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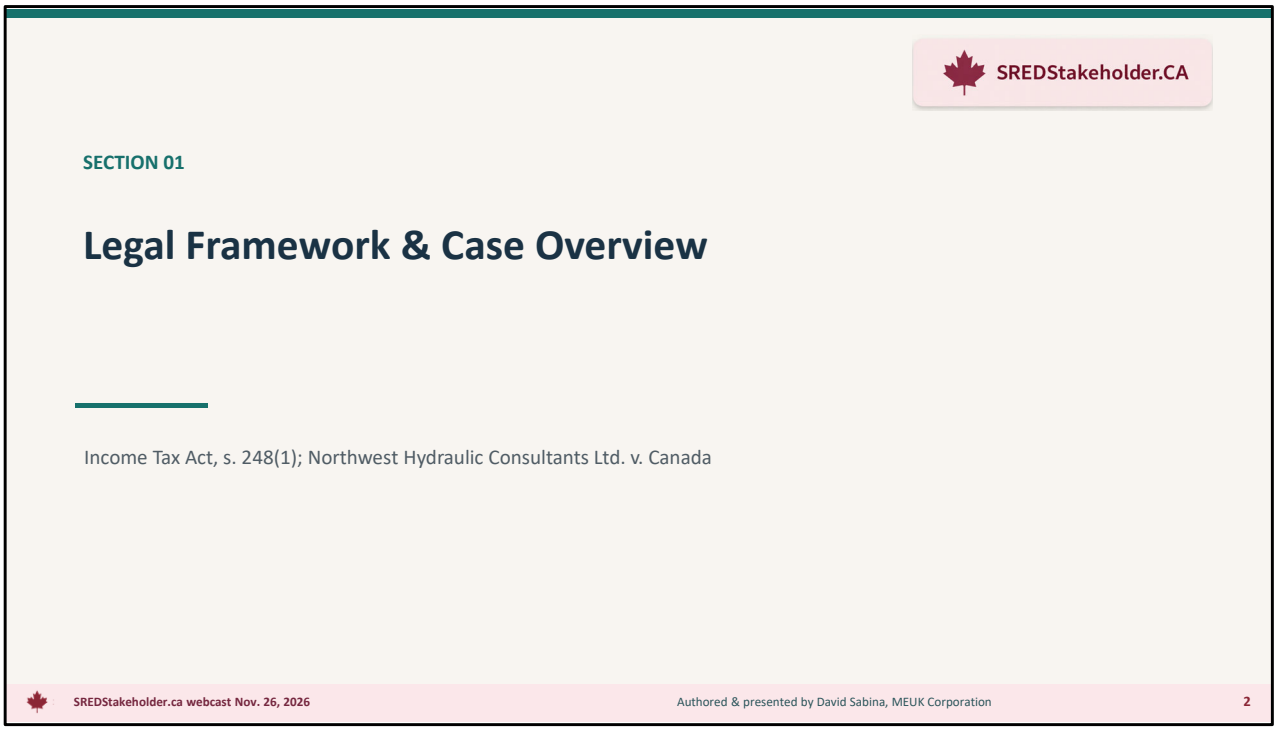
TAX COURT OF CANADA · SR&ED CASE STUDIES

SR&ED at the Tax Court: Tempora, Tuna Temple & Willowglen

Les Éléments Chauffants Tempora Inc., 2025 TCC 173 · Tuna Temple Inc., 2025 TCC 183 · Willowglen Systems Inc., 2026 TCC 7

Three recent Tax Court of Canada SR&ED decisions: Tempora (2025 TCC 173, split result with reassessment, penalty and s. 160 issues), Tuna Temple (2025 TCC 183, full loss) and Willowglen (2026 TCC 7, MTCLM allowed, SCADACOM-5 disallowed). Each case is assessed against Income Tax Act s. 248(1) and the Northwest Hydraulic criteria, with RDBASE key-criteria summaries and recommended fields of science.



Income Tax Act, s. 248(1); Northwest Hydraulic Consultants Ltd. v. Canada

Income Tax Act, RSC 1985, c. 1 (5th Supp.), s. 248(1); Northwest Hydraulic Consultants Ltd. v. Canada, 1998 CanLII 553 (TCC).

1. LEGAL FRAMEWORK & CASE OVERVIEW

1.01 Case summary and presentation contents

Cases and outcomes

Case	Issues	Outcome
Tempora · 2025 TCC 173	Eligibility; limitation; penalties; s. 160	Split
Tuna Temple · 2025 TCC 183	Eligibility; records; expenditures	Loss
Willowglen · 2026 TCC 7	Eligibility; proxy wages	Split

Numbered sections

Section	Case / subject	Slides
1	Legal framework and overview	2–4
2	Tempora — technical evidence and outcomes	5–16
3	Tuna Temple — unsuccessful claims	17–23
4	Willowglen — SCADACOM-5 and MTCLM	24–33

Income Tax Act, s. 248(1); Northwest Hydraulic Consultants Ltd. v. Canada

Case summary: Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173 (split: 2007 and 2008 ITCs allowed; 2006 and 2009 dismissed; reassessment of statute-barred years, gross negligence penalties and s. 160 shareholder assessments upheld); Tuna Temple Inc. v. The King, 2025 TCC 183 (loss on all projects before the Court); Willowglen Systems Inc. v. The King, 2026 TCC 7 (MTCLM allowed with a proxy-wage timekeeping adjustment; SCADACOM-5 disallowed). Legal framework: Income Tax Act, s. 248(1), and Northwest Hydraulic Consultants Ltd. v. Canada.

