Cash strapped companies may wish to accrue reasonable salary & wages to employees working for no remuneration.

**Sample facts**

A business owner performs eligible SR&ED work on his company's behalf but does not have the funds available to pay himself a reasonable salary for the work performed. The business owner estimates that his normal salary for this work would have been $100,000.

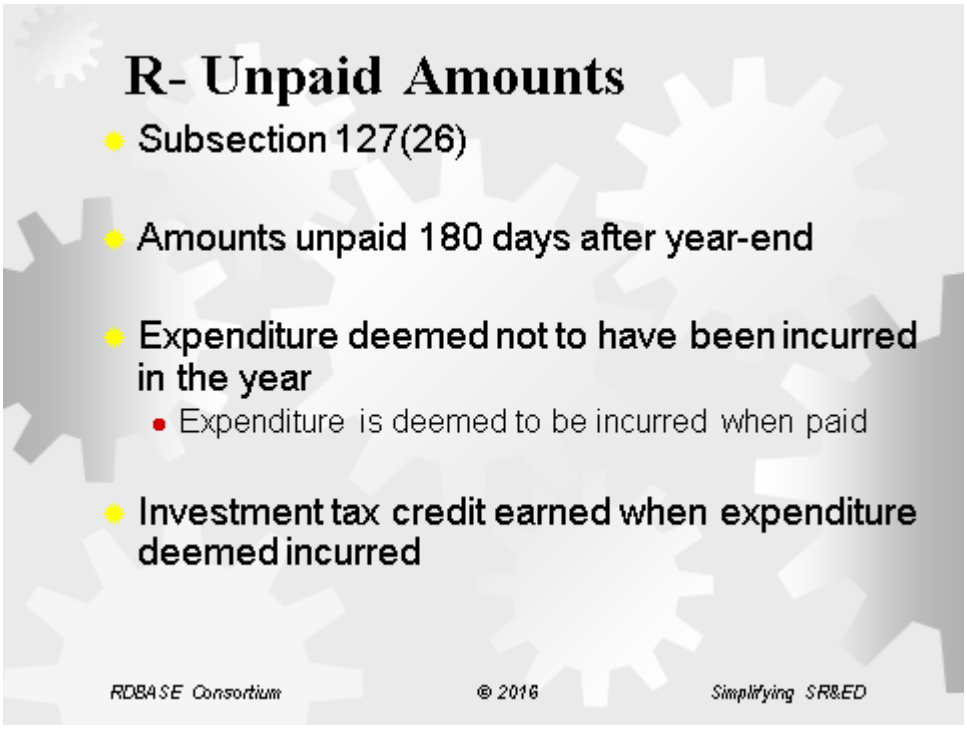
**SR&ED claim = Accrual of reasonable subcontractor fees in year performed**

The taxpayer must assert that subcontractor costs have been **incurred** in the year due to the nature of the work. It is important that the taxpayer claims this work during the year in question to avoid missing the 18 month filing deadline[125] for SR&ED costs. In this case we would try to accrue reasonable, non-arm's-length salary costs (i.e. $100,000) related to the current year's work.

**Effect of this position**

There is a provision in the SR&ED legislation, which (temporarily) denies an investment tax credit for any costs, which remained unpaid within 180 days of year-end[126]. These costs will be audited in the current year and a conclusion will be made on their reasonableness however, investment tax credits will be paid on these amounts only in the years in which they are actually paid.

[125] ITA subsection 37(11) requires any SR&ED claims to be filed in prescribed form within 18 months of year-end
[126] ITA subsection 78(4) denies ITCs on amounts until taxation year in which paid




Furthermore, if this transaction is properly structured, **employees will not have to pay tax on wages until they are received.** [127]

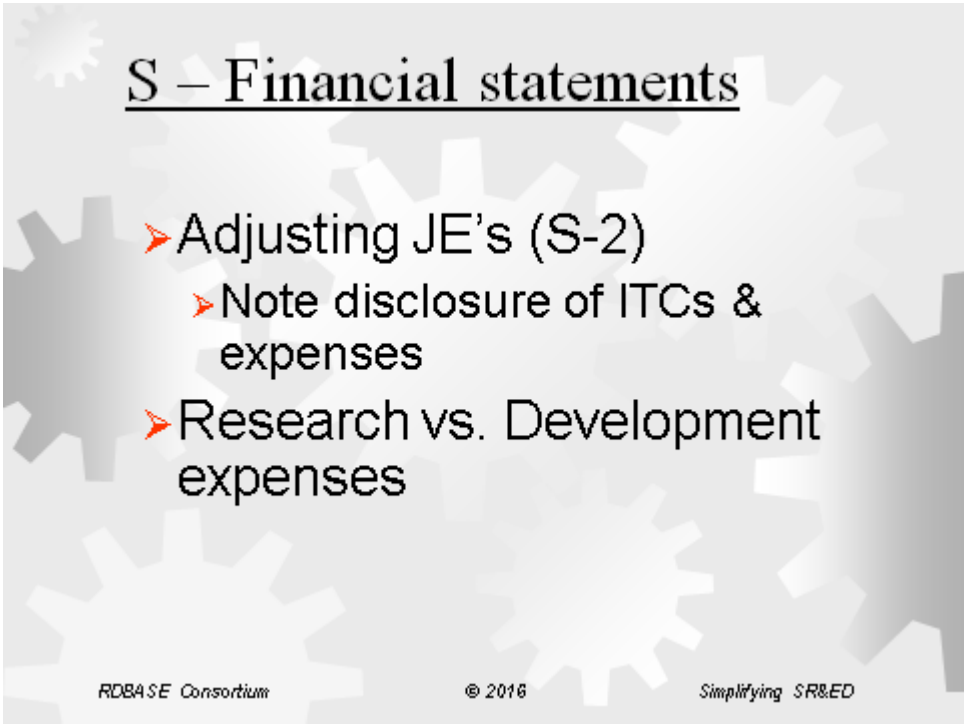
Note: It is important to structure payments to specified shareholders as salaries rather than bonuses, for them to be eligible for SR&ED credits. Also, accrued wages are not included when calculating proxy overhead.

**Notable Quote:**

"When all think alike, then no one is thinking."
**- Walter Lipmann**

[127] ITA subsection 5(1) only taxes employees on income "received" during the year

# s Financial statement considerations




## A.1 Overview of Canadian financial statement requirements when claiming SR&ED tax credits

This section overview issues for preparers of financial statements to follow Canadian generally accepted accounting principles or GAAP". Where appropriate we have attempted to provide cross-references to sections of the *CICA*[128] *Handbook*, which outlines these guidelines. Note: different rules may apply if the company is reporting under U.S. GAAP or IFRS.

### S.1.1 Notes regarding SR&ED adjusting journal entries

In order for the financial statements to meet the criteria for Canadian GAAP (Generally Accepted Accounting Principles) at year-end, adjusting entries may be required.

## S.2 Sample financial statement adjusting journal entry

A note to the financial statements[129] should indicate the amount recognized for SR&ED investment tax credits in the current year and reduce the related research (current) or development (capital) expenses.

Please also note that generally accepted accounting principles (GAAP) require that the research (as well as development) expenses be separately disclosed in the financial statements. An appropriate adjusting entry would be:

[128] Canadian Institute of Chartered Accountants
[129] *CICA Handbook* section 3450

**R&D Base demo**
**General Ledger Adjusting Journal Entries**
**December 31,2015**

| AJE # | WP Ref. | | | | | |
|---|---|---|---|---|---|---|
| 1 | T-0 | DR | Investment Tax Credit recoverable | Current Ontario | 73,248 | |
| | | DR | Investment Tax Credit recoverable | Non current CRA | - | |
| | | DR | Investment Tax Credit recoverable | non-current Ontario | 18,924 | |
| | | DR | Investment Tax Credit recoverable | Current CRA | 197,350 | |
| | | CR | Capital assets | | | - |
| | | CR | Tax Provision | | | 289,522 |
| | | | To recognize research and development related ITC's | | | |
| 2 | T-0 | DR | Professional fees (SR&ED consultant) | current | 10,000 | |
| | | DR | Professional fees (CPA) | current | 5,000 | |
| | | CR | Accounts payable | current | | 10,000 |
| | | CR | Accounts payable | current | | 5,000 |
| | | Total SR&ED fees: | | | | 15,000 |
| | | To recognize fees for SR&ED tax credit support services | | | | |

CICA Handbook section 3450 recommends that a note to the financial statements indicate the amount recognized for SR&ED investment tax credits in the current year and reduce the related research (current) or development (capital) expenses.

**Potential note disclosure: Note X – Research & Development**

Research and development costs incurred during the year and charged to expense amounted to $ 547,344 (prior year $XXX,XXX) and have been reduced by related investment tax credits of $ 0 (prior year $ XXX,XXX). The cost accumulations follow the definition of scientific research and experimental development as provided in the Income Tax Act. No development costs were deferred in the current year.

