



HVACR Heritage Centre Canada
HHCC
Collections and Curatorial Services
CCS

HHCC Essential Document No. 5
Repositioning HHCC, Moving from “Start-Up” to “Mainstream”

**Helping to Tell the Many Stories of Canada’s
Rich Heritage of Material Culture**



A HHCC Strategic Planning and Development Resource Document

**Prepared by
Collections and Curatorial Services
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Cover Image: Canadian Mechanical Exposition [CMX] Feb. 2006

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Forward

This document sets out HHCC's first steps in strategically repositioning itself, moving from successful "Start-Up" to "Mainstream", helping to tell the many stories of Canada's rich heritage of material culture. It follows from the policy and planning directions set out in its December 2018 Planning and Development Guide for FY2018-2019 [See doc.OA1812D¹]. The larger vision is that of HHCC's potential contribution to a "Centre for the Study of Canadian Material Culture and Cultural Property", consisting of a number of cooperating and collaborating cultural organizations.

The case is made that, with an extensive list of innovations and performance accomplishments, and with the recent acquisition of an extensive archival trade and technical literature collection, HHCC is ready to move on. It is now ready to move from an industry-focused start-up to new life and times as a fully operational, industry-based, Canadian cultural organization. In making the case:

- A brief history is provided of the realization of HHCC as an idea – "HHCC Comes of Age". Including: its achievements, history-making, evolving world view, and its preparations for the future.
- Clarification is provided of the core work of the Centre, following from its national letters patent. For it was to be a new kind of 21st century, NFP, Canadian, cultural venture in matters of: core concepts, unique and distinguishing characteristics, business model, and stock-in-trade.
- Prerequisite conditions for HHCC's future success are highlighted, as critical next steps in the evolution of HHCC as a fully operational cultural organization – "Stable Funding, Executive Leadership, and Wise and Judicious Board Development", as well
- Section 4 includes selected historic images of HHCC at work over the last 20 years - a picture being worth a thousand words.

Substantial supporting, documentary evidence is provided through the citing of authority, and the use of extensive footnoting. For at this critical, transitional stage, without wisdom and understanding HHCC could well become a "Camelot" of sorts - a kind of idyllic, mystical place and time, one which faded into the mist of time, over-taken by the realities life and times. There is much at stake for HHCC in making this successful transition. Included are: hundreds of thousands of dollars of invested public and private capital over the last 20 years; the loss of momentum in meeting HHCC's commitments to its national Letter Patent; as well as the 20 years of private volunteer commitment by those that have worked as advocates, Board members, and line workers in the cause.

Yet make no mistake, at the heart of the case being made for HHCC, is not about its role in promoting the lifestyle benefits of HVACR technology, but about what that technology teaches about Canadian's evolving society and culture. It's about the processes of serious knowledge production and dissemination, about the essential understandings [the stories told] by those things which the HVACR industry has unleashed on Canadians [what they are; what they do; how they work; with what results; and with what consequences for Canadian culture and society]. By inference it's also about the knowledge-rich treasures held in Canada's museums, archives and their contribution to the enrichment of life's understandings.

HHCC owes its genesis to the leadership, and generosity of a handful of leading individuals and organizations within the HVACR Industry. Each in their own way, have come to understand what Canada's emerging 21st century, information society expects of Canadian industry. Through their leadership, advocacy, and volunteerism they supported HHCC through its often problematic, embryonic and early development years, as an innovative and entrepreneurial Canadian start-up. Our heart-felt thanks to our Industry - HHCC, Collections and Curatorial Services, September 2019.

¹ All references cited are held in HHCC'S Corporate Data Centre

Section 1

HHCC Comes of Age

The year 2018 was a uniquely defining moment in the history and evolution of HHCC². Through its successful “start-up” phase, it had clearly proven its ability to meet its objects, as set out in its national letters patent. As well, with its recent acquisition of a significant archival collection of HVACR trade and technical literature³ the Centre had taken on the full mantle of an industry sponsored, national museum and archive. As recently recognized by the Library and Archives of Canada, such collections are national cultural imperatives. For “Documentary heritage is a cornerstone of all democratic societies and is an essential resource for supporting economic, social, legal, and cultural domains, as well as fostering innovation”⁴

HHCC’s Achievements - With the corporate support of its founding partners⁵ and with the various national and provincial program grants received⁶, HHCC now has to its credit:

- A significant HVACR artifact collection, documenting the embryonic and early years of the Canadian Industry from the 1920’s through to the 1960’s. The collection, consisting of over 300 artifacts, appraised as cultural property at over \$ 30,000.00, has been the focus of much of its work over the last 15 years and more,
- A computer-accessed research database, available through the HHCC Data Centre, currently holds several hundred, multi-page research reports, catalogue sheets, and images of historic artifacts held in trust by HHCC. The reports document variously “what it is”, “how it works”, “what it does”, and “with what results and consequences” for Canadian culture and society⁷,
- The recently acquired HVACR trade and technical literature collection, containing over 2000 documents, has been cited as “....a rare and possibly unique example of an amassed body of material in its wide variety of aspects representative of a revolutionary emerging modern technical industry”⁸,
- An on-line, “virtual” museum and archive, which has attracted attention, variously from across much of the Western world, established with the generous support of the Ontario Trillium Corporation,
- Two interactive educational web sites established with the support of the Virtual Museum of Canada,

² HHCC is taken as recognized acronym for The HVACR Heritage Canada

³ For professional review and appraisal of the collection see Pamela Campbell, “A Donation Appraisal” doc. HHCC 1812G, December 2018

⁴ Library and Archives Canada, “Building a Canadian National Heritage Digital Strategy”, Internet May 30, 2018

⁵ Including principally, The Heating, Refrigeration and Air Conditioning Institute of Canada [HRAI], The HVACR United Association, Local 787, Ontario, [UA787]; and the Ontario Refrigeration and Air Conditioning Contractors Association [ORAC]

⁶ Including principally: the Ontario Trillium Corporation, and the Virtual Museum of Canada

⁷ See HHCC File 114- 18, Vol. 6

⁸ Pamela Campbell, Donation Appraisal, see doc. HHCC1812G, Dec. 2018

- Numerous national, provincial, and community exhibitions, and special educational displays, as well as
- A substantial educational materials development program, which has produced an impressive array of “Story Boards” telling the essential stories of the contribution of HVACR technology to a richer fuller life for all Canadians.