1. LEGAL FRAMEWORK & CASE OVERVIEW

1.02 Eligible Fields of Science & Technology

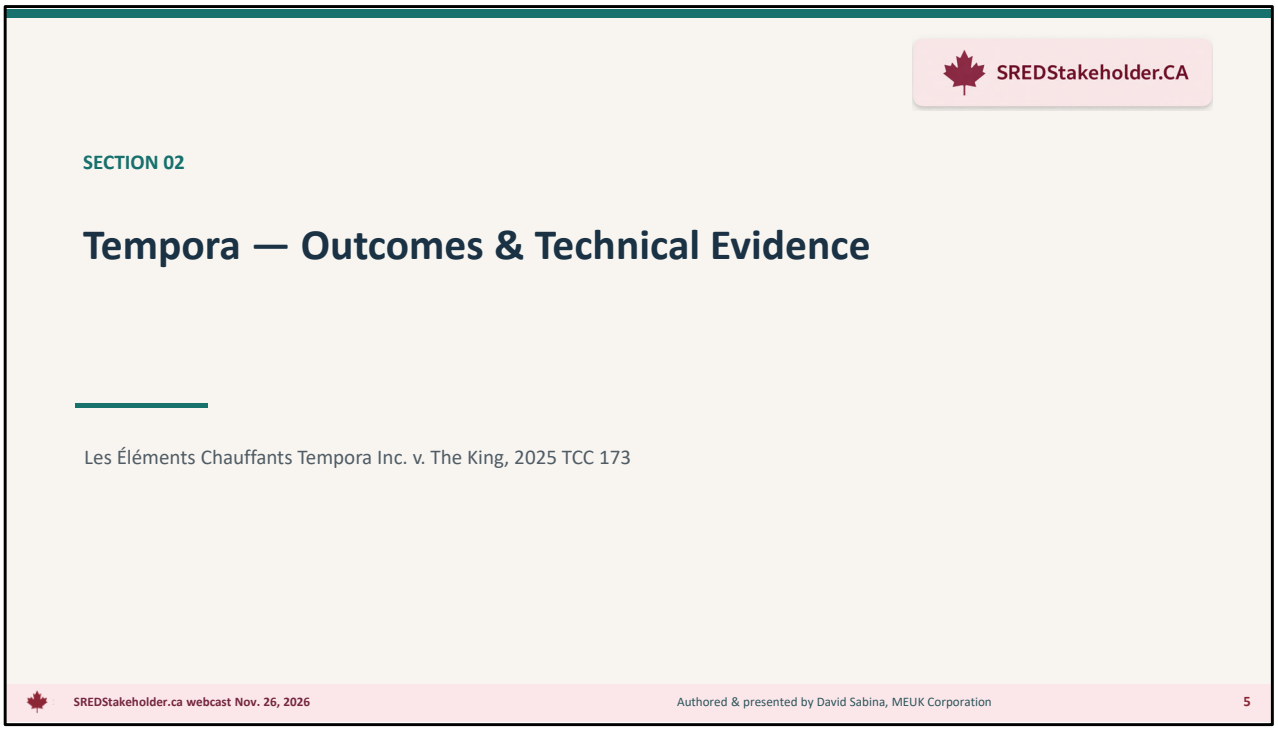
Field codes identify the scientific discipline; a code alone never establishes that a project qualifies.

Field group	Disciplines
1 — Natural and formal sciences	Mathematics, computing, physics, chemistry, biology
2 — Engineering and technology	Electrical, mechanical, materials, software and industrial engineering
3 — Medical and health sciences	Clinical medicine, health sciences, medical biotechnology
4 — Agricultural sciences	Agriculture, forestry, fisheries, veterinary sciences
Classification test	Define field → existing knowledge → technological gap → test hypotheses → document advancement
Excluded	Social sciences and humanities

Field classifications are analytical recommendations, not codes confirmed in the judgments.

Source: SR&ED Field of Science and Technology Codes (2026 list), Eligible Field Codes and Excluded Fields. The list contains 147 individual eligible field codes. The field is selected based on the actual scientific or technological problem, not the employer's industry alone. This slide summarizes the four major groupings in the 2026 list; it does not enumerate every code. Social sciences and humanities are excluded under the SR&ED definition, as stated in the 2026 list.

Classification test: define the scientific field, establish its existing knowledge base, identify the specific technological gap, test hypotheses, and document the advancement. A field code alone never establishes eligibility.



Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173

Income Tax Act, RSC 1985, c. 1 (5th Supp.), s. 248(1); Northwest Hydraulic Consultants Ltd. v. Canada, 1998 CanLII 553 (TCC).

2. TEMPORA — OUTCOMES & TECHNICAL EVIDENCE

2.01 Case overview

Item	Details	Ref.
Appellants	Tempora Inc. and shareholders Shady and Maged Elhami (files 2021-1701, -1703, -1704(IT)G)	Judgment
Judge and hearing	Lafleur J.; Montreal, Feb–Mar 2025; judgment 20 Nov 2025	—
Taxation years	Years ending 31 July 2006–2009	[5]
ITCs denied	$170,649 / $173,540 / $242,328 / $151,954 for 2006–2009	[5]
Deductibility	Not otherwise challenged as ordinary business expenses	[6]
Claim size (2007)	Tubular line: $924,915 claimed; $498,760 allowed at audit	[19]

Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173

Tempora is a Quebec manufacturer of industrial heating components; the corporate appeal was heard with the s. 160 appeals of shareholders Shady and Maged Elhami (Lafleur J.). The Minister reassessed 2006–2009 to deny previously refunded ITCs [5] but did not otherwise challenge deductibility of the expenses as ordinary business expenses [6]. The 2007 Tubular Element Manufacturing Line claim illustrates claim size: $924,915 claimed, $498,760 allowed at audit [19].

Legal and case reference: Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173.

2. TEMPORA — OUTCOMES & TECHNICAL EVIDENCE

2.02 Tempora — Results

Year / issue	Court outcome	ITCs allowed
2007 — Tubular Element Manufacturing Line	WIN	$173,540
2008 — Flexible Silicone/Kapton; Annealed Tubular/Finned	WIN — two projects	$242,328
2006 and 2009 — SR&ED appeals	Dismissed	$0
Shareholder appeals — s. 160	Dismissed	—
Total — qualifying projects	**Partial success**	**$415,868**

$415,868
ITCs allowed for 2007 and 2008

2006 & 2009
SR&ED appeals dismissed

Tempora, 2025 TCC 173, [196]–[200], [223]–[242], [316]

Judgment: Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173. 2007 ITCs $173,540; 2008 ITCs $242,328; 2006 and 2009 appeals dismissed. Shareholder s. 160 appeals dismissed. Key lesson: protect filing integrity while retaining contemporaneous technical evidence. See reasons [196]–[200], [223]–[242], [316].