***Notable quote:***

***"There is no reason anyone would want a computer in their home."***

- Ken Olson, president,
chairman and founder of Digital Equipment Corp., 1977

## S.3 Research vs. development costs:

There are several specific journal entries recommended by *CICA Handbook*[130] regarding research expenses regarding disclosure of research vs. development expenses.

- Research costs are a period expense, which means that they are expensed in the year in which they occur.

- Development costs can also be period expenses, however, when these costs meet all of the following GAAP (Generally Accepted Accounting Principles) criteria, **development costs are always capitalized and amortized** over the expected earning stream of the product or process:

  (1) The product is clearly defined and the costs attributable to it can be identified
  (2) The technical feasibility of the product has been established
  (3) Management has indicated an intention to produce and market the products being developed
  (4) Management has been able to identify a market for the products being developed
  (5) Management has indicated that adequate financial resources are expected to be available to complete products being developed.

In the **current case study we have assumed that one or more of these criteria were NOT met at the fiscal year-end**. If they had been met, we would be required to estimate the expected earnings stream of the process and amortize these costs over the respective earnings period.

Generally accepted accounting principles (GAAP) typically require that costs be matched to their expected earnings streams. With respect to research expenses, the criteria to be used in determining the respective "earnings streams" are specifically outlined (CICA Handbook section 3450.21).

When, at year end, the "research asset" created meets all five of the following criteria all research costs **MUST BE** capitalized as "development costs" and amortized over their expected revenue streams.

Capital tax implications of the above treatment:

Federal capital taxes will impose a 0.225% tax on any “taxable capital” of the corporation in excess of $10 million. In many provinces (including Ontario) the definition of “taxable capital” provides for a deduction of amounts (such as SR&ED expenses) which are deducted for tax purposes but capitalized in the financial statements. Unfortunately, the Federal capital tax calculation (Federal Tax Schedule 33) provides no similar deduction for “development costs” from the calculation of taxable capital.

Implications to management and financial statement preparers:

As a result of the capital tax “problem” management is motivated to argue that perhaps one or more of the criteria were not present. Given the judgements involved as to whether “markets are clearly defined” or “management’s intentions are clear” many companies (and their auditors) feel justified in expensing these **balances in all cases**!

[130] Canadian Institute of Chartered Accountants handbook - section 3805

In the author's opinion, the results of this scenario are;

1. Most public companies financial statements have potential "GAAP" deviations by failing to capitalize these development costs.
2. As a result of this "general tendency" or "standard practice" for public companies, it has been my experience that most bankers **(including those specialized in technology lending!)** do not understand the entire concept of development costs. If presented with these costs on the financial statements they often ask for any explanation of the entire concept rather than merely the composition of the account!

Implications of the current scenario on shareholders:

As an investor in a technology based company, the principal value of the investment is likely attributable to the technologies developed to date rather than the value of tangible assets (i.e. furniture and computer equipment) disclosed on the financial statements. If the statements indicate that expenses were research rather than development the financial statement user may be mislead into assuming that work to date was not "successful" when in fact it was. They may in turn, perhaps justifiably, sue management and the auditor of the company for misrepresentation in cases where they sold the stock without the benefit of this knowledge.

As a result, in the author's opinion**, the entire capital market for investing in technology based companies in Canada is inefficient**: in other words, investors are required to seek additional information on the company's products and processes since this information is NOT being disclosed in the financial statements (as originally intended under GAAP).

Solution(s) to this problem:

1) A simple "legislative" solution to this problem would be to allow a deduction for development costs (particularly to the extent that any were eligible SR&ED) for the purposes of calculating taxable capital for Federal purposes. This may alleviate what I see to be a significant "generic" problem in accounting for technology based companies.

2) In the author's opinion, the larger problem of teaching users of the financial statement to understand the true value of the "development cost" balances will take significantly more time and effort but is worth the "pain."

## S.4 Identifying and valuing development costs

### S.4.1 Development vs. research expenses

Canadian "generally accepted accounting principles" (GAAP) require that costs be matched to their expected earnings streams.

With respect to "research" expenses, there are several criteria to be used in determining the respective "earnings streams" of the resultant products or processes.

When, at year end, the "research asset" created meets all five of the following criteria all research costs MUST BE capitalized as "development costs" and amortized over their expected revenue streams.

(a) the **product** is clearly **defined and the costs** attributable to it can be identified;

(b) the **technical feasibility** of the product has been established;

(c) management has indicated an **intention to produce** and market the products resulting from each project;

(d) management has been able to **identify a market** for the products resulting;

(e) management has indicated that **adequate financial resources** are expected to be available to complete the project.

## S.4.2 Implications to financial statement readers:

As an investor in a technology based company, the principal value of the investment is likely attributable to the technologies developed to date rather than the value of tangible assets (i.e. furniture and computer equipment) disclosed on the financial statements.

If the statements indicate that expenses were research rather than development the financial statement user may be mislead into assuming that work to date was not "successful" when in fact it was.

They may in turn, perhaps justifiably, sue management and the auditor of the company for misrepresentation in cases where they sold the stock without the benefit of this knowledge.

As a result, in the author's opinion, the entire **capital market** for investing in **technology based companies** in Canada is **inefficient**: in other words,

- investors are required to seek additional information on the company's products and processes since,

- this information is NOT being disclosed in the financial statements (as originally intended under GAAP).

### S.4.2.1 Example of Development cost disclosure in Financial statements (F/S's)

In particular the **preparers of the SR&ED claims** are in an excellent position to provide further **guidance** to management on **which projects** in question have met the **"technical feasibility"** criteria and therefore should be considered for disclosure as "development costs" in the financial statements.

An example of how a company might then capitalize and amortize development costs is provided in the following schedule (next page).

### S.4.2.2 Step 1: Determining if technology capitalization criteria met

**Universal Research Corporation**
**Identification of development vs. research costs for financial statement disclosure**
**for the fiscal year ended December 31, 2009**

| | | | | | Capitalization criteria per CICA handbook section 3450.21 * | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Project #: | Name: | start | end | Net costs to date @ Dec. 31, 2009: | 1) product defined & costs identified | 2) technical feasibility established at year end | 3) mgmt. intent to market the product | 4) future market clearly defined | 5) adequate resources exist to bring to market | Devel. Cost (Y / N)? |
| 901 | Widget development | Jan-08 | Jun-10 | $315,582 | Y | Y | Y | Y | Y | Y |
| 902 | Widget improvement | Jan-09 | Aug-10 | $24,131 | Y | Y | Y | Y | Y | Y |

**Notes:**

* - MUST capitalize & amortize costs if ALL 5 "development cost" capitalization criteria have been met at year end.
This is performed EACH taxation year. In this example, project 901 had met the criteria for both the 2008 and 2009 taxation years

### S.4.2.3 Step 2: F/S disclosure of technology "development costs"

| Project / product | Amount | Total Cost | Year | ITC on expenses* | Total capitalized cost* | Amortization start | Amortization rate** | Amortization Accumulated Amortz'n2009 | NBV 2009 |
|---|---|---|---|---|---|---|---|---|---|
| 901 Widget development | $66,000 | $66,000 | 2008 | $27,390 | $38,610 | 2008 | 20.00% | $7,722 | |
| | $512,000 | $578,000 | 2009 | $212,480 | $404,130 | 2009 | 20.00% | $80,826 | $315,582 |
| 902 Widget improvement | $55,000 | $55,000 | 2009 | $22,825 | $32,175 | 2009 | 25.00% | $8,044 | $24,131 |
| Totals | $633,000 | $699,000 | | $262,695 | $474,915 | | | $96,592 | $339,713 |

Notes:
* The capitalized costs should be net of related grants &/or SR&ED investment tax credits on this research
** Amortization rate - straight line over estimated economic life of the technology (5 years) with NO half year provision

## S.4.3 Results & implications to F/S users:

In the case above the company would have:

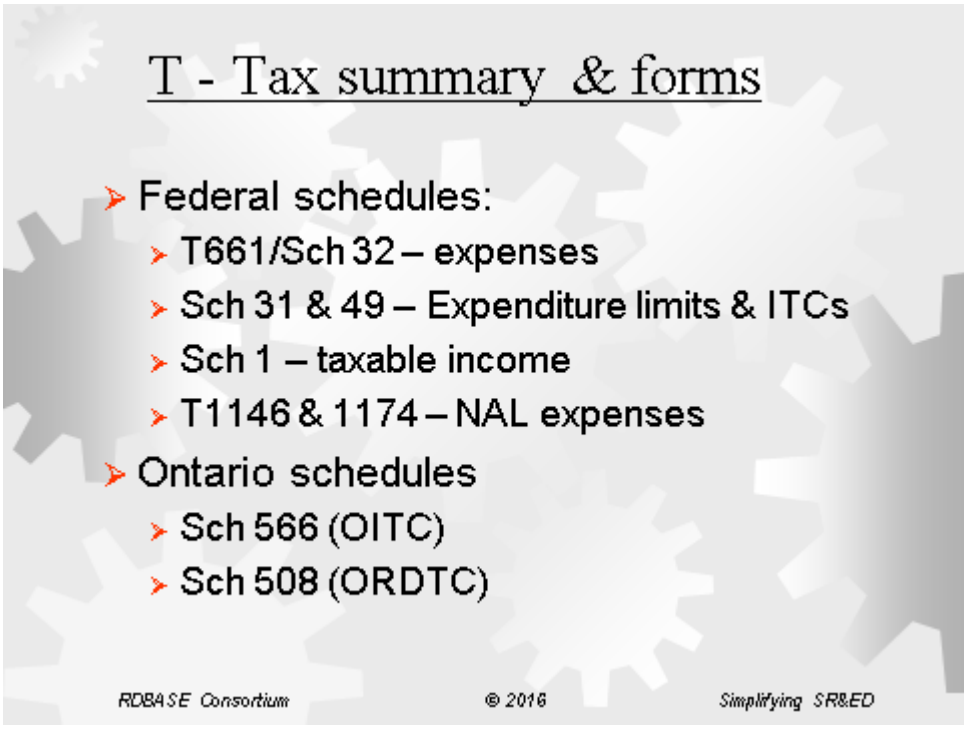
- the net book value (NBV) of these development costs
- disclosed on the balance sheet (i.e. as an asset)
- rather than in the "retained earnings" of the company.