The Organization has clearly “walked the talk” and in fact, has come of age:

- The year 1998 marked the 20th anniversary of the “idea” of an industry sponsored, volunteer-based, HVACR research center, museum and archive, It was to be an innovative, 21st century organization focusing, not so much on the memorabilia left behind by the Industry, as on the Industry’s contribution to Canada’s rich heritage of material cultural.
- It was also the 18th anniversary of the Centre’s Founding Committee, charged with preparing the terms of reference for this new kind of innovative and entrepreneurial cultural organization, and for applying for national certification and recognition
- As well, it was the 14th anniversary of receiving HHCC’s national Letters Patent, as a charitable organization, with specific charitable objectives to be achieved in the public interest.

HHCC “Making History”, while on the “Right Side of History” - Through all of this HHCC can be seen as “Making History”, while being “On the Right Side of History”. For it had gone where few Canadian industries have gone before. Through its research, educational materials, production, and public programming HHCC was promoting understanding of the social and cultural consequences of the Industries technology’s, its systems, equipment, and myriad devices – including: What they are; How they work; What they do; and With what results and consequences for Canadian society and culture.

In addition, the Canadian HVACR industry, through the work of HHCC, can also be seen as being on the “Right Side of History”⁹. For HHCC’s, on-going commitment to studies in technology and its consequences reflected a long-standing Canadian unease about the promotion of technology and its endless devices as a universal public and private goods¹⁰.

On the universality of Western technology as “public good”, noted philosopher Isaiah Berlin, in his “Chapters in the History of ideas”¹¹ observes that, here we are dealing with the most fundamental human issues of our times. He describes the “storm of ideas” that came with

⁹ The expression “On the Right Side of History” was popularized by Ben Shapiro in his book “The Right Side of History, How Reason and Moral Purpose Made the West Great”

¹⁰ A substantial volume of Canadian studies have followed the penetrating analysis by the French philosopher Jacques Ellul’s 1954, [The Technological Society]. They warn of the potential, unintended consequences of the mindless adoption of technology and its devices. Included are: the increasingly standardization of society and culture”, the loss of human technique, learning ability, natural human adaptability, spontaneous innovation and entrepreneurialism, and their collective implications for the future of humanity. Wherever technical knowledge is seen as overriding personal, knowledge and understanding, and wherever cultural development is somehow confused with technological development, civilization stands at risk. See for example the early respected, foundational works of Canadian: Ursula Franklin, “The Real World of Technology”; Heather Menzies, “Fast Forward and Out of Control”; Arthur Kroker, “Technology and the Canadian Mind”; and “Technology and Empire”, George Grant.

¹¹ “The Crooked Timber of Humanity, Chapters in the History of Ideas”, Isaiah Berlin, 1959

science, and technology, along with political ideologies of the 20th century, as altering the lives of virtually all mankind. Yes, HHCC is making history, as well as being on the right side of Canadian thought!

HHCC’s Evolving World View – Yet, characteristic of “coming of age” and “early adulthood”, the last several years have been ones of relative chaos, turmoil, and thoughtful reflection. In preparing for its future HHCC has mused over: its embryonic and early development years and what they taught, its sense of accomplishment that comes with its multiple early achievements, the corporate skills and knowledge acquired about what works and doesn’t work so well, the looming challenges of adulthood, and most importantly the issues, options, directions, and priorities to be carefully considered, in the minefield to be confronted in planning thoughtfully for a mature and meaningful future.

HHCC is clearly going through a historic and significant shift in its world-view. Among other things, it’s a shift from “industry memorabilia” to “Canadian cultural property”, a shift in HHCC’s “center of gravity” from an inward-looking organization on its Industry, to an outward-looking one, focusing on a public world-view. It’s a shift of fundamental importance, helping to ensure that the Centre will evolve from a successful, industry focused start-up into Canada’s museum and archival mainstream. Here it will work collaboratively with other national, provincial, and community museums and archives. In so doing HHCC will be in a position to better fulfill its objects as a national charitable organization¹²

HHCC’s Preparations for the Future - Looking Ahead, the Centre’s “Planning and Development Guide” for 2019¹³, puts the organization firmly on track. It provided fresh, new, and re-invigorating images of the Centre and its work. The 10 proposed “renewal” projects, to be undertaken as financial and curatorial resources allow, were based on HHCC’s 15 years of experience as a start-up. Together they help re-mold the Centre from a fledging start-up into a mature operating facility meeting advanced standards and practices in the preservation, interpretation, research, documentation, and promotion of Canadian material culture.