2. TEMPORA — OUTCOMES & TECHNICAL EVIDENCE

2.03 Elhami Brothers — Backgrounds & Credibility

Topic	Evidence	Ref.
Background	In the heating-element business since childhood; full-time after Dec 2006	[13]–[14]
Qualifications	Practical experience; not formally qualified engineers	[75]
Records	Excel test/parameter roadmaps and iterative prototypes	[53]–[56], [65], [218]–[219]
Equipment	Modified Oakley equipment; designed an annealing oven	[204]–[205], [232]
Outside expertise	Professor assisted with concrete composition	[215]
Credibility	Generally honest and open, with one specific exception	[57]
Weight of evidence	Helped establish systematic testing and uncertainty	[206]–[208], [223]–[229]

Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173

Maged and Shady Elhami — claimant technical backgrounds and credibility. The brothers grew up in the heating-element business and took over full-time responsibilities after their father's death (paras. 13–14). The judgment notes that they were not engineers (para. 75). The Excel programs and trial exhibits supported their account (paras. 53–56, 65). For tubular work, the Court discussed Oakley-machine changes and systematic testing (paras. 199–208). For flexible heaters, see paras. 213–229, especially 215, 218–219 and 223–227. The Court generally found both witnesses credible, but did not accept Maged's characterization of copied supplier materials as 'theory' (para. 57). Do not suggest that all their testimony was accepted without qualification.

Legal and case reference: Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.

2.04 Silicone/Kapton Heaters — Professor's Involvement

What the Court records	What is not established
Flexible heating elements integrated into concrete moulds [213]–[214]	Professor's name, institution or specialty
Maged testified a professor helped set concrete composition, type and size [215]	Specific formulation, test data or deliverables
Concrete mould outsourced [216]	Contract, payment, or whether the professor ran experiments

Tempora, 2025 TCC 173 — relevant paragraph references in notes

Para. 215 attributes the account to Maged. Para. 216 states the mould was outsourced. The professor's name, affiliation, experimental activities and payments are not identified in the reasons.

Source: Tempora, 2025 TCC 173, [213]–[216].

2.05 Field of Science — Tempora

The heater projects combined electrical heating elements, flexible materials and outdoor temperature control.

Classification	Field and rationale
Primary — 2.02.01	Electrical and electronic engineering: heating-element design and behaviour
Alternative — 2.05.04	Plastics, rubber and composites: silicone/Kapton bonding and flexibility
Additional — 2.02.05	Automation and control systems: remote sensing and temperature control
Other possible — 2.03.03	Thermodynamics: only where heat transfer is the actual research focus
Court vs. recommendation	The judgment does not establish these T661 codes; classification is inferred

Field classifications are analytical recommendations, not codes confirmed in the judgments.

Suggested fields are drawn from the 2026 SR&ED field code list, not the judgment's T661 entries. Tempora's project description includes flexible silicone/Kapton heaters, concrete mould integration and sensors [213]–[229]. The strongest field depends on which specific technological uncertainty is being claimed: electrical heater behavior, materials properties, thermal distribution or system controls. The historical Court result must be kept separate from this illustrative classification.

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.
Field-of-science codes are presenter recommendations, not verified T661 filings.

2. TEMPORA — RDBASE KEY CRITERIA

2.06 Silicone/Kapton Heaters — RDBASE Key Criteria

Court evidence Illustrative or presenter analysis

Key criterion	Summary	Source
Objectives	Outdoor flexible heating; ~20-minute warm-up; uniformity, durability, concrete integration	*Project analysis*
Uncertainties	Moisture, freeze–thaw, stress and heater–concrete heat transfer acting together	[215]
Experiments / results	Prototypes, sensors, professor-supported concrete studies, Excel roadmaps	[53]–[56], [65], [215]
Conclusions / outcome	New flexible-heater/concrete thermal knowledge; 2008 joint ITCs $242,328	[215], judgment

Les Éléments Chauffants Tempora Inc. v. The King, 2025 TCC 173 — condensed teaching summary

This is the condensed RDBASE teaching summary for the Tempora Flexible Silicone Rubber and Kapton Heating Elements project, 2025 TCC 173. The recommended field-of-science code is 2.02.01 Electrical and electronic engineering, with 2.05.04 Plastics, Rubber, and Composites as the materials-focused alternative (see 2.05); neither is verified as filed. The 2008 ITC allowance of $242,328 combines this project and the Annealed Tubular/Finned project. Descriptions labelled 'project analysis' are not precise judgment citations. In prior teaching assessments, the underlying project evidence was rated 4/10 for the specificity of hypotheses and technological conclusions, distinct from the Court's successful eligibility outcome.

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.

2. TEMPORA — RDBASE KEY CRITERIA

2.07 Silicone/Kapton Heaters — Background & Objectives

Court evidence Illustrative or presenter analysis

Key criterion	Summary	Source
Historical project	Flexible silicone/Kapton heaters for outdoor railway use, integrated with concrete moulds	[213]–[215]
Reported performance	Target temperature in about 20 minutes; sensor monitoring	[215]
Illustrative goals (Project 2603)	−70°C operation; ≤±10% resistance drift; 500+ flex cycles; CSA compliance	*Illustrative*
Scope distinction	2026 targets are teaching examples, not Court findings for 2008	*Presenter*

Tempora, 2025 TCC 173 — Court evidence vs. illustrative 2026 RDBASE analysis (Project 2603)

Court case Tempora, 2025 TCC 173, Flexible Silicone Rubber and Kapton Heating Elements, successful 2008 year. Discuss outdoor railway heating, integration into concrete and approximately 20-minute reported heating response. The 2026 RDBASE Project 2603 values (a hypothetical re-run of the project used for teaching) are illustrative planning targets only: −70 degrees Celsius, plus/minus 10 percent resistance drift, 500 flex cycles. Do not attribute those numbers to the Court. References [213]–[215].

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.

2. TEMPORA — RDBASE KEY CRITERIA

2.08 Silicone/Kapton Heaters — Technological Uncertainties

Court evidence Illustrative or presenter analysis

Key criterion	Summary	Source
Historical uncertainty	Would the heater–concrete interface work reliably outdoors, with adequate heat transfer and control?	[213]–[215]
Materials and durability	Silicone/Kapton under cold, moisture and stress; adhesion; resistance stability	*Project analysis*
Thermal / integration	Heater geometry, heat uniformity, concrete composition, sensors, installation	[215]
Illustrative 2603 variables	Adhesives; heater thickness and pattern; flexing; moisture–freeze cycles; controls	*Illustrative*

Tempora, 2025 TCC 173 — Court evidence vs. illustrative 2026 RDBASE analysis (Project 2603)

Emphasize uncertainties rather than ordinary engineering requirements. The judgment describes heater/concrete integration and the professor's involvement [213]–[215]. The detailed 2026 uncertainty list is a proposed RDBASE teaching framework, not a set of explicitly established Court findings. Differentiate project knowledge gaps from unverified numerical targets.

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.