In the author's view this will allow users to ask questions such as:

- Does the world need this widget (i.e. demand)?
- What advantage does this technology represent in the marketplace &
- How much is it worth?

# T Tax Summary & Completed tax forms – cross-referenced to supporting schedules

**Tax credit overview**




**T.1 Federal forms: T661 (Schedule 32) identification of SR&ED expenses**

**T.2 Schedule 31- Calculation of investment tax credits**

**T.3 Form T2S(1): Reconciliation of financial statement & daxable incomes**

**T.4 Non-arm's-length transfer forms**

**T.5 Sch. 566 Ontario innovation tax credit (OITC)**

**T.6 Sch. 508 Ontario Research & Development Tax Credit (ORDTC)**

# Tax Credit Overview

| | | | Expense type | | | |
|---|---|---|---|---|---|---|
| I | **Eligible Expenses: for deduction** | | **Current** | **Capital** | **Total** | **Notes** |
| | | | | | | ***T-0.1*** |
| | Labour | | 400,000 | | | |
| | Materials | ***D-0*** | 25,000 | | | |
| | Subcontractors - Arm's length | | 35,000 | | only 80% eligible to claim | |
| | - Non-arm's length | | 10,000 | | | |
| | Traditional Overhead | | - | | | |
| | Third-party Payments | | 50,000 | | | |
| | | | 520,000 | ***T-3*** | | I-A |
| | ASA R&D Capital | ***D-0*** | | 15,000 | | I-B |
| | Eligible (deductible) R&D Expenses | | | | 535,000 | |
| II | **Qualified Expenses: for calcuation of ITC's** | | | | | |
| | **Add** | | | | | |
| | Proxy (overhead allocation) if elected | ***T-1.8*** | 240,001 | - | calculated at 60% for 2013 | |
| | Qualified expenditures transferred (T1146) | ***T-4.1*** | 10,000 | | | |
| | Shared Use Equipment Allocation (SUE) | | - | - | | |
| | **Less** | | | | | |
| | non-arms letnth contracts | | (10,000) | | | |
| | Subcontractor expenditures Cap | | (7,000) | 20% of arms length contractor | | |
| | Third party payments expenditures Cap | | (10,000) | 20% of third party payments | | |
| | Used equipment & other prescribed expenses | | - | - | | |
| | Qualified Expenditures for SR&ED ITC | | 743,001 | 15,000 | 758,001 | II-A |

| | **Credits:** | | | **Current** | **Capital** | **Total** | % refundable | |
|---|---|---|---|---|---|---|---|---|
| III | Ontario Innovation Tax Credit (OITC) | | | | | | | |
| | Current Expenditures (10%) | | | 74,300 | - | | 100% | III-A |
| | Capital expenses - ASA SR&ED (4%) | | | - | 600 | | 100% | III-A |
| | Total Ontario Innovation Tax Credit (OITC) | | | | | 74,900 | | |
| | Ontario R&D Tax Credit (ORDTC) (4.5%) | | | 30,740 | | 30,740 | 0% | |
| | Ontario Business Research Institute Credit (OBRI) | | | | | | → | ***to T-1.3*** |
| | Ontario University Payments (20%) | ***T-7*** | | 10,000 | - | 10,000 | 100% | |
| | Qualified Expenditures for Federal SR&ED ITC | | | 627,962 | 14,400 | 642,362 | | III-A |
| IV | Federal Investment Tax Credit Earned (35% ) | | | | | | | |
| | Current Expenditures (35%) | ***T-2.2*** | | 219,787 | - | | 100% | III-B |
| | Capital expenses - ASA SR&ED (35%) | | | - | 5,040 | | 40% | III-B |
| | Total Federal Investment Tax Credit | | | 219,787 | 5,040 | 224,827 | * | |
| | Expected Investment Tax Credit refunds | | CRA | 219,787 | 2,016 | 221,803 | | |
| | | | Ont. | 84,300 | 600 | 84,900 | | |
| | Investment Tax Credit carryforward | | CRA | | 3,024 | 3,024 | | |
| | | ***T-2.2*** | Ont. | 30,740 | | 30,740 | | |
| | Total Investment Tax Credits earned | | | 334,826 | 5,640 | 340,466 | | |
| | | | | ↘ ***S-1*** | | ↘ ***J-0 / S-1*** | | |

| V | **After tax cost of I.T.C** | |
|---|---|---|
| | ITC's earned = eventual taxable income | 340,466 |
| | Tax Effect - Federal taxes @ 13.1% | (44,601) |
| | Provincial taxes @ 5.5% | (18,726) |
| | Net Taxes Saved | 277,139 |

# U Summary of SR&ED tax filing procedures

## U.1 E-filing requirements & deadlines

To access the incentive for SR&ED carried out in Canada, you must complete Form T661, and schedule T2SCH31 (corporations) or Form T2038 (IND) (individuals), as applicable, and Efile them with your return of income. You have to file Form T661 whether or not you claim an ITC in the current year.

A claimant's reporting deadline is the day that is **12 months after the filing due date** of the return of income for the year. As a result:

- A corporation will have 18 months and
- (individuals have 17.5 months),

from the end of the tax year in which you incurred the expenditures to report them[131].

The T661 is to be filed with the tax return of the entity claiming the credit on or before the normal due date for that return. Generally, for a corporation, this would be 6 months after year-end, and of an individual, this would be April 30th or June 15th following the calendar year-end. There are provisions allowing a claim to be filed as late as 12 months after the normal due date of the tax return.[132]

The latest filing date for a corporation to file a complete claim would be 18 months after the fiscal year-end. For example:

*Taxation year-ended December 31, 2007 = SR&ED filing deadline is June 30, 2009*

The CRA has instructed all offices to reject any claims that are not filed within the time limits as complete claims. The complete claim checklist is included in the current version of the T661. It indicates that all information in the T661 Form is prescribed information and that if the prescribed information is not filed with your T2SCH31 or T2038(IND) within 12 months after the normal due date, your claim may be rejected. Where the deadline is missed or the claim is still incomplete when the deadline passes, no SR&ED expenditures can be deducted under s.37(1) and no investment tax credits are earned.

There are a number of court cases[133] that demonstrate that given the right fact pattern, it was possible to apply for judicial review whereby the Courts would ask the Minister to reconsider his decision.

131 Filing deadlines prescribed by Income Tax Act subsection 37(11)

132 Filing deadlines prescribed by ITA subsections 37(11) and 127(9) definition of qualified expenditures

133 In one case, a taxpayer appealed for a review of the special circumstances surrounding a late filed claim. The court established that the Minister did have the discretion under subsections 220(2.1) and subsection 220(3) to allow late filing of an SR&ED claim. Refer to Alex Parallel Computer Research Inc. 99 DTC 5283 FCTD.

More recently, two cases Dorothea Knitting Mills Ltd ("Dorothea") 2005 DTC 5177 FCTD and Sixgraph Informatique Ltee ("Sixgraph") 2005 DTC 5173 FCA dealt with late or deficient filing of SR&ED claims. In the case of Sixgraph, the T661 was filed five years late and in the case of Dorothea, the T661 was filed on time (within 18 month period), but the supporting technical project description was not filed until three months after the 18 month deadline. In both cases, the Minister refused to exercise his discretion under subsection 220(2.1). In both cases, the taxpayers sought judicial review of the Minister's decision.

In the case of Sixgraph, the taxpayer alleged that the Minister had not considered the fact that the CRA refused to provide the company with copies of the 1991-1993 Notices of Assessment and the fact that its books and records were seized by its creditors. The trial judge concluded that the Notices of Assessment were not essential in filing the 1995 SR&ED claim and that the books and records seizure had been lifted in the summer of 1996. The Federal Court of Appeal agreed with the trial judge and the taxpayer's appeal was dismissed.