The Guide specifically highlights 10 initiatives, for which financial resources and professional skills and knowledge will be solicited:

1. Redevelopment of HHCC Artifact Collection Management Information System
2. Redevelopment of HHCC Artifact Warehouse Facility
3. Installation, Promotion, and Management of HHCC’s New Collection of Archival Trade and Technical Literature
4. Redevelopment of HHCC’s Virtual Museum and Archive
5. Redevelopment of HHCC’s Interactive, VMC, Educational Websites
6. Re-activating HHCC’s On-Site Display and Exhibition Program
7. Ensuring Ongoing Stable Funding for the Work of the Centre
8. Rethinking HHCC as an Organization Working Cooperatively with others, contributing to a Canadian Centre for the Study of Material Culture

¹² See Attachment A

¹³ See “HHCC Planning and Development Guide FY 2018-2019, Doc: OA1812D. The Guide draws on the deliberations of a Joint Working Group consisting of Board members and Collections and Curatorial Services volunteer staff

9. Extend and Broaden HHCC Board Representation
10. Consolidation and Relocation of CCS Operating Systems [Data Centre]

Among other things, the Guide variously makes the case for 5 new emerging and enabling images of the Centre at work:

1. The Centre is viewed as “**A Successful Canadian Start-Up**”, now ready to work with other Canadian museums and archives in promoting public understandings of Canadian material culture
2. The Centre is seen as “**A Respected, National Organization**”, helping to provide custodial care for Canada’s valued cultural properties, telling their many life-giving stories
3. The Centre is envisaged as “**a National Organization Working with Other National and Provincial Organizations**” as part of a larger “Centre for the Study of Canadian Material Culture”.
4. The Centre, now well past its “start-up” phase, is making use of “**A full range of funding strategies**” – including corporate sponsorships, private funding, endowments and bequests, as well as grants for the development and maintenance of infrastructure, systems, and specific projects.
5. The Centre, while still continuing to depend on volunteer CCS staff, is “**Increasingly Dependent on Executive Professional Leadership**” in order to meet national expectation and standards for collections management and public programming.

Section 2

Coming to Understand HHCC's Core Work, its Principal Assets, and Future Opportunities

A principal challenge in strategically repositioning HHCC lies in explaining to potential advocates, supporters, and publics just what HHCC is all about. For it's a new, quite unfamiliar kind of 21st century, NFP, Canadian cultural venture in matters of:

- 2.1 Concept and Idea,
- 2.2 Unique and Distinguishing Characteristics
- 2.3 Business Model and Public Commitment
- 2.4 Stock-In-Trade.

2.1 HHCC as Concept and Idea - Historically, the idea of a HVACR Heritage Centre Canada [HHCC] was born of the late 1980's. It was part of the excitement of the times, anticipating and preparing for a new century and millennium. There, new innovative things were seen as possible and, indeed were expected. Following several years of work by its Founding Committee, the "Centre" concept was given substance in 2004, with the formal establishment of the HVACR Heritage Centre Canada as a national NFP, charitable organization. Twenty years later, and with significant achievements to point to as a "start-up" venture, it's ready to move into the "main-stream".

The Organization's 15th AGM and Board meeting number 104, held December 10, 2018 were occasions to look back and look ahead on the successes, challenges, and promises of the Centre. In keeping with its "turn of the century and millennium" outlook, the concept and idea was of: *"a 21st century, national museum and archive"* with a difference, an *"Industry Sponsored", "Distributed" Organization, "Without Walls"*. This pretty much describes what it looks like today – with artifact and archival collections storage, research, collections and curatorial services, displays and exhibition, along with on-line, virtual program facilities widely distributed, as functionality, resources, economies, and opportunities dictate.

2.2 HHCC's Unique and Distinguishing Characteristics – "What It Is and Is Not" - Over the years, keeping HHCC "on message" has sometimes proved more difficult than might have been imagined. While it may be able "to do this while doing that", it must be clear as to what the core work of the Centre is and what it's there for. Most importantly it must provide clear evidence of performance outcomes, congruent with its national letters patent - should HHCC be subject to such an audit¹⁴

At the outset, then, let's be clear on what HHCC is not, helping, in turn, to clarify what it is responsible for under law:

- It's not an organization with an industry style economic development mandate - one expected to make money, show private profit, or promote the economic growth of the Industry.

¹⁴ See Attachment A, Advisory note: "It is essential that all activities of the Corporation fall within the parameters of the charitable objects. Any activities outside the stated charitable purpose would be *ultra vires* the statutory authority given to the Corporation at its inception and would be null and void..."

- Nor is it an organization with a community development focus – one focused on building relationship and common bonds amongst its adherents
- It's not a fraternal organization - one in which members freely associate for mutually beneficial purposes.
- It's not a dedicated educational organization - one commitment to the intellectual, and skill development of its membership.
- Similarly, it is not an organization intended to recognize and celebrate individual accomplishment and contribution - as for example a "Hall of Fame"¹⁵.

Yet, there is a sense in which HHCC is all of these, while being about none of the above. So what are HHCC's essential, and distinguishing characteristics?

- First and foremost HHCC is about "*Collections, Culture, and Consequence*". It's, about how HVACR devices, equipment, and systems, one at a time, over the years, have inspired, and altered the lives of Canadians: how they think about themselves, what they do in the course of their day, their life's expectations, and much more. For coming to understand social and cultural consequences of HVACR technology is the purpose for which HHCC exists, the purpose of its research and inquiry, its related studies, and its related public educational program commitments.
- Not surprisingly then, HHCC's is also a "*Collections-Based Organization*". Its collections are its principal, distinguishing assets, the asset-base on which it builds, the source of its financial, as well as its cultural value, as the custodian of cultural property of national interest. Together its historic artifact and archival materials collections provide a solid platform for its research and inquiry, publication, and its programming requirements in meeting its objects as a charitable Canadian cultural organization. HHCC's collections are also of value to the Associated Refrigeration Workers Local Union 787 [UA787], as a current, HHCC designated principal partner, in meeting its [the unions] commitments to the Industry in trade training, education, and professional development.
- HHCC is also a "*Geographically Distributed Organization*", one "*Without Walls*", making use of 21st century technology to link its various operating units together in a "*Loosely-Coupled System*" - wherever they might be conveniently and economically located.
- As well, HHCC is a "*Partnering Organization*", achieving its objects through cooperation, collaboration, and coordination with others with similar objects.