2. TEMPORA — RDBASE KEY CRITERIA

2.09 Silicone/Kapton Heaters — Experimental Methods

Court evidence Illustrative or presenter analysis

Key criterion	Summary	Source
Historical evidence	Prototypes, iterative design, Excel roadmaps, professor input on concrete	[53]–[56], [65], [215]
Historical integration	Concrete moulds and temperature-monitoring sensors	[213]–[216]
Illustrative 2603 method	Benchmark suppliers; vary materials, adhesives, geometry; measure resistance, adhesion, flex	*Illustrative*
Illustrative validation	Thermal cycling, moisture exposure and field trials against set objectives	*Illustrative*

Tempora, 2025 TCC 173 — Court evidence vs. illustrative 2026 RDBASE analysis (Project 2603)

Separate contemporaneous evidence described in the Tempora judgment from the illustrative 2026 experiment plan. The latter is a proposed systematic investigation with material-screening matrices, environmental cycling, measurements and field testing; do not portray it as performed by Tempora in 2008. Court references: [53]–[56], [65], [213]–[216].

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.

2. TEMPORA — RDBASE KEY CRITERIA

2.10 Silicone/Kapton Heaters — Results vs. Advancement

Court evidence Illustrative or presenter analysis

Key criterion	Summary	Source
Reported historical results	Prototypes achieved controlled outdoor heating; concrete and sensors informed integration	[215], [223]–[229]
Illustrative 2603 results	−70°C operation, adhesion and uniform heating would need measured test evidence	*Illustrative*
Advancement: historical	How heater construction, concrete composition and outdoor thermal behaviour interact	[215]
Advancement: proposed	Bonding limits, pattern trade-offs, combined-stress degradation — only if tests prove them	*Illustrative*

Tempora, 2025 TCC 173 — Court evidence vs. illustrative 2026 RDBASE analysis (Project 2603)

Explicitly distinguish observations (what a prototype did) from technological advancement (new design knowledge explaining why it worked and where limits lie). The 2026 extreme-cold and durability results were illustrative scenarios, not Court-measured facts. Do not overstate the precision of reported results. The historical project was accepted by the Court, but no detailed quantitative dataset is available. References [215], [223]–[229].

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.

2. TEMPORA — RDBASE KEY CRITERIA

2.11 Silicone/Kapton Heaters — Records & Outcome

Court evidence Illustrative or presenter analysis

Key criterion	Summary	Source
Key criteria	Outdoor heating objective; integration uncertainty; prototypes and tests; new integration knowledge	[213]–[229]
Records and testimony	Excel roadmaps; Elhami testimony; professor consultation on concrete	[53]–[57], [65], [215]
Court outcome	2008 WIN: $242,328 allowed jointly with Annealed Tubular/Finned	Judgment
Teaching assessment	4/10 for specificity of hypotheses and conclusions — presenter rating, not a Court finding	*Presenter*

Tempora, 2025 TCC 173 — Court evidence vs. illustrative 2026 RDBASE analysis (Project 2603)

Conclude with the RDBASE framework: objective, uncertainty, experimental methods, observed results and advancement. Court evidence includes Excel parameter roadmaps, testimony and reported professor consultation. The professor's name, exact formula and deliverables are not established in the reasons. The 2008 amount of $242,328 is shared with the Annealed Tubular/Finned project. The teaching score 4/10 is the presenter's evaluation of project-description detail, not a judgment of Court eligibility. Recommended field of science 2.02.01 Electrical and electronic engineering (alternative 2.05.04 Plastics, Rubber, and Composites) is not verified as a filed T661 code.

Source: Tempora, 2025 TCC 173. Relevant passages include [53]–[57], [65], [215], [223]; verify individual propositions against the judgment.

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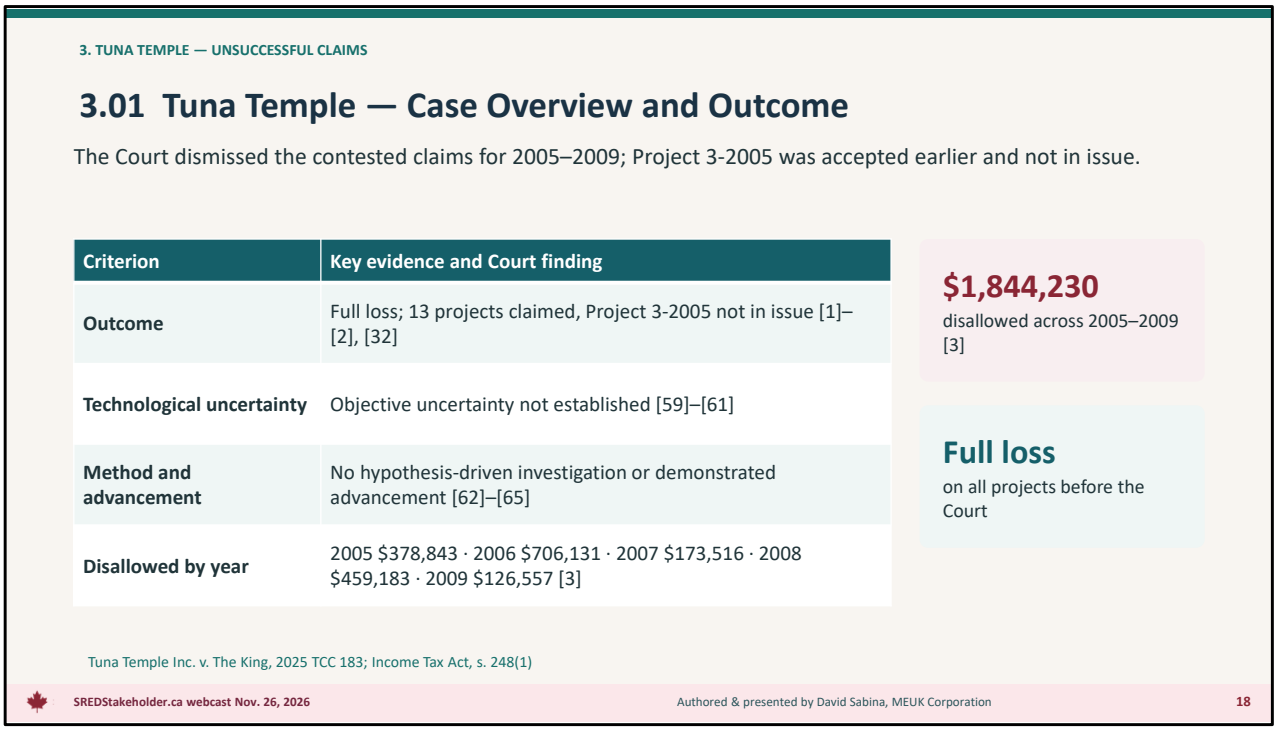
SECTION 03

Tuna Temple — Unsuccessful Claims

Tuna Temple Inc. v. The King, 2025 TCC 183

Tuna Temple Inc. v. The King, 2025 TCC 183 (Clark J.).