However proposed amendments issued on November 17, 2005 would eliminate the application of subsection 220(2.1) of the ITA. More specifically, Section 220 of the ITA is amended by adding the following after subsection 220(2.1):

> (2.2) Exception – Subsection (2.1) does not apply in respect of a prescribed form, receipt or document, or prescribed information, that is filed with the Minister on or after the day specified, in respect of the form, receipt, document or information, in subsection 37(11) or paragraph (m) of the definition of investment tax credit in subsection 127(9).

The proposed legislation would be applicable in respect of a prescribed form, receipt and document, and prescribed information, filed with the Minister of National Revenue on or after November 17, 2005.

Note that the proposed legislation is contained in Bill C-33 and received first reading in the Senate as of June 18, 2007.

To access the incentive for SR&ED carried out in Canada, the taxpayer must satisfy all of the following basic requirements:

- carry on business in Canada in the year;
- perform SR&ED work which is related to a business of the taxpayer; and
- complete and file prescribed forms including prescribed information:
  - Form T661 (T2Schedule 032),
  - Technical project description containing information set out in Form T4088 guide
  - T2Schedule 031 for corporations or Form T2038(IND) for individuals for each taxation year
  - Relevant provincial forms
  - File on or before the filing deadline.

**Filing Deadline – A Complete Claim**

- File no later than 12 months after the taxpayer's filing due date ("18 month rule" for corporations)
- File a claim with all prescribed information completed by the deadline (All information on the T661 is prescribed information)
- Possibility to apply for relief under subsection 220(2.1) – Minister's discretion
- Given the right fact pattern - Possibility to seek judicial review if your request under subsection 220(2.1) is denied by the Minister.
- Draft legislation subsection 220(2.2) has removed the application of subsection 220(2.1) for SR&ED purposes

The tax summaries on the previous pages **(T-0 & T-0.1)** are designed to provide summary of all related tax implications. Eligibility for SR&ED tax credits requires that the claims be filed within 18 months from the year-end of the taxpayer.

## U.2 Overview of CRA forms to claim tax credits

### U.2.1 Mandatory forms – all SR&ED claims

In the case of Dorothea, the taxpayer filed the claim within the 18 month deadline but did not file the technical information until three months after the 18 month deadline. The Minister refused to exercise his discretion under subsection 220(2.1) of the ITA. However, the Federal Court granted the taxpayer's application for judicial review on the grounds that the Minister did not properly consider all the facts in question.

T2 SCH32 – [also referred to as form T661][134] Claim for Scientific Research and Experimental Development (SR&ED) Expenditures Carried on in Canada

T2SCH31 - Investment Tax Credit – Corporations (+ any provincial ITC schedules)

T2S(1): Reconciliation of Financial Statement & Taxable Incomes

### U.2.2 Issue specific forms

T1145 - Agreement to Allocate Assistance for Scientific Research & Experimental Development Expenditures (SR&ED) Between Persons not dealing at arm's-length

T1146 - Agreement to Transfer Quantified Expenditures Incurred in Respect of Scientific Research and Experimental Development (SR&ED) Contracts

T1174 - Agreement Among Associated Corporations to Allocate Salaries or Wages of Specified Employees for Scientific Research and Experimental Development (SR&ED)...

T665 - Simplified claim for expenditures incurred in carrying on scientific research and experimental development (SR&ED) in Canada

### U.2.3 How to speed up the processing of your claim

To ensure we can process your current year claim as quickly as possible:

- Use the latest version of Form T661;
- **keep all technical** and financial documents to support your claim;
- **Efile** the SR&ED claim
- **File at the tax centre** (filing your claim at your local tax services offices will delay the processing of your claim) if you are filing only the SR&ED claim;

### U.2.4 Where to send SR&ED Claim returns if filing an amendment via paper copy- CRA SR&ED Tax Centres by region

The Canada Revenue Agency has six (6) tax centres in Canada responsible for processing T2 (for corporations) returns. In order to expedite your SR&ED claims both the corporate tax return & the SR&ED claim should be sent to the appropriate Tax Centre.

The CRA lists these Centres on its website at http://www.CRA-adrc.gc.ca/tax/business/

| **CORPORATIONS SERVED BY TAX SERVICES OFFICES IN:** | **SEND YOUR RETURN TO THE FOLLOWING:** |
|---|---|
| British Columbia, Yukon Territory and Regina | Tax Centre<br>Surrey BC V3T 5E1<br>1-888-738-7718 |

[134] Schedule 32 was formally known as form T661 - several CRA Information Circulars, Interpretation Bulletins and other forms are still in force even though they refer to the old form T661.

| | |
|---|---|
| Alberta, Manitoba, Northwest Territories, London, Saskatoon, Thunder Bay and Windsor | Tax Centre<br>Winnipeg MB<br>R3C 3M2<br>1-800-724-0790 |
| Toronto Centre, Toronto East, Toronto North, Toronto West, and Sudbury (Sudbury/Nickel Belt only[135]) | Tax Services Office<br>Sudbury ON<br>P3A 5C1<br>1-800-998-7739 |
| Laval, Montréal, Ottawa, Rouyn-Noranda, Sherbrooke and Sudbury (North-eastern Ontario only[136]) | Tax Centre<br>Shawinigan-Sud QC<br>G9N 7S6<br>1-800-959-7405 |
| Chicoutimi, Montérégie-Rive-Sud, Outaouais, Québec, Rimouski, and Trois-Rivières | Tax Centre<br>Jonquière QC<br>G7S 5J1<br>1-888-699-0735 (ext. 2000) |
| New Brunswick, Newfoundland and Labrador, Nova Scotia, Kingston, Waterloo, Peterborough and St. Catharines | Tax Centre<br>St. John's NF<br>A1B 3Z1<br>1-888-832-1728 |
| Prince Edward Island, Belleville, Hamilton and Kitchener | Tax Centre<br>Summerside PE<br>C1N 6C6<br>1-877-427-1321 |

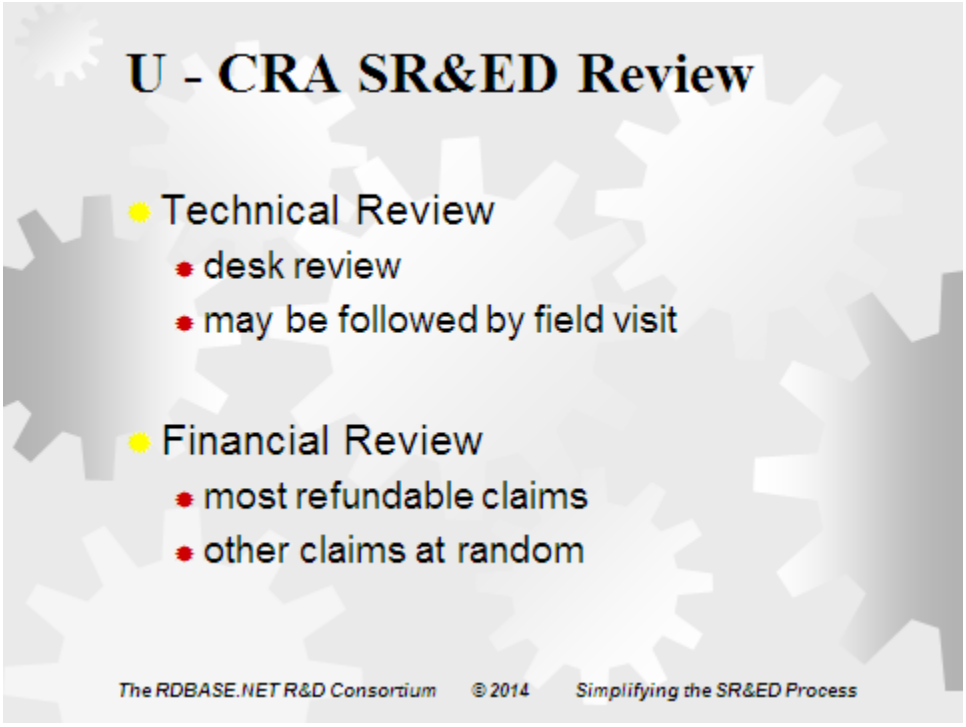
## U.2.5 Summary of required provincial SR&ED tax forms:

Ontario forms for the Ontario Business research Institute (OBRI) tax credit, the Ontario Research & Development Tax Credit (ORDTC) and the Ontario Innovation Tax Credit (OITC) have been included in the service. These forms adhere to the provisions outlined in Chapter IV of this service.

**Additional provincial forms are integrated in most corporate tax programs.**

[135] Sudbury/Nickel Belt areas includes all postal codes beginning with P3A, P3B, P3C, P3E, P3G, P3L, P3N, P3P, P3Y, and all postal codes beginning with P0M and ending with 1A0, 1B0, 1A0, 1E0, 1H0, 1J0, 1K0, 1L0, 1M0, 1N0, 1P0, 1R0, 1S0, 1T0, 1V0, 1W0, 1Y0, 2C0, 2E0, 2M0, 2R0, 2S0, 2X0, 2Y0, 3A0, 3B0, 3C0, 3E0 and 3H0

[136] North-eastern Ontario includes all areas outside of Sudbury/Nickel Belt that are served by the Sudbury Tax Services Office.