2.3 HHCC's Business Model¹⁶ - Established under national letters patent in 2002, HHCC's mandate was clearly articulated, "...to promote, support and facilitate the study, research and understanding of the history and development of the heating, ventilation, air conditioning and refrigeration industry in Canada...". The Centre's Letters Patent, setting out its full range of objects for which it was granted national charitable status are included as Attachment A

¹⁵ HHCC at one point did established and briefly operated a "Hall-of-Fame" program, as a one-off promotional strategy, attracting the support of the HVACR industry. For a number of reasons it proved in-effective.

¹⁶ HHCC's business model is here taken to be defined by the public products or services it provides by virtue of its national letters patent

Its letters patent clearly mark HHCC as a new kind of 21st century cultural organization, contributing to Canada's "post-industrial", "information", and "knowledge" society¹⁷. Its core business, in "promoting, supporting and facilitating the study, research and understanding of the history and development" of HVACR technology, puts HHCC firmly in the research and inquiry business. And research and inquiry are recognized as providing the substantive basis of all scientific knowledge – here scientific knowledge and understanding of HVACR technology as Canadian material culture and cultural property¹⁸.

The frame of reference adopted by HHCC for the production of substantive knowledge about the historic artifacts held in its custodial care is based on 5 fundamental questions of inquiry¹⁹:

- What is it,
- What does it do,
- How does it work,
- With what results, and
- With what consequences for Canadian society and culture?

2.4 HHCC's "Stock-In-Trade"– Following from its uniqueness in concept and idea, its distinguishing characteristics, and business model, HHCC has, over the last 20 years, developed a unique 21st century "stock-in-trade"²⁰. Included are its:

- Core concepts, key ideas, principles, practices, processes, and procedures developed, tested, and put into action over the last 20 years in speaking to its national mandate,
- Storied collections of historic artifacts and archival materials held in public trust by HHCC, as a 21st century collections-based cultural organization [see File 114-18, vol. 1 to 4]²¹,
- Extensive, well documented, research data base [See File 114-18, vol. 5 to 7],
- Wealth of storyboards developed as a base for its public programming [See File 114- 19, vol. 2],
- Interactive educational public websites [See File 114-19, vol. 1],
- Virtual museum and archive [See File 114-17],

¹⁷ Terms "Post- Industrial" and "Information" society became part of the Western popular lexicon, following the late 20th century work of a host of writers reflecting on the contemporary driving forces reshaping Western society and culture - including; Yonegi Masuda. Alvin Toffler, and Ruben Nelson, and so forth

¹⁸ See "The Structure of the Disciplines: Meaning and Significance", Joseph, J, Schwab, 1964.

¹⁹ Scientific knowledge and understanding of HVACR technology, see "The Fractional Horsepower Electric Motor and Canadian Society and Culture", Material History Review, 43, spring 1996, G. Leslie Oliver.

²⁰ "Stock-in -trade" is taken here as a way of describing an organization's way of doing business, including: its staples, specialized resources, merchandize, goods held for timely public distribution, as well as its corporate assets utilized in support of its special business interests [Internet July 2019].

²¹ Collections include principally HHCC's founding collection of 350 historic, documented, and appraised artifacts [See File 114-18, Volumes 1 to 3] , as well as its documented and appraised archival materials collection of some 2000 volumes [See Files 114-18, Volumes 4.1 and 4.2]

- Specialized facilities and equipment developed and maintained by HHCC, including its warehouse²² and archives, and data center²³,
- Stock [research reports²⁴, catalogue sheets²⁵, education story boards²⁶, special event programming for public and industry,²⁷
- HHCC Data Centre²⁸ providing a comprehensive, strategic and operational frame of reference in meeting the Organizations national commitments.

HHCC as concept and idea, born of special times, may yet well prove to be a “Camelot” of sorts. A kind of idyllic, mystical place and time, one which faded in the mist of time, over-taken by realities life and times. While that may well be HHCC’s ultimate fate, it’s not the one envisaged here. For there is nothing mystical in its unique and distinguishing characteristics, business model, and stock-in-trade – all meticulously generated over close to 20 years.

Section 3 deals with conditions for HHCC’s future success, transitioning from “start-up” to “mainstream”, helping to tell the many stories of Canada’s rich Heritage of material culture

²² Warehouse facilities are currently limited to close-pack [container storage], awaiting development of new facilities [See images of warehouse facilities, the “Centre At Work”, Attachment A. Coded tags for all artifacts are produced as part of the research and documentation process and attached to the research report [See Digital resources, Item 4 below], Artifacts are individually protected, boxed and labelled. Mapping of all box and large equipment for both standard warehouse and close-pack storage are included in File: 114-16, BK 11.

²² The Data Centre, developed and maintained by HHCC’s volunteer, Collections and Curatorial [CCS] , provides a comprehensive, cumulative account of HHCC work over 20 years, across 3 categories: Foundations, Organization, and Operations. See doc. OA1906F

Section 3

Conditions for Future HHCC Success: Stable Funding, Executive Leadership, and a Wise and Judicious Board

Thinking both strategically and operationally, what are HHCC's next orders of business in repositioning its self, moving from an industry focused start-up to the Canadian mainstream? What are the "must-do" things, in preparing the Organization to work collaboratively with other Canadian cultural organizations, in telling the many life giving stories of Canada's rich material culture? And, based on HHCC's experience to date, what do we know about the conditions for success in making such a move as seamlessly as possible:

- In coming of age as an industry sponsored, national museum and archive,
- In meeting its performance expectations under its national letters patent
- In re-defining its core business, as now part of a larger network of organizations contributing to the larger and growing field of Canadian material cultural studies
- In moving confidently into new times, working cooperatively with other museums and archives
- In coming to understanding the corporate opportunities and challenges that lie ahead?