Income Tax Act, RSC 1985, c. 1 (5th Supp.), s. 248(1); Northwest Hydraulic Consultants Ltd. v. Canada, 1998 CanLII 553 (TCC).



Tuna Temple Inc. v. The King, 2025 TCC 183 (Clark J.). The judgment addressed the contested projects; Project 3-2005 was accepted by the Minister and was not in issue [32]. The disputed expenditure amounts by year are given at [3].

Source: Tuna Temple, 2025 TCC 183. Relevant passages include [16]–[17], [24]–[28], [59]–[65]; verify individual propositions against the judgment.

3. TUNA TEMPLE — UNSUCCESSFUL CLAIMS

3.02 Tuna Temple — Business Background and Issues

Higher-yield processing of super-frozen tuna: a commercial improvement, not an advance in technology.

Criterion	Key evidence and Court finding
Business context	Processing and cutting super-frozen tuna for restaurant customers
Principal investigator	Stavros Tripis — president, CEO, 45% shareholder and sole witness [4]
Academic background	Bachelor's degree in history; no formal food-processing education [5]
Industry experience	Tuna processing since 1999; grading and selling fresh tuna [5]
Core issue	Credible on his own experience [4], but no objective industry-wide uncertainty [15]–[17], [59]–[65]

Tuna Temple Inc. v. The King, 2025 TCC 183; Income Tax Act, s. 248(1)

Tuna Temple Inc. v. The King, 2025 TCC 183, paras. [1]–[2], [16]–[17], [32], [59]–[65].

Source: Tuna Temple, 2025 TCC 183. Relevant passages include [16]–[17], [24]–[28], [59]–[65]; verify individual propositions against the judgment.

Investigator background: Tuna Temple, 2025 TCC 183, [4]–[6]. Tripis held a bachelor's degree in history and had no formal food-processing education. His family was involved in the food industry; he had worked in tuna processing since 1999. The Court found him credible in his immediate experience. Credentials are context, not a standalone eligibility criterion.

3.03 Tuna Temple — Evidence, Documentation and Wages

Production records and trials existed, but did not establish qualifying experimental development.

Criterion	Key evidence and Court finding
Technical records	Handwritten logs and diagrams for Project 1-2005; other batch records gave little explanation
Testing approach	Repeated attempts without stated hypotheses or reasons for changing parameters
Technological advancement	No knowledge shown to be new to the relevant field
Expenditures	Disputed activities and related wages not accepted as SR&ED

Tuna Temple Inc. v. The King, 2025 TCC 183; Income Tax Act, s. 248(1)

Court references [24]–[28], [59]–[65]. Distinguish ordinary business expenses from SR&ED expenditures.

Source: Tuna Temple, 2025 TCC 183. Relevant passages include [16]–[17], [24]–[28], [59]–[65]; verify individual propositions against the judgment.

3.04 Tuna Temple Project 1-2005 — Strongest Evidence

The best-documented project — but documented iteration alone did not demonstrate SR&ED.

Criterion	Key evidence and Court finding
Objective	More usable portions and less cutting waste for high-end restaurants
Experimental evidence	32 documented attempts with handwritten logs and diagrams [24]–[25]
Observed result	About 32% yield after iterative cutting techniques
Prior art	Specialized equipment and techniques already known in Japan [25]–[27]
Court finding	No objective uncertainty or advancement beyond industry knowledge [27]–[28]

Tuna Temple Inc. v. The King, 2025 TCC 183; Income Tax Act, s. 248(1)

Project 1-2005: Exhibit A-1, tab 8; [24]–[25]. The Court considered the equipment already used in Japan [25]–[27], and likened the process to maximizing cookie yield [27]–[28].

Source: Tuna Temple, 2025 TCC 183. Relevant passages include [16]–[17], [24]–[28], [59]–[65]; verify individual propositions against the judgment.

3.05 Tuna Temple — Systemic Weaknesses Across Projects

Knowledge that is new to the claimant is not technological uncertainty in the field.

Criterion	Key evidence and Court finding
Uncertainty	Subjective learning curve, not objective uncertainty [16]–[17], [59]–[61]
Scientific method	Trial-and-error without clear hypotheses or controlled reasoning [62]–[63]
Advancement	No evidence the knowledge was unavailable to specialists [64]
Records	Logs lacked rationale and conclusions; some said only “try again” [62]–[63]
Outcome	Ordinary business activity, not SR&ED [65]

Tuna Temple Inc. v. The King, 2025 TCC 183; Income Tax Act, s. 248(1)

Court references: [16]–[17], [59]–[65]. The existence of records and repeated trials was insufficient to meet the technological uncertainty, scientific method and advancement requirements.