## U.3 CRA SR&ED Review

- **Technical Review**
  - Desk review
  - May be followed by field visit
- **Financial Review**
  - Most refundable claims
  - Other claims at random

Although some claims are assessed without a detailed review, many SR&ED claims are still reviewed by the CRA. The CRA has a two-step review process for SR&ED claims: the technical audit and the financial audit. A Research and Technology Advisor (RTA) or technical consultant will review the claim in a desk review and may forward the claim directly to the financial reviewer. Some files will have a field review to resolve any questions about the work or to visit a taxpayer that has not been seen for a few years.

The goal of the CRA is to complete the review process of refundable claimants within 120 days of receiving a complete claim, 90% of the time.

For non-refundable claims the goal is to advise the claimant within 120 days if the claim will be processed as filed or if a further review is required (technical and/or financial review). The goal is to complete the review within one year of receiving a complete claim, 90% of the time.

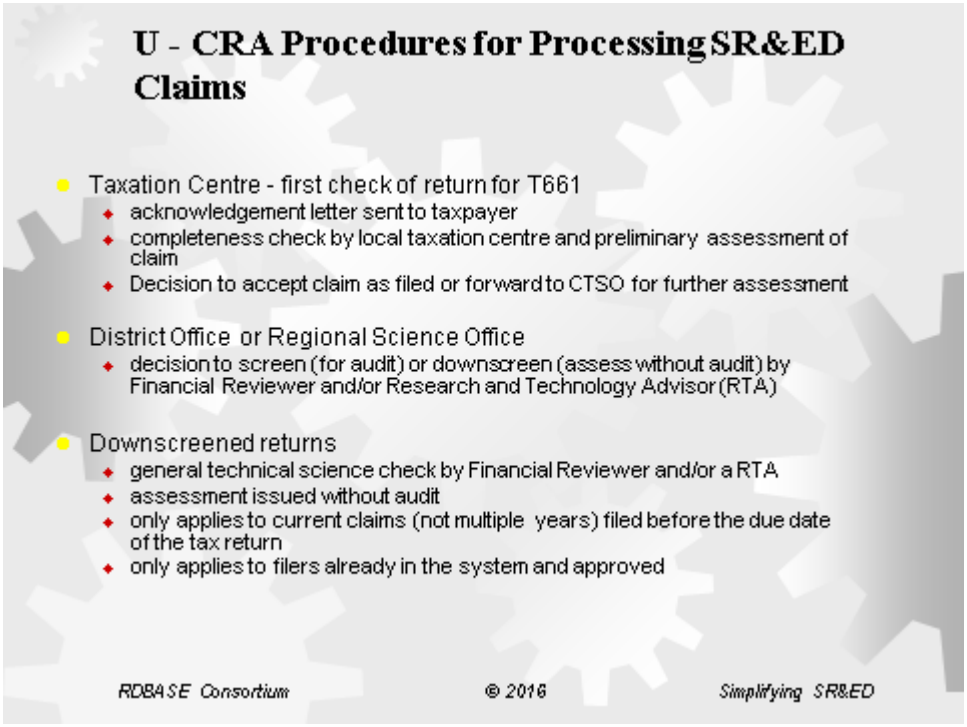
Through education and experience, taxpayers are submitting better claims. However, the CRA provided the following list of some common problems that still arise:

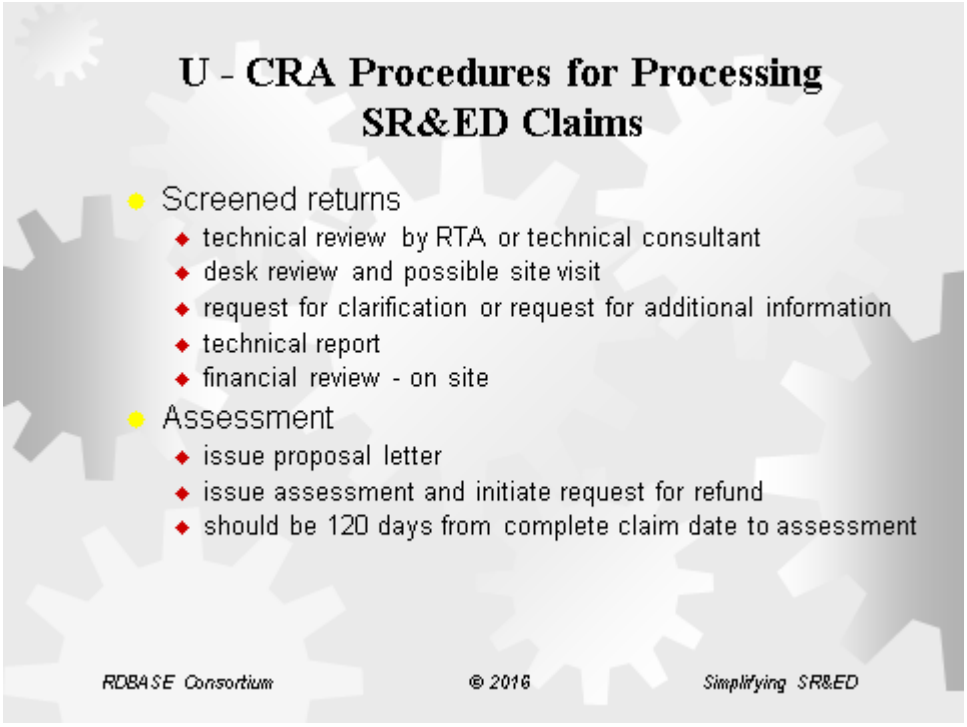
- Improper project description
- Proposals only

- Photocopied prior claim only
- Sales brochures only
- T661 costs exceed activities
- Foreign site
- Archaeology (staff/facilities gone)
- Project production/marketing
- Standard practice
- Routine testing, programming
- Routine development
- Feasibility studies
- Using new products
- Non-qualifying activities
- Production, marketing
- Mining, exploration
- Social sciences, management

While the Department's screening process will identify fundamental deficiencies in the technical information, detailed technical issues will probably not be encountered until the review is underway.

## U.4 CRA procedures for processing SR&ED claims






**Technical review**

Once the completeness check has been performed by the local taxation centre, the claim is accepted as filed or forwarded to the district office or regional science office for further review. At the district office, a risk assessment is performed by a Financial Reviewer and/or a Research and Technology Advisor (RTA). The RTAs are senior scientists and technologists who have been hired by the CRA to administer this phase of the SR&ED program. In the past, the Department contracted with several outside consultants to assist with the backlog of claims. However, most claims are now handled by staff advisors unless there is specialized knowledge or expertise required. As the RTA has the responsibility to determine whether the claim represents qualifying SR&ED activities, it is important that he/she be qualified to undertake the technical review of the projects in the claim.

Taxpayers have the right to request the qualifications of the RTA or Consultant and should request a change if they do not believe that the person has the expertise necessary to property evaluate the claim.

Subsection 37(3) of the Act gives the Minister of Finance authority to obtain the advice of the Department of Industry, Science and Technology (Industry Canada), the National Research Council of Canada, the Defence Research Board or, any other agency or department of the Government of

Canada carrying on activities in the field of scientific research and experimental development as to whether any particular activity constitutes scientific research and experimental development. However, in practice these resources are rarely used.

As outlined in Guide to Conducting a Scientific Research and Experimental Development Review (2000-01-14), the technical review should occur in the following distinct phases:

1. Assemble, organize and analyze all information submitted with the SR&ED claim to ensure completeness and to become familiar with the circumstances of the work;
2. Determine the scope of the technical SR&ED review;
3. Request for information (if necessary);
4. Contract a technical consultant (if necessary) to resolve specific issues;

5. Site visit/interviews (if required);
6. Follow-up – additional request for information issued should new issues arise; and
7. Preparation of the SR&ED review report – the technical review is concluded with a technical report.

The taxpayer should be informed of the review plan before the work commences and should be informed of the progress throughout. Any technical issues should be resolved before the RTA concludes the review and issues the technical report.

If the taxpayer objects to the conclusions reached by the RTA, the appeal procedures are:

- Second review
- Written technical rebuttal
- Appeal to the Regional Technical Co-ordinator
- After assessment, formal appeal via Notice of Objection.

At the conclusion of the technical review, the files are forwarded to the financial reviewers.

**Financial review**

Once the eligible SR&ED projects are identified, the claim is reviewed by the Financial Reviewer. This review is to determine whether the costs charged to the project are eligible SR&ED expenditures (deductible) and qualified expenditures (for ITC purposes). The reviewer should apply the CRA's risk management guidelines in setting the scope of the financial review. He or she should set a dollar-materiality according to the size of the company and the size of the SR&ED claim. The company's prior history with the program may also be considered. Module 2 on eligibility outlines some of the advantages of an SR&ED management system, including facilitating the CRA's review of the claim.