Hard won experience over the last 20 years suggests that the first order of business focuses on the provisions for²⁹:

- Stable Funding
- Executive Leadership and
- A Wise and Judicious Board.

Stable Funding:

At the outset several points need to be recognized in coming to understand the 21st century realities and condition for stable funding of Canadian NFP's, such as HHCC -

- During HHCC's start-up years, and in the absence of experienced professional executive oversight, there was no sustained effort in the provision of on-going, stable funding for the Organization - not-with-standing the concern of some board members.³⁰
- During that start-up period, HHCC's pioneering and innovative work was funded by its founding partners, private donations from well-wishers, and specific program grants, along with the volunteered professional skills donated for collections and curatorial services work.
- Almost by definition, HHCC's priority, as a "start-up", was sharply focused on demonstrating its innovation and entrepreneurialism, along with its productive capacity for

²⁹ See HHCC Planning and Development Guide, doc OA1812D, Projects: 7,8, and 9

³⁰ Several recent documents speak to the point, providing overviews of the corporate fundraising initiatives in the Centre's in its start-up period. See for example File 114-14 Fund Raising, A Short History of HHCC Corporate Fundraising, as a Start-Up National Museum and Archive, Jan. 31, 2019, doc. OA1901F. See File 114-9 and 10

research, educational materials development, and the management of its precious collections of Canadian cultural property, on which its pioneering work was premised.

- With little regard for sustainability, emphasis over the start-up period was quite rightly focused on the collections and curatorial services required for product and service development – including: collections acquisition, warehousing, and management, research and documentation, story-board production, computer and management information systems development, and public programming.
 - Not-with-standing the looming and sobering financial constraints of the times, there was all-to-little thought given during those start-up years to the mechanisms for stable funding - beyond the traditional “tin-cup” approach,³¹ to corporate fund raising.³²
 - That having been said, the Centre’s five year Business and Strategic Plan 2012 to 21017 made the case for a “fee-for-services” approach to better funding and sustaining the work of the Organization – thereby linking production with resourcing the work of the Organization³³.
 - Yet not entirely by coincidence, the same period in which HHCC was founded also produced an impressive new literature on the management and conditions for support of Canada’s NFP’s. In making the case for stable funding, the research focused attention on the increasing complexities of business in Canada’s NFP sector, along with the need for thoughtful integration of funding as an integral part of the organization’s products and program offerings.
 - A short list of representative examples includes: establishment of private and corporate paid membership programs, HHCC program promotion through media and newsletters, building profile for the Organization through news stories of innovation, current events, field trips, as well as promoting the work of other national, provincial and community museums and archives working similarly in the field of Canadian material culture.
 - Charitable giving was also to be encouraged through donations and endorsements, tied to specific program offerings - in a kind of “value for money approach” to charitable giving.
 - Charitable income streaming for the organization, and sustained donor support was also to be promoted through various donor-investment programs and strategies.
- None of which ever happened.

Conditions for Success - There seems to be much that remains to be learned in coming to understand the realities of stable funding for HHCC. Principally, there’s the need to fully integrate fund raising, more-or-less seamlessly, into the production and programming work of the Organization. Fund raising, in all its many forms, must become an integral part of the work of management and the organization’s executive director - not a separate, stand-alone function, the responsibility of others. The “cold-canvas”, tin-cup” and “cap-in-hand” approaches to fund raising are seen as part of another time - now long gone.

³¹ See “Beyond Fund Raising, New Strategies for Nonprofit innovation and Investment”, Kay Sprinkel Grace, 1997, Chapter 2.

³² See File 114-14, Notes on HHCC Promotion, Marketing, Fundraising, Resource Projection, and Budgeting Experience 2000 to 2019, Feb 26, doc. OA1902H, along with Email from Oliver to Holmstrom Feb. 26, 2019

³³ See HVACR Heritage Centre Canada, 5 Year Business and Strategic plan 2012 to 21017, Sept 2012, doc HVACR1208B

Executive Leadership:

- The new century and millennium also has brought with them new understandings, ideas, principles, and concepts fundamental to successful executive leadership and management of Canadian NFP organizations. For example: ³⁴
 - ✓ Charitable organizations must be seen as *meeting needs*, rather than *having needs*;
 - ✓ They must be viewed as focused on “*programs and their results, not meeting financial goals*”;
 - ✓ They must recognize that “*asking and giving are based in shared values and visions*”; and that
 - ✓ NFP, charitable organizations are “*vital and valued agents in community life*”.
- The current literature suggests that executive directors of Canadian NFP organizations should be held responsible for: the organization’s achievements in meeting its commitments as set out in its public letters patent; implementing and management of its long-range strategic and annual operating plans; securing the stable funding required to ensure the financial viability of the organization; as well as staffing, budgeting, and resource management.
- Duties and responsibilities cited in the literature as requirements for successful executive leadership are ordered around such nodes as: planning and development; financial management; human resources management; health and safety; external relations, as well as Board relations.
- General expectations, qualifications, and attributes for Canadian executive directors currently cited in the literature on-line, include: vision; leadership; passion; and patience.
- Specific expectations for executive leadership for HHCC’s currently follow from its Planning and Development Guide for 2018-19³⁵:
 - ✓ Redevelopment of HHCC Artifact Collection Management Information System [CMIS],
 - ✓ Redevelopment of HHCC Artifact Warehouse Facility,
 - ✓ Installation, Promotion, and Management of HHCC’s New Collection of Archival Trade and Technical Literature,
 - ✓ The Redevelopment of HHCC’s Virtual Museum and Archive,
 - ✓ The Redevelopment of HHCC’s Interactive, VMC, Educational Websites,
 - ✓ Re-activating HHCC’s On-Site Display and Exhibition Program,
 - ✓ Ensuring Ongoing Stable Funding for the Work of the Centre,
 - ✓ Rethinking HHCC as an Organization Working Cooperatively with others, Contributing to a Canadian Centre for the Study of Material Culture,
 - ✓ Extend and Broaden HHCC Board Representation,

³⁴ See for example the work of Sprinkel Grace, writing in 1997, *Beyond Fund Raising, New Strategies for Nonprofit Innovation and Investment*, P. ix, 1997.