3.06 Field of Science — Tuna Temple

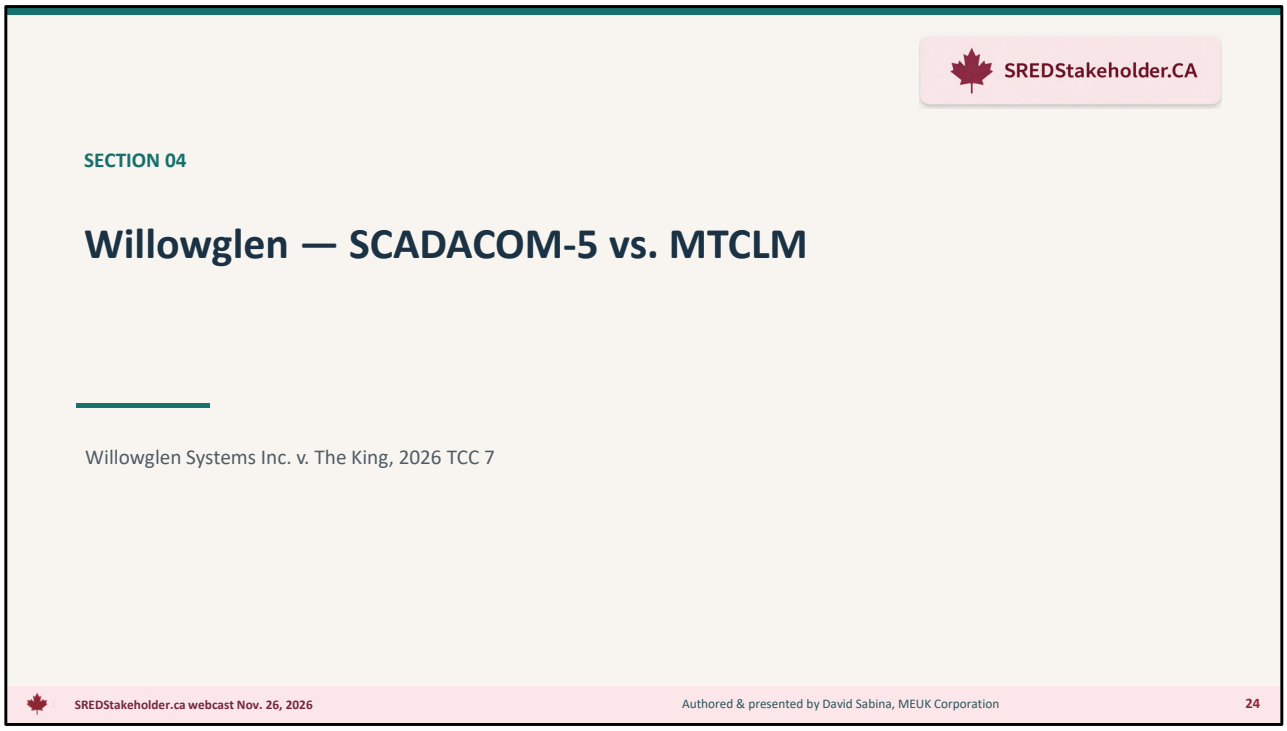
The field of science sets the knowledge base for judging uncertainty and advancement.

Field / criterion	Classification and SR&ED relevance
T661 code in judgment	Not identified; no code can be attributed to the claimant
Primary	2.11.01 Food and beverages — processing, cutting, preservation
Secondary	4.01.03 Fisheries and aquaculture — only if that science is the focus
Conditional	1.06.02 Biochemistry — only if biochemical mechanisms are central
Key distinction	A field code does not establish eligibility; evidence is still required

Tuna Temple Inc. v. The King, 2025 TCC 183; Income Tax Act, s. 248(1)

The judgment does not state the T661 field-of-science code used by Tuna Temple. The suggested codes are analytical recommendations, not findings of the Court. The 2026 SR&ED field code list confirms 2.11.01 Food and beverages, 4.01.03 Fisheries and Aquaculture, and the fuller official label 1.06.02 Biochemistry, molecular biology, and Biochemical research. Food and beverages is the strongest primary fit for the cutting, shelf-life and product formulation activities described. Fisheries and Aquaculture is a possible secondary field only where the actual technological investigation concerns that science rather than routine food processing. Biochemistry is conditional on a genuine biochemical research focus. The case illustrates why the field's existing knowledge matters: the Court distinguished subjective lack of knowledge from objective technological uncertainty [16]–[17], [59]–[64]. A code alone does not establish eligibility.

Source: Tuna Temple, 2025 TCC 183. Relevant passages include [16]–[17], [24]–[28], [59]–[65]; verify individual propositions against the judgment.
Field-of-science codes are presenter recommendations, not verified T661 filings.



Willowglen Systems Inc. v. The King, 2026 TCC 7

Income Tax Act, RSC 1985, c. 1 (5th Supp.), s. 248(1); Northwest Hydraulic Consultants Ltd. v. Canada, 1998 CanLII 553 (TCC).

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].

4. WILLOWGLEN — SCADACOM-5 VS. MTCLM

4.01 Case overview

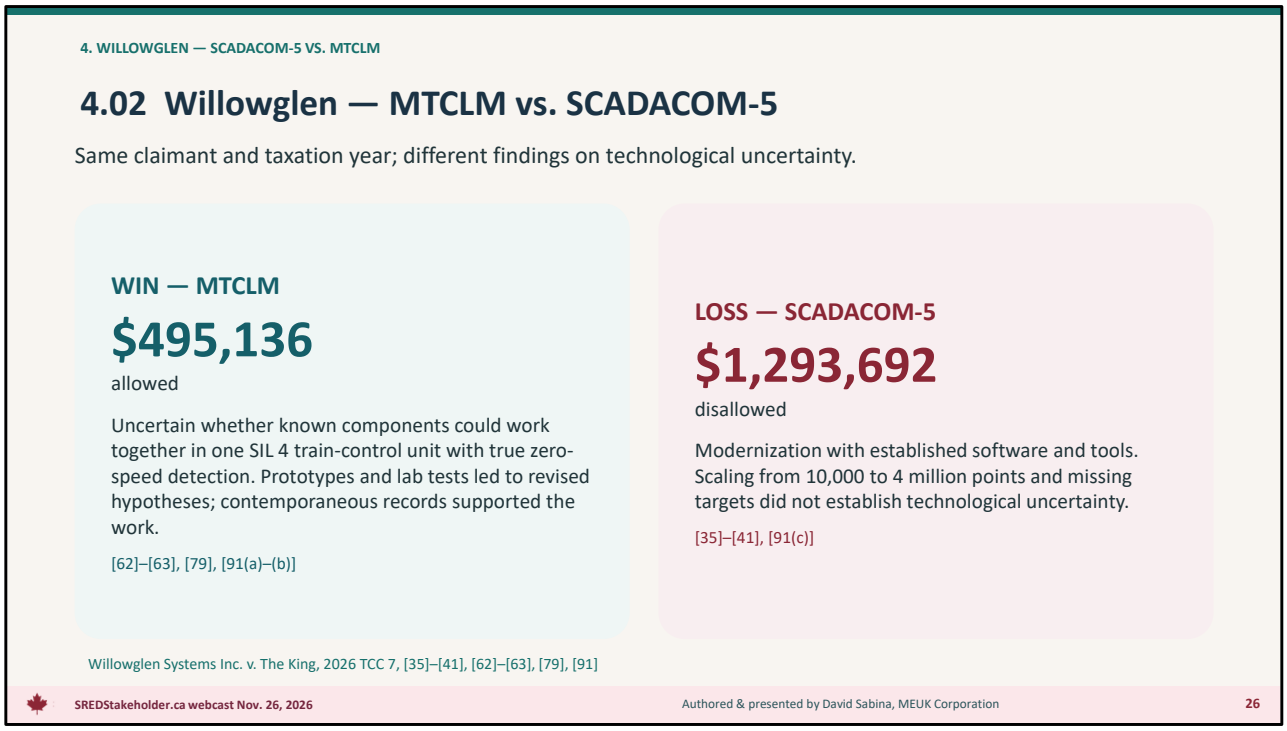
Item	Details	Ref.
Judge and hearing	Wong J.; Edmonton Dec 2023 and virtual May 2024; judgment 9 Jan 2026	—
Taxation year	Year ending 31 July 2014	[2]–[3]
Company	Edmonton industrial-automation / software company; founded 1971 as Datek	[1], [9]–[13]
Workforce	~100 staff at hearing; 86% bachelor's or higher, 16% graduate degrees	[10]–[11]
2014 work	Mostly oil and gas	[1], [10]
Witnesses	Karpoff (CEO), Kruger (engineering), Kahler (VP Engineering)	[9]–[15], [44]–[45]
Issues	Were SCADACOM-5 and MTCLM experimental development? Qualified amount under s. 37(8)?	[3]