The following issues frequently arise during financial audits:

– Documentation which links the costs to a particular project may be incomplete;
– Timesheets or time tracking methodology may be incomplete;
– Non-qualifying expenditures (Reg. 2902) may have been claimed;
– Foreign expenditures may have been claimed;
– Identification of employees who are directly engaged in SR&ED may be inconclusive;
– Government assistance may not have been deducted;
– Amounts claimed as overheads (traditional method) may not be incremental expenses and there may be disagreement over the method of allocating overheads to SR&ED; and
– Materials consumed may be viewed as supplies (supplies are not eligible under the proxy method).

The determination of eligible salaries under the proxy method has been of particular interest in recent years. Although the proxy method was intended to eliminate disputes around the allocation of overhead to SR&ED work, it is often raising significant issues as to the interpretation of "directly engaged".

The taxpayer is generally given a proposal letter setting out the results of the financial audit. The taxpayer has 30 days to respond with a written rebuttal. The taxpayer may request a second review, under the new policies outlined by the CRA. The file is completed when the assessment is issued. Further appeals may be initiated by filing a Notice of Objection.

## U.5 Recent Request for Information (RFI) procedures

### Request for information (RFI) procedures

Since approximately January 2013 the CRA has been sending "requests for information" (RFI's) to a large % of claimants.

These RFI's tend to include questions which can be divided into 3 categories:

- Standard questions asked nationally of all claimants
- Questions specific to a district office &
- Questions specific to an individual reviewer

### Technical documentation

On your T661 Part 2, you indicated availability of contemporaneous information as captured in the table below.

| Line Description | Project Number(s) |
|---|---|
| 270 Project planning documents | 1 |
| 271 Records of resources .. . , time sheets | 1,2 & 3 |
| 272 Design of experiments | 1,2 & 3 |
| 273 Project records, laboratory notebooks | 1,2 & 3 |
| 274 Desiqn, system architecture ... code | |
| 275 Records of trial runs | 2 & 3 |
| 276 Progress reports, minutes ... meetings | |
| 277 Test protocols, test data ... conclusions | 1 & 3 |
| 278 Photographs and videos | |
| 279 Samples, prototypes ... other artefacts | |
| 280 Contracts | 1,2 & 3 |
| 281 Others: | |

Please send this information up to maximum of **five (5) letter-sized (8.5" x 11") pages for each project** claimed which you feel best demonstrates that the work meets the definition of SR&ED in Subsection 248(1) of the Income Tax Act.

In addition, if not included in the above sample, please send us copies of the **contemporaneous evidence** that:

• recorded your initial **due diligence** activities and that shows that available technology could not overcome the technological problem or obstacle that you faced;

• recorded **the plan** you subsequently devised to overcome the technological problem or obstacle;
•Preserved the **new technological knowledge** gained by the company.
.

SR&ED Wages & Contractor labour

For salaries, wages and contract labour, please provide:

- An organization chart with job descriptions/duties for each person claimed.
- **Details of activities** for each SR&ED Project claimed, including
- number of hours claimed **for each individual per activity, per month**.

Contractors

For each contractor, we require a copy of the contract(s) & statement(s) of work.

**Author's comment (high significance)**

**New focus on "weekly" timesheet details**

Perhaps the most notable item in the RFI questionnaires is consistent request for **timesheet** detail at a monthly**, weekly** or in some cases even a daily level.

These requests seem to be focused on small and large claimants alike.

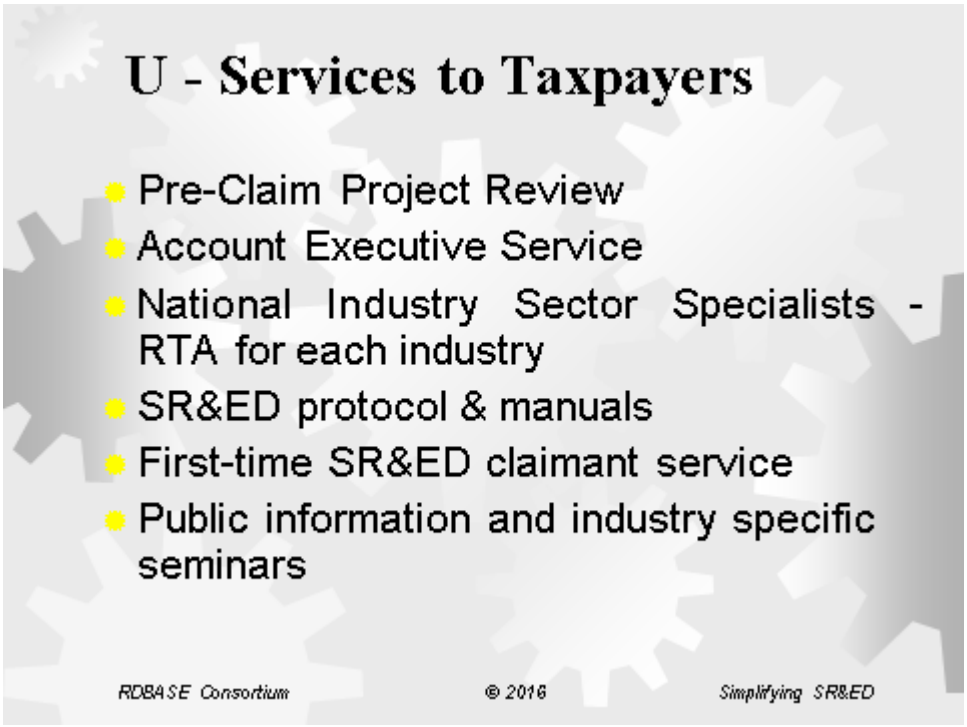
Since current CRA directions on how to prepare proper timesheet are vague as to what is actually required this is likely to become an issue of contention.

Ultimately each employee should be able to identify how his or her

- "design or testing" work was
- "necessary to resolve"
- one or more of the stated "uncertainties."

Having the development team agree on the key variables of experimentation allows this correlation to take place.

## U.6 CRA services to taxpayers




Service standards – time for CRA to assess a claim

One of the goals of the SR&ED program is to process claims in a timely, consistent, and predictable way. To support timely processing, the CRA has established service standards and has succeeded in meeting these standards.

- Current-year refundable claims (applies to Canadian-controlled private corporations) will be processed within 120 days, 90% of the time.
- Client-requested adjustments of refundable claims will be processed within 240 days, 90% of the time.
- Non-refundable claims will be processed within 365 days, 90% of the time.

CRA has implemented several initiatives designed to improve the quality of service to taxpayers. Some of these are specific to the SR&ED program while others have broader application. The objective is to improve timeliness, certainty and consistency, all significant issues with taxpayers filing claims in recent years. These initiatives include:

- **Preclaim Project Review (PCPR)** offers advice on eligibility before claims are made. The objective is to give taxpayers greater up-front certainty about the eligibility of work and expenditures. This service is available before a project starts or while it is underway;
- **Account Executive Service** provides claimants with a designated contact person. This person provides continuity over a period of years, rather than one year at a time. This allows the RTA to better understand the company's field of research, manage the claim from concept through to the review of the work, and act as a resource for the company, providing follow-up as requested. The Account Executive can also coordinate other CRA resources as required.
- **National Technology Sector Specialists** – There are a few Industry specialists available to act as national resources on issues in a particular industry. Some of these people are CRA

employees; others have been seconded from industry.

- **SR&ED Protocol** – Large Case Files are often managed by an audit protocol or agreement between CRA and the taxpayer regarding the conduct of the audit. Both sides agree on timing, deadlines, access to resources, and scope of the audit. A similar arrangement can now be negotiated for the SR&ED review process. This may assist in moving towards a system-based review rather than the detailed project-by-project audit that is common today.
- **First-time SR&ED claimant service** provides information and assistance for companies new to the program. Upon request, one of the CRA's representatives can answer questions and explain the program to new claimants. New claimants can access the information, tools, and assistance needed to complete an SR&ED claim.
- **Public information and industry specific seminars** are held regularly throughout Canada. New claimants are invited to attend in order to obtain a better understanding of the program.

Each of these services can assist in developing a more cooperative relationship between the CRA and the taxpayer, improving the quality of the claims through education and enhancing the image of the SR&ED program.

The joint initiatives undertaken by CRA and Industry are a clear indication of the importance of the SR&ED program. Education of taxpayers, advisors and CRA staff will assist all stakeholders to ensure the continued existence of the incentives. The 2007 consultation process conducted by the CRA and the Department of Finance highlighted the need for improvements in administration of the program and resulted in a $10 million increase in CRA's budget. This money will be used to hire and train additional technical reviewers in the fall of 2008.

The Finance press release stated in part:

In undertaking these consultations, the Government's overriding objective is to increase the level of private sector R&D by implementing cost-effective improvements to the tax incentives and further streamlining the program's administration.