³⁵ See “HHCC Planning and Development Guide FY 2018-2019”, doc. OA1812D

- ✓ Consolidation and Relocation of CCS Operating Systems [Data Centre].

Conditions for Success - Clearly, such experienced, and qualified professional executive direction will be a critical requirement for HHCC in moving from an innovative entrepreneurial start-up to a fully participating member of the Canadian museum and archive community. Experienced, wise, and judicious executive leadership, along with a wise and judicious board will be pivotal points around which HHCC's successes will be centered.

A Wise and Judicious Board:

- HHCC is committed to thoughtfully extending HHCC Board membership, supplementing and complementing the current skills and knowledge of existing Board members³⁶. The purpose in so doing is to better reflect the expanded national, provincial and public community interests [beyond the Industry] to be served by the Organization.
- As a condition for success in soliciting new board membership, there needs to be considerable clarity on what their roles and responsibilities are. Here we are reminded that, at the outset: Canadian, NFP organizations, such as HHCC are:
 - ✓ A significant part of the national economy and vital to the Canadian way of life,
 - ✓ Typically driven by Canadian values and beliefs,
 - ✓ Incorporated under provincial/ national legislation,
 - ✓ Able to receive and use public funds to meet their objects, as defined in their letters patent, and
 - ✓ Enjoy significant legal and financial benefits.
 - ✓ In return Board members [trustees] are charged with significant legal and moral obligations to serve a public good.³⁷
- In soliciting interested and dedicated Board membership, we are also reminded that in matters of planning and development Boards operate at the intersection of the governance and management functions. Both make equally significant contributions from different perspectives. Board members reflect public concerns and viewpoints, while management staff, through the Executive Director [CEO/Chief Executive Officer] provide details on individual needs, day-to-day strategic, operational, and management issues and options.³⁸
- It is to be noted also, that under Canadian law each Board member has the moral and legal responsibilities to act in the public good, charged with the "Duty to Care".³⁹ And that "governing boards" are there not merely to "advise", but to "direct"- charged under law with ultimate accountability, as well as for authority over the organization's activity.⁴⁰

³⁶ See Project 9, HHCC Planning and Development Guide, FY 2018-19, doc OA1812D

³⁷ See "A Handbook for Cultural Trustees, A Guide to the Role of boards of Trustees of Cultural Organizations in Canada", 1989

³⁸ See "Strategic Planning for Nonprofit Organizations, Support Centre for Nonprofit Management, 1997

³⁹ See "A Handbook for Cultural Trustees, A Guide to the Role of boards of Trustees of Cultural Organizations in Canada", 1989 PP. 5-6

⁴⁰ See "A Handbook for Cultural Trustees, A Guide to the Role of boards of Trustees of Cultural Organizations in Canada", 1989 P. 7. The handbook provides a detailed outline of the policy development, governance, and planning functions of governing boards in Canada.

Conditions for Success – Critical to moving HHCC into its new role as participating national museum and archive will be the successful search, selection, and briefing of new Board members. The core challenge is in seeking those candidates with the special knowledge, experience, good judgement, insight, and commitment to HHCC's vision - as set out in its letters patent. The successful establishment of an expanded, wise, judicious, and committed Board, one supplementing and complementing existing Board membership, is a prime condition for HHCC's success, and an early order of business for its newly appointed executive director.

Section 4
Historic Images of HHCC at Work as a Canadian Start-Up

A Random Selections of Images and the Stories Told

4.1 HCC's Collections P. 19

4.2 HHCC's Facilities P. 29

4.3 HHCC's Programs P. 31

Section 4.1, HHCC Collections

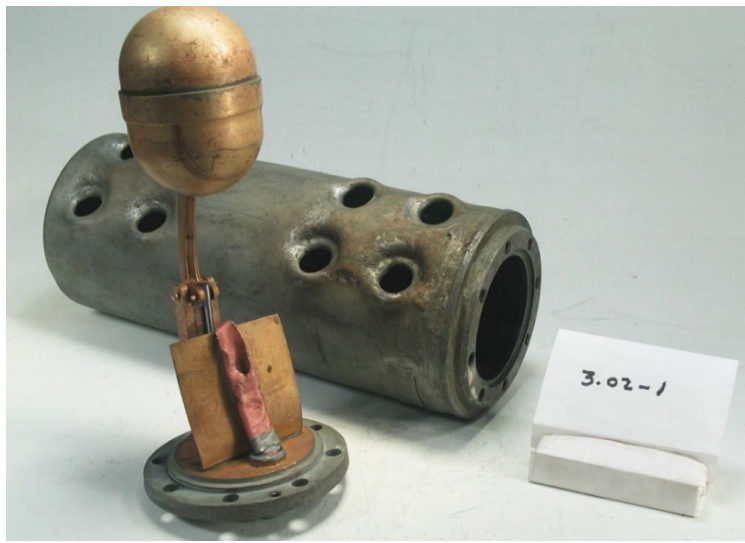
Representative Images Portraying the Nature and Scope of HHCC's Collection of Over 300 Historic Artifacts Telling the Many Stories of Canada's Rich Heritage of Material Culture

Detailed information on all artifacts in the Founding Artifact Collection are available from HHCC's, 900 MB. Artifact, Collection Management, Information, Repository [CMIR].