Willowglen Systems Inc. v. The King, 2026 TCC 7

Willowglen is an Edmonton industrial-automation and software company (originally Datek, 1971) with a highly qualified workforce. The single 2014 taxation year put two projects before the Court: SCADACOM-5 (modernizing its SCADA platform) and MTCLM (a SIL 4 manual train-control logic module for Bombardier). Issues: whether each was experimental development, and the qualified amount under s. 37(8) [3]. Witnesses: Wayne Karpoff (CEO), Douglas Kruger (engineering), Glen Kahler (VP Engineering).

Legal and case reference: Willowglen Systems Inc. v. The King, 2026 TCC 7

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].



Willowglen, 2026 TCC 7. MTCLM: Court recognized system uncertainty from integrating known technologies into one SIL 4 central train-control box with train-line functions and reliable zero-speed detection. See [62]–[63], [79], [91(a)–(b)]. The allowed amount was $495,136. Contemporaneous technical and time records supported the claim. SCADACOM-5: Modernization of the existing SCADA product through available tools and techniques did not establish objective technological uncertainty; failure to meet a scaling target was insufficient. See [35]–[41], [91(c)]. Disallowed amount $1,293,692.

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].

4.03 Willowglen SCADACOM-5 — Field of Science

SCADACOM-5 modernized a legacy supervisory control and data acquisition (SCADA) platform.

Classification	Field and rationale
Primary — 2.02.09	Software engineering: architecture, data management, modernization
Alternative — 2.02.05	Automation and control systems: supervisory monitoring and control
Supporting — 2.02.06	Communication engineering: only if communications was the central uncertainty
Court finding	Known techniques and third-party tools; scaling and missed targets did not establish uncertainty
Teaching point	An eligible field does not make routine software modernization SR&ED

Field classifications are analytical recommendations, not codes confirmed in the judgments.

Suggested codes are analytical, based on the 2026 SR&ED field code list. In Willowglen, 2026 TCC 7 [35]–[41], the Court rejected SCADACOM-5 despite its engineering context. The Court characterized modernization and scaling as insufficient to establish the required objective technological uncertainty. Do not claim that the company actually used these codes on its T661 forms.

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].
Field-of-science codes are presenter recommendations, not verified T661 filings.

4.04 Willowglen SCADACOM-5 (LOSS) — RDBASE Key Criteria

Criterion	Court evidence and assessment	Court ¶
Background / prior art	Replace obsolete SCADACOM-3; browser access, non-proprietary hardware, third-party tools	[14]–[30], [37]–[38]
Objectives	Modernize; scale from ~10,000 to 4 million points; improve deployment	[35]–[40]
Uncertainties	Scalability and integration claimed; nothing beyond routine engineering shown	[36]–[40]
Experiments	Development, integration and scaling using generally available techniques	[37]–[40]
Results	Modernized system deployed; difficulty reaching 4 million points not proof of uncertainty	[39]–[40]
Conclusions	No technological advancement shown; rejected as SR&ED	[36]–[41]

Willowglen Systems Inc. v. The King, 2026 TCC 7, [14]–[41]; Income Tax Act, s. 248(1)

SCADACOM-5 — unsuccessful project. The Court characterized the modernization of the legacy SCADACOM-3 platform, use of established third-party tools, and scalability work as product development and routine engineering. Difficulty reaching 4 million points was not itself proof of technological uncertainty. See Willowglen, 2026 TCC 7, paras. 14–41, particularly 36–40. Do not confuse these findings with the successful MTCLM project, which is analyzed in the following slides.

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].

4.05 Willowglen MTCLM — Field of Science

MTCLM tested whether established components could work together in one SIL 4 train-control system.

Classification	Field and rationale
Primary — 2.02.05	Automation and control systems: integrated safety, zero-speed and train-line control
Alternative — 2.02.01	Electrical and electronic engineering: safety circuitry, interference mitigation
Supporting — 2.02.09	Software engineering: state-machine logic, diagnostics, control software
Court finding	Unpredictable interactions and revised hypotheses showed system-level uncertainty
Teaching point	The field sets the prior-art baseline; unresolved integration problems made it qualify

Field classifications are analytical recommendations, not codes confirmed in the judgments.

Suggested codes are drawn from the 2026 SR&ED field code list, not identified as actual T661 classifications. Willowglen, 2026 TCC 7 [62]–[63], [79], [91(a)–(b)] found that integration into a single SIL 4 safety box involved genuine system-level uncertainty; tests and design iterations were significant. Compare directly with SCADACOM-5: similar broad engineering discipline but a different technological evidentiary record.

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].
Field-of-science codes are presenter recommendations, not verified T661 filings.