> "Our Government continues to look for new and innovative ways to improve the administration of the tax system and to reduce the burden on businesses," said Minister O'Connor. "Private sector R&D is crucial to the long-term growth and prosperity of our economy, and this broad-base consultation process will help us improve our existing programs."

## U.7 SR&ED filing deadlines – do's & don'ts

Most claimants are aware that corporate claims for SR&ED tax credits include a requirement to file a, "SR&ED return with all prescribed information," within 18 months of its corporate year-end[137].

What many taxpayers seem unaware of is the fact that these returns can be efiled or filed through Canada Post up to the very last day of this filing deadline.

## U.8 Canada Post filing procedures

[137] Filing deadline per ITA subsection 37(11)

## U.8.1 Relevant legislation

The Income Tax Act states, "when anything other than a remittance is sent by **first class mail (or equivalent),** the item is **deemed received when the item was mailed."**[138]

## U.8.2 Effects of weekends and holidays

Interpretation Act section 26 states "Where the time limited for the doing of a thing expires or falls on a holiday, the thing may be done on the day next following that is not a holiday."

Interpretation Act section 35 defines "Holiday"[139] to mean Sunday among other specified days during the year.

## U.9 Related "Xpresspost" planning

Unfortunately if you just mail the envelope you will not have proof of filing. As a result the author proposes that taxpayers could take the following steps:

- Use the Canada Post, Xpresspost service
- Document the company name, year-end & "tax returns enclosed" on the Xpresspost slip
- Perhaps include an "enclosure letter" which could further list the enclosed documents
- Have the Canada Post agent stamp both their Xpresspost tracking slip as well as any additional "enclosure" letters you may include with respect to your "enclosed" documents.

## U.10 Issue – proving "prescribed information" filed within 18 months!

**While the recommended filing methods can be used to prove that the claim was filed "on time" it may not be enough to prevent the claim being denied due to "failure to submit prescribed information in prescribed form."** In fact if any significant portion of the claim is missing the entire claim could be jeopardized!

In several cases taxpayers have maintained that all prescribed information was submitted and sadly there seems to be **little if any recourse to challenge the CRA's assertion that one or more pieces of information were missing.**

## U.10.1 CRA – position – file within 15 months

Question:

> **When does an SR&ED claim need to be filed** in order for the CRA to review and **advise the claimant of any deficiencies** in the SR&ED claim?

CRA Response:

[138] paragraph 248(7)(a)

[139] "holiday" means any of the following days, namely, Sunday; New Year's Day; Good Friday; Easter Monday; Christmas Day; the birthday or the day fixed by proclamation for the celebration of the birthday of the reigning Sovereign; Victoria Day; Canada Day; the first Monday in September, designated Labour Day; Remembrance Day; …any day appointed by proclamation…

If an SR&ED claim is filed **within 90 days before the reporting deadline,** the CRA should have sufficient time to conduct a review to determine whether or not the claim meets the filing requirements and to advise the claimant of any deficiencies in the claim.[140]

### U.10.1.1 Implications and author's commentary

In the author's view a prudent claimant would take strong measures to **ensure that claims are submitted within 15 months from any corporate year end despite the 18 month deadline** prescribed by the legislation

## U.11 Budget 2013 – new reporting on SR&ED preparer fees

According to the Department of Finance,

"Budget 2013 introduces measures to provide the Canada Revenue Agency with new resources and administrative tools to better respond to **the minority of** SR&ED program **tax preparers and SR&ED performers** who participate in claims where the **risk of non-compliance** is perceived to be **high** and eligibility for the SR&ED program unlikely."

Requirements

In particular, in instances where one or more third parties have assisted with the preparation of a claim,

- the Business Number of each third party
- details about the billing arrangements including
- whether contingency fees were used &
- the amount of the fees payable.

In instances where no third party was involved, the claimant will be required to certify that no third party assisted in any aspect of the preparation of the SR&ED program claim.

Penalty for non- compliance

Budget 2013 proposes that a new penalty of

-$1,000 be imposed in respect of
- each SR&ED program claim for which
- information about SR&ED program
- tax preparers & billing arrangements is
- missing, incomplete or inaccurate.

The SR&ED program claimant and tax preparer will be jointly and severally liable for the penalty.

[140] CRA Application Policy SR&ED 2004-02, Filing Requirements for Claiming SR&ED Carried Out in Canada, Question 4, October 5, 2004

Timing of implementation

This measure will apply to SR&ED program claims filed on or after the **later of January 1, 2014** and the day of Royal Assent to the enacting legislation.

Author's comment: low significance

Due to the fact that certain journalist published articles which "falsely" claimed that:

- upwards of $1 billion / year

- is being paid to SR&ED consultants

the government has begun collecting information on these fees to confirm or deny whether these accusations have any merit.

These results will likely be used to determine:

- whether billings which are "contingent" on the success of the claim are in the interest of all parties &

- if any further regulation is thereby required.

**Notable quote:**

**"Minds are like parachutes; they work best when open."**

**- T. Dewar**

## U.12 SR&ED – dispute resolution - appeals and objections


**Author's commentary:**

- Where the CRA reviewers have any proposed adjustments they will generally provide the claimant with an explanation letter providing the opportunity for feedback / negotiation within 30 days.
    - In the author's opinion this "30 day window" is the most effective time to negotiate issues of contention.

- The next step is to request a "second administrative review" with the CRA reviewer + a manager.
    - In the author's experience this process has mixed results and may be cancelled in the near future.

- The third step is a formal objection – which means the case still remains with CRA officials to decide.
    - In the author's experience the CRA officials are unlikely to reverse and of their prior decisions.

- The final stage is to appeal to the Tax Courts (TCC, Court of Appeal or Supreme Court)
    - A Crown Counsel will consider the legislation independently.
    - This may be the best chance for taxpayers to have the ITA legislation (vs. CRA guides) examined regarding positions taken.

## Legal Timeframes of Tax Appeal Process:

| Step: | Time limits on the: Taxpayer | Minister | Notes: |
|---|---|---|---|
| Receive notice of assessment | - | - | |
| File notice of objection | 90 days | - | |
| Receive notice of reassessment | - | - | 1 |
| File notice of Appeal with TCC | - | - | 2 |
| File Reply to NofA w TCC | - | 60 days | 3 |
| Send Reply to NofA to Taxpayer | - | 65 days | 3* |
| Taxpayer can Answer the Reply | 30 days | - | 4 |
| Exchange - list of documents | 30 days | 30 days | 5 |
| Discovery | - | - | 6 |
| Hearing before the Court | - | - | 7 |
| Trial & findings | - | - | 8 |
| Appeal to Federal Court of Appeal | - | - | 9 |

**Notes to tax appeal process timelines:**

1) taxpayer can appeal directly to Tax Court of Canada (TCC) if issue not addressed by CRA within 90 days of filing its Notice of Objection.

2) NofA served to TCC which in turn serves it to: Revenue Canada & Dept. of Justice via a Deputy Attorney.

3) If Minister does not file reply the taxpayer can file for default judgement.

4) This is optional for the taxpayer however, beyond this point the taxpayer can not submit any further documents without the Minister's consent.

5) Both parties have to list the evidence they intend to rely upon & disclose this to each other.

**6) The discovery process has no set time limit & can drag on for years.**

7) An application for hearing must be filed including the pleadings and admissions of fact. The courts may request a pre-hearing conference.

8) Costs are then allocated to respective parties at the discretion of the courts.

9) Appeals must be filed within 30 days of the day of judgement from the TCC.

## U.13 Challenging the science officer's opinion

The legislation:

Subsection 93(3) of the Rules[141] reads as follows:

> "The Crown, when it is the party to be examined, shall select a knowledgeable officer, servant or employee, nominated by the Deputy Attorney General of Canada, to be examined on behalf of that party, **but if the examining party is not satisfied with that person, the examining party may apply to the Court to name some other person**."

[141] Tax Court of Canada Rules (General Procedure)

This issue was examined in the case of Blue Wave Seafoods[142] in which the judge felt the claimant should have challenged the CRA officials credentials at the outset of the review (not after a negative opinion is rendered).

Problems:

Since the tax courts allow such refusals but the CRA typically does not, claimants may be forced to "threaten" litigation for equitable treatment on this issue.

## Solutions - formal vs. informal appeal strategies:

Since the Tax Court of Canada general procedures typically

- take 2-3 years &
- cost > $50,000

it may be more efficient to consider an "informal appeal" strategy for a quick and economical resolution.

| Typical dispute resolution steps & timelines | | | |
|---|---|---|---|
| | **Step** | **Parties** | **Expected timeframe** |
| 1 | Negotiate with CRA reviewer | CRA & client | 30 days |
| | | | |
| 2 | 2nd admin. review | CRA & client | 180 days |
| | | | |
| 3 | Objection | CRA & client | 365 days |
| | | | |
| 4 | Tax Court of Canada | | |
| | a) Appeal - Informal | CRA, Dept. of Justice client | 6-9 months |
| | b) Appeal - General | CRA, Dept. of Justice client | 2-3 years |

[142] *Blue Wave Seafoods Incorporated and D'Eon Fisheries Limited and Her Majesty the Queen (TCC informal procedure – Docket: 2001-2140(IT)G)*

## Notable quote:

**“The uncreative mind can spot wrong answers, but it takes a very creative mind to spot wrong questions.”**

**- Anthony Jay**

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## w Concluding remarks

It is my hope that this section has illustrated the high degree of influence that both Canadian taxpayers and Tax Courts have had as co-architects of the current SR&ED tax credit system.