Extensive working, research reports are provided for all artifacts, with details on: date and place of origin, materials/design/construction/operation/performance/and patent details. Included also is documentation on technological/social/ cultural/and industrial significance [what it is, how it works, what it does, and with what results and consequences for Canadian society and culture].

4.1.1 – A Classic Frigidaire Low-Side Float Refrigerant Flow Control Valve, with Deep Draw Copper Header and Brass Float Valve Assembly [HHCC Founding Collection 3.02-1]

Working at the leading edge of refrigerating science and technology, this device would be reprehensive of the innovative, costly, delicate, and often unreliable refrigerant flow control technology of its times. Yet such devices, to be found on refrigeration equipment in leading community food stores and butcher shops of the mid 1930's, would change the life of Canadians forever, Circa 1929



4.1.2 – Kelvinator Model E Thermostats, One of the Earliest Commercially Marketed, Self-Regulating, Temperature Sensing Electric Refrigeration Control Devices to be found in Canada [HHCC Founding Collection 7.01-2B]

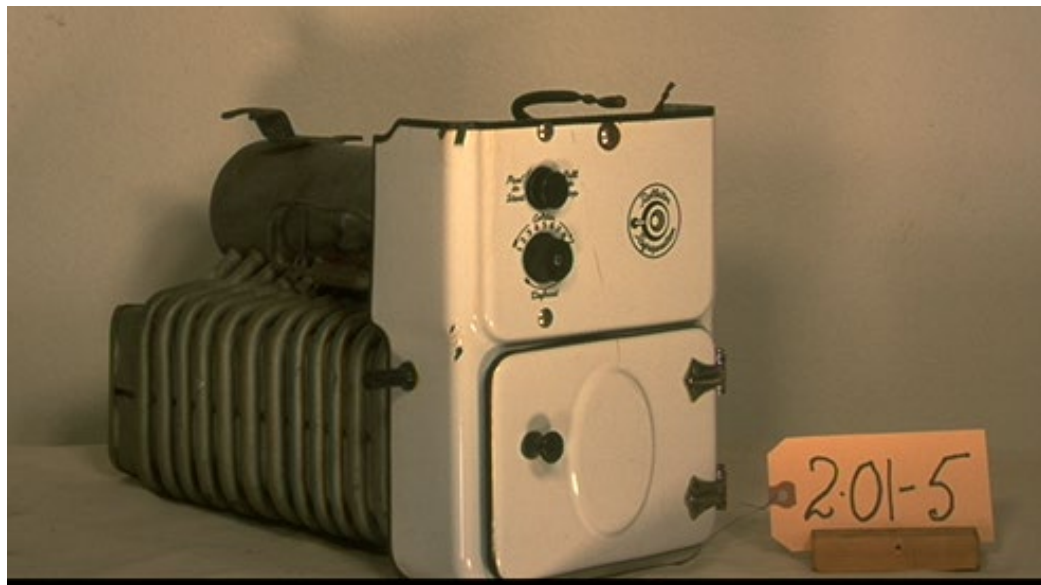
The marketing of electro-mechanical refrigerating machines for residential, commercial and institutional application would await the development of a practical and reliable device for the automatic control of temperature. For stability purposes, this innovative device sensed representative “liquid” rather than “air” temperature. It used a bass bellows immersed in a copper container filled with glycerin. The technology was marketed in various forms by Kelvinator from 1923 through to about 1927



4.1.3 – High style, Art Deco, Two Tray, Flooded Refrigerator Evaporator with Low-Side Float [HHCC Founding Collection 2.01-5]

This Art Deco refrigerator evaporator, found in Canadian homes, would be representative of the high-tech, high-style being popularly marked in the latter part of the 1930's. It featured a curved front escutcheon plate, spring-return hinged door, built-in adjustable temperature control, all in gleaming white porcelain, with back trim,. Norge household cabinet refrigerator, circa 1936.

Associated with Art Deco international design movement, modernity, and luxury, this device was representative of a special moment in the evolution of the embryonic household refrigeration industry in Canada. The stories told are of the introduction of European engineering and internationally inspired design styling - associated with 20th century modernism, luxury, bright colors, curved and bold geometric forms, polished surfaces, and a new 20 century craftsmanship. A market winner, it would be a welcome contrast to much of the mundane that characterized Canadian life in the depression years.



4.1.4 - The Restoration of an All Porcelain Kelvinator PK7, Cabinet Refrigerator, Circa 1931 [HHCC Founding Collection 1.01-3]

The deluxe Model PK7 was Kelvinator's bid for the high-end home-owner market in Canada's depression years. With gleaming white, state-of-the-art, interior and exterior porcelain finish, it was the pride of the Industry. Priced in their February 23, 1932 price list at a whopping \$355.00, it was equivalent to over \$3,000, in 1996 currency. The opportunity cost of such an investment would approach that of an automobile of the times.