4.06 Willowglen MTCLM (WIN) — RDBASE Key Criteria

Criterion	Court evidence and assessment	Court ¶
Background / prior art	Known components; no 2014 solution combined SIL 4, train-line and zero-speed	[62]–[64]
Objectives	One centralized SIL 4 manual train-control logic module	[48]–[51], [74]
Uncertainties	Unpredictable redundancy, interference and isolation interactions	[62]–[64]
Experiments	Gate arrays, relays, board redesigns; accredited EMI/EMC and vibration tests	[48]–[55], [65]–[73]
Results	Initial design failed; redesigned boards and state machine resolved zero-speed	[51]–[55]
Conclusions	Integrated SIL 4 box achieved; $495,136 qualified	[74]–[79], [90]–[91]

Willowglen Systems Inc. v. The King, 2026 TCC 7, [48]–[79], [90]–[91]

MTCLM (successful SR&ED project): one-page RDBASE key-criteria summary. Background: The known components did not provide a proven system architecture meeting SIL 4, train-line and true zero-speed functions together. Objectives: centralized Manual Train Control Logic Module with redundancy, isolation and electromagnetic compatibility. Uncertainty: unpredictable system-level interactions despite known components; no 2014 roadmap. Experimental investigation: alternative gate arrays, safety relays, multiple redesigned circuit boards, hand-wired integrated prototype, diagnostics, accredited EMI/EMC and shock/vibration testing; revised hypotheses in response to evidence. Results: the original architecture proved inadequate; revised board layout, redundancy, isolation and state-machine logic addressed false pulses in zero-speed detection. Technological advancement: the Court accepted system integration knowledge and a centralized SIL 4 unit combining control and train-line functions. Evidence: contemporaneous schematics, handwritten laboratory notes, progress reports and 15-minute timesheets. Disposition: $501,850 less $6,714.43 timekeeping adjustment equals $495,135.57, rounded to $495,136. References: Willowglen Systems Inc. v. The King, 2026 TCC 7, [48]–[79], [90]–[91].

4.07 Willowglen MTCLM — Objectives & Uncertainties

Key criterion	Summary	Court ¶
Objective beyond standard practice	One SIL 4 module for manual control of an autonomous train, with train-line functions and fail-safe diagnostics	[45]–[49]
Measurable goals	SIL 4 (vs. typical SIL 2); no single-point failures; true zero-speed; backplane isolation; manufacturable	[47]–[54]
Technological uncertainties	Could one design meet SIL 4, redundancy, zero-speed, EMI and isolation at once — and stay manufacturable?	[48]–[54]
Key variables	Gate-array/relay redundancy; speed-signal integrity; brake relay and 7–8 boards; wiring isolation; lead-free parts	[48]–[54]

Willowglen Systems Inc. v. The King, 2026 TCC 7 — condensed teaching summary

These are the objectives and uncertainties as summarized in the RDBASE analysis. The uncertainty was system-level: whether known components could be integrated into a single SIL 4 control box while also managing train-line functions. The goals were SIL 4 rather than typical SIL 2, redundancy, zero speed, isolation and manufacturability. Court references [45]–[54].

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].

4. WILLOWGLEN — SCADACOM-5 VS. MTCLM

4.08 Willowglen MTCLM — Experimental Methods & Results

Key criterion	Summary	Court ¶
Experimental activity	Subsystem boards → integrated prototype; firmware, wiring and safety circuits revised	[50]–[53], [56]
Methods	Redundancy analysis, board redesigns, diagnostics; accredited EMI/EMC, shock and vibration tests	[50]–[56]
Results	Initial design failed SIL 4; brake relay and 7–8 boards redesigned; SIL 4 achieved	[48], [50]–[54]
Technological conclusions[1]	Relay, board, diagnostic and isolation behaviour had to be solved together	[62]–[73]
Technological conclusions[1]	Zero-speed detection and interference were system-level safety problems	[54]–[56], [65]–[78]

Willowglen, 2026 TCC 7 — [1] presenter synthesis of technical evidence; see notes

The work progressed from subsystem boards to a hand-built integrated prototype. Test failures required changes to the brake relay, multiple boards, diagnostics and isolation. Accredited lab tests included EMI, EMC, shock and vibration. The zero-speed issue was conceded by the Minister as SR&ED. Distinguish observed results from conclusions about advancement. References [48], [50]–[56].

Source: Willowglen Systems Inc., 2026 TCC 7. MTCLM: [45]–[56], [62]–[78], [90]; SCADACOM-5: [14]–[41], [91(c)].

[1] Technological conclusions are presenter interpretations of the documented experiments, not verbatim judicial findings. The evidence supports knowledge about interdependencies among safety circuitry, diagnostics, isolation and zero-speed detection. The judgment does not provide exact design thresholds or full test datasets; do not infer numerical safety margins.

4. WILLOWGLEN — SCADACOM-5 VS. MTCLM

4.09 Willowglen MTCLM — Advancement & Outcome

The Court accepted the integrated SIL 4 control box as experimental development.

Key criterion	Court finding and technological knowledge
Advancement: architecture	One box integrating control and train-line functions at SIL 4 — beyond competitor designs [74]–[75]
Advancement: integration[1]	Combined safety behaviour was unpredictable; system-level testing was needed [62]–[73]
Advancement: fault handling[1]	Diagnostics, wiring and EMI state-machine revisions maintained safety under interference [65]–[73]
Evidence	Lab notes, schematics, test results, Bombardier progress reports [76]–[77]
Classification and outcome	Recommended 2.02.05. WIN: $495,136 after $6,714.43 timekeeping adjustment [90]–[91]

Willowglen, 2026 TCC 7 — [1] presenter synthesis of technical evidence; see notes

The Court accepted the integrated SIL 4 control-box development as experimental development. Advancement: a single centralized box handling both control and train-line functions, which the Court considered a significant distinction from partial competitor designs [74]–[75]. Uncertainty: known components interacted unpredictably when integrated to meet SIL 4 and zero-speed requirements; there was no roadmap [62]–[64]. The Crown's concession on zero-speed supported the larger system-level finding [4], [78]. Method: redundancies, firmware diagnostics, wiring changes and a state machine for EMI were tested through iterative prototyping, observation, lab testing and modification [65]–[73]. Records: handwritten lab notes (Ex. A-1 vol. 2 tab 79), schematics (vol. 1 tab 52) and Bombardier progress reports (tabs 53–65) satisfied the fifth Northwest Hydraulic criterion; the Court noted unusually detailed record-keeping for a small company [76]–[77]. All five criteria met [59]–[79].

Field of science 2.02.05 is a recommended classification, not a code established by the judgment.

Source: Willowglen Systems Inc. v. The King, 2026 TCC 7, [59]–[79], [90]–[91].
Proxy method under s. 37(8)(a)(ii)(B): Willowglen allocated 100% of remuneration for work that contributed directly to SR&ED and 60% for supporting work such as weekly project-management meetings that covered this project and others.

[1] Presenter synthesis of technological knowledge, distinct from the observed SIL 4 result and the legal outcome. No quantitative interference thresholds, failure probabilities or detailed implementation rules are supplied here.