Hopefully the section has illustrated that there will always be a requirement for professional judgment in determining the eligibility of both the technology and the related cost of development however, I believe that these issues can be administered fairly and objectively once all of the issues are clarified.

It is my strong assertion that the resultant SR&ED tax credit system illustrates previously unparalleled levels of co-operation and partnership between industry and government.

In my opinion, this is a positive shift from the government's traditional roles of regulation and taxation! The continual development of this system on both the federal and provincial levels is likely to keep Canada in the forefront of countries in which companies choose to perform SR&ED.

# x SR&ED tax court cases (interpretative issues)

## SR&ED cases regarding "technological eligibility"

| TOPICAL AREA | APPELLANT | PRIMARY ISSUE | WIN - LOSE - DRAW? | RULING & RATIONALE | IMPLICATIONS: UNRESOLVED ISSUES AND OPPORTUNITIES | LONG-TERM SIGNIFICANCE |
|---|---|---|---|---|---|---|
| 1) a) TECHNOLOGICAL ADVANCEMENT | Northwest Hydraulic | "system uncertainties" basis for | Win | 4 of 5 projects eligible due to "system | Landmark case on technological eligibility | High |
| b) | Rainbow Pipeline | definition of "technological | Win | rejection of an hypothesis is an advance | Significant precedent definition of "TA" | High |
| 2) a) BUSINESS VS. TECHNOLOGY TECHNOLOGY | CW Agencies | software development - business vs. technology? | Lose | 3 strikes: no hypotheses, lack of records, 3rd party defense | Need to focus on technology | Moderate |
| b) | Nashen | software development - business vs. technology? | Draw | 2 of 4 projects eligible - technology vs. business | bus. vs. tech. software - eg. Patents U.S. vs. Japan & Europe | Moderate |
| c) | Zeuter | Is transcribing "info" eligible SR&ED? | Lose | As per NW Hydraulics ruling | Need to verify "data collection" is "commensurate" | Moderate |
| 3) a) SYSTEMATIC INVESTIGATION(SI)/ | Hun-Medipharma | eligibility of analysis without | Win | SR&ED work can be "experimentation | "SI" envisions contemplation of | Moderate |
| b) TECHNICAL | RIS Christie | "lack of documentation" | Lose - round 1 | ineligible - lack of any experimentation or analysis | Successful result &/or patent NOT proof of experimentation | Moderate |
| RECORDS | | | Win - round 2 appeal (FCA) | engineer died prior to trial - court sympathetic | courts may be sympathetic for CCPC's in extreme circumstances | Moderate |
| c) | R.J. Miller | lack of technical documentation | Lose | claimant must provide evidence | need evidence of experimentation | Low |
| d) | Blue wave Seafoods | challenging science officer's analysis | Lose | insufficient evidence to refute CRA recommendations | challenge auditor qualifications before opinion rendered | Moderate |
| e) | Maritime-Ontario Freight Lines | hardware & software adequacy of documentation | Lose | must illustrate methods utilized & results | need evidence of experimentation | Low |

## SR&ED cases regarding Financial issues

| TOPICAL AREA | | | APPELLANT | PRIMARY ISSUE | WIN - LOSE - DRAW? | RULING & RATIONALE | IMPLICATIONS: UNRESOLVED ISSUES AND OPPORTUNITIES | LONG-TERM SIGNIFICANCE |
|---|---|---|---|---|---|---|---|---|
| 1) | a) | WAGES | Alcatel | stock options - whether SR&ED "cost" incurred | Win - round 1 | SR&ED "cost" is dilution of shareholder interest | Courts contemplate "costs" not in taxable income | High |
| | | | | | Draw - round 2 | legislation to disallow > Nov. 14, 2005 | 2 year window to amend 2004 - 2005 taxation years | High |
| | b) | | CDD-REM | payments to "specified employees" | Win - round 1 | eligible based on "evidence" | courts allow reasonable estimate of costs incurred | Low |
| | | | | | Draw - round 2 | Subsequent events: "non-arm's length" | post 1996 - only "salary & wages" allowed "NAL | |
| | c) | | Synchrosat | allocating salary to only SR&ED activities | Lose | only SR&ED percentage claimable | need system to document employee experimenation time | Low |
| | d) | | Ergorecherche | time allocation - SR&ED vs. non-SR&ED projects | Lose | "reasonable" basis for allocation required | could structure "non-SR&ED" done during unpaid time | Moderate |
| 2) | | MATERIALS | Consoltex | materials used in SR&ED then sold | Win - round 1 | eligible if required for SR&ED | short-lived precedent to include "commercial materials" | Low |
| | | | | | Draw - round 2 | Subsequent legislation repayment of ITC's on sale | Clarification: labour eligible - materials "sold" excluded | High |
| 3) | a) | CAPITAL | Dew Engineering | building vs. "other structure" | Win | temporary lab not a "building" - no fixed foundation | courts take literal interpretation of "building" | Moderate |
| | b) | | Aurora Marine | eligibility of Yacht expenses for SR&ED | Win | SR&ED eligible even if not otherwise tax deductible | courts took liberal interpretation of "SR&ED costs incurred" | Low |
| | c) | | Waxman | whether cattle eligible SR&ED | Win | eligible if ASA (>90%) SR&ED intent | short-lived precedent to include "commercial materials" | Low |
| | | | | | Draw - round 2 | Subsequent events: repayment of ITC's on sale | eligible if SR&ED intent - repayment if sold | High |
| 4) | a) | ASSISTANCE/ GRANTS/ | Com Dev Ltd. | government fees - "assistance" or | Win | fixed price contract not purchase of SR&ED | Structure SR&ED contracts-"taxpayer" to bear "risks" | High |
| | b) | SALE OF PRODUCT | Les Cultures | sale of experimental production | Win | subsequent sale irrelevant if SR&ED | clarifies SR&ED labour eligible despite subequent sale | High |
| 5) | | UNPAID AMOUNTS | Chartwell | eligibility of unpaid amounts / bad | Win / lose | need to claim costs during the year incurred | opportunity to claim unpaid wages (*unless forgiven) | High |
| 6) | a) | FOREIGN EXPENSES | Data Kinetics Ltd. | foreign "mainframe" costs Canadian SR&ED? | Win | attributable to SR&ED if researcher "in Canada" | definition of "in Canada" issue of contention . | Moderate |
| | | | | | Draw - round 2 | Subsequent events: only payments to "taxable suppliers" | subcontractor BN# now required to claim payment | High |
| | b) | | LGL | data collection outside Canada SR&ED? | Lose | ineligible if physically outside Canada | courts took literal interpretation of "in Canada" | Moderate |
| | | | | | Draw - round 2 | Subsequent events: eligible if within "EEZ" | marine work eligible to 200 nauts - still "unclear" travel abroad if >10% | Low |
| 7) | | "ASA" | Quantetics | "costs" or "revenues" basis for | Lose | SR&ED costs basis for eligibility | Preferential ITC's "sole purpose performers" gone 1992 | Moderate |
| 8) | a) | FILING EXTENSIONS | Datacalc | extension of 18 month filing | Lose | qualified expenditures - identified by filing | object under proper sections of ITA - see Alex Parallel | Low |
| | b) | | Alex Parallel Computers | basis for extension of filing deadline | Win | CRA cannot restrict Minister's power to extend deadlines | extension for reasons other than CRA IC (illness/disasters) | High |
| | | | | | Draw - round 2 | Legislation - Nov. 17, 2005 restriction of | must file within 18 months of year end - preferably 15 | High |
| 9) | a) | QUALIFIED CCPC STATUS | Mimetex | if US director with 50% of shares | Lose | actions of US director w/o consent of | consent from 1 of 2 Canadian directors solves problem | High |
| | b) | | HSC Research | Factors in evaluating defacto | Win | separate directors - no control evidenced | Landmark case on definition of "defacto control" | High |
| | c) | | Terra Remote | Is shareholder with < 50% ownership arm's length? | Win | Analysis of ITA 256 (control) & 251 (related persons) | Confusing "specified employee" (>10%) with "arm's length" | High |
| | d) | | All Colour Chemicals | Can CCPC partners claim 35% refundable ITC's | Lose | ITA 127(8) for partnership "over-rides" 127(10.1) refunds | Qualified CCPC's should avoid using SR&ED partnerships | High |
| 10) | | ITC USE | Ainsworth Lumber | ordering of ITC use - refundable vs. non-refundable | Win | Act clarifies that taxpayer "may" deduct [credits] indicates that taxpayer elects order of refundable vs. non-refundable credits | right to order affairs to minimize taxes | Moderate |