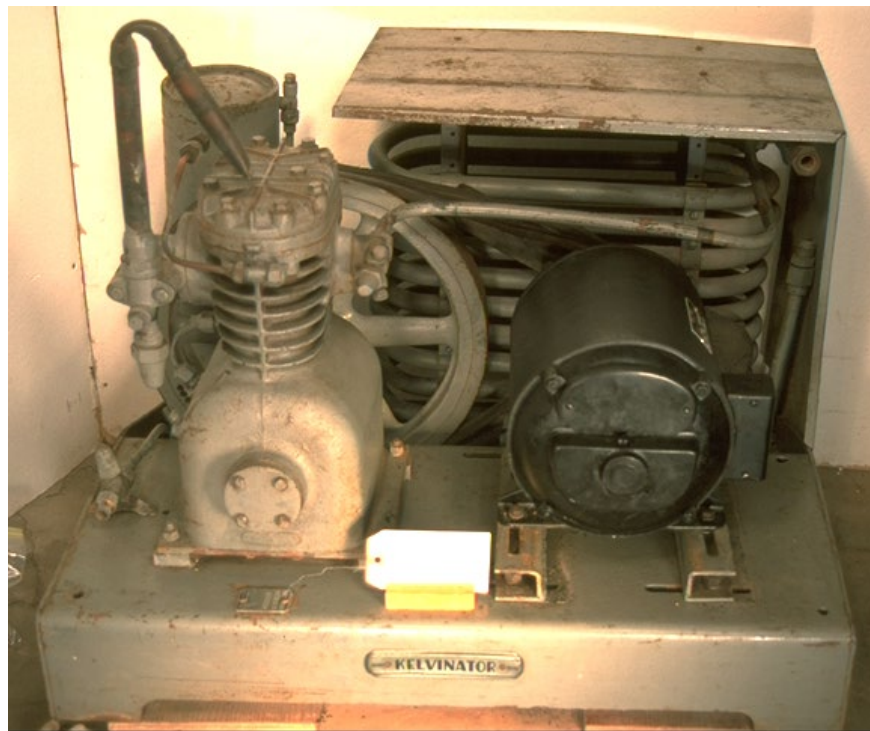
The machine, operating on the refrigeration compression-cycle technology, using noxious, sulphur dioxide low-pressure refrigerant, worked well – until the system sprung a leak. The development of compressors, condensers, evaporators, piping, and electrical control systems in the period were major challenges in the commercialization of refrigeration technology – much as the scramble for the commercialization of digital technology is in the early 21st century.



4.1.5 - This 2 HP, water cooled, Refrigeration Condensing Unit by Kelvinator would help to revolutionize the foods Canadians eat and how they shopped [HHCC Founding Collection 4.02-5]

With the availability of chlorinated hydrocarbon refrigerants, in the post WWII years, the demand quickly developed for larger low-pressure refrigeration machines for commercial applications. This 2 HP, water cooled, belt-driven machine, with high-torque, single-phase, repulsion- start, induction-run motor by Kelvinator is a fine example of the state-of-the-art. It would come to be seen as part of the Kelvinator of Canada corporate legacy in its mature years in Canada, circa 1948.

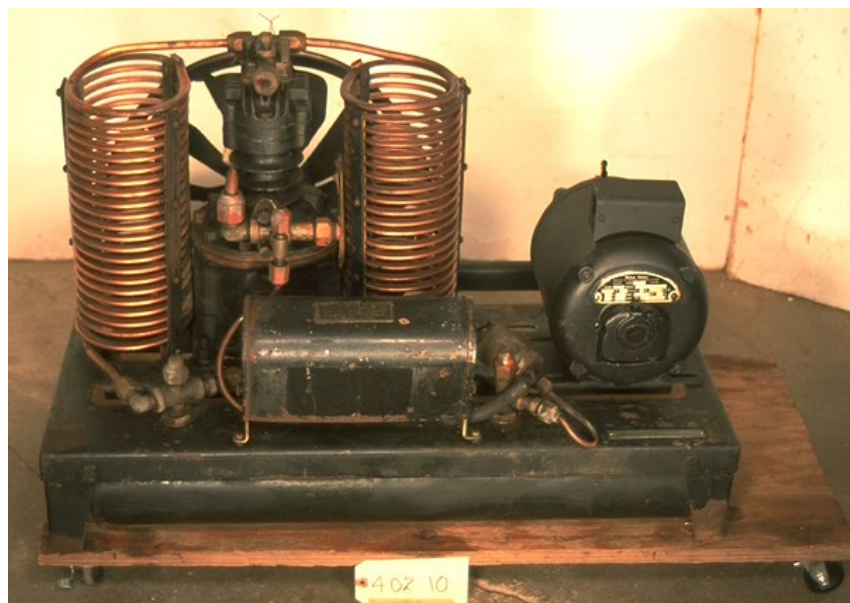
In a period of inexpensive, plentiful municipal water, such water-cooled machines would find wide application in the rapidly expanding food store and processing sector. For operating cost and environmental reasons the use of water-cooling machines would be relatively short lived. The use of chlorinated hydrocarbon refrigerants, in the post WWII vintage were found to contributors to the destruction of the earth's ozone layer and were also progressively phased out.



4.1.6 - An Early Static, Air-cooled Refrigeration Condensing Unit by Frigidaire, Using an elemental, Stacked Oval, Copper Tubes Condenser [HHCC Founding Collection 4.02-10]

Designed for sulfur dioxide, a refrigerant of choice by Frigidaire in the period, this condensing unit would be commonly seen in Canadian estate homes, institutions, food stores, dairy bars and other hospitality applications well into the late 1940's

As a hedge against technological obsolescence and as a conservation strategy borne of the Canada's WWII years, Frigidaire would subsequently provide a conversion kit to up-date this unit to forced air cooling⁴¹ - a corporate policy relevant, but seldom found in the early years of the 21st century.



⁴¹ A conversion kit, engineered and marketed by Frigidaire in the 1950's is included in HHCC's Founding Collection

4.1.7 - An elemental oil metering, float and gravity controlled vaporizing oil burner. Elegantly crafted in brass, bronze and copper, it would be found in selected Canadian homes, prior to electrification and the invasion of noisy motorized devices, the Colman Lamp and Stove Co. Ltd. Toronto, Circa 1922 [HHCC Founding Collection 2006-154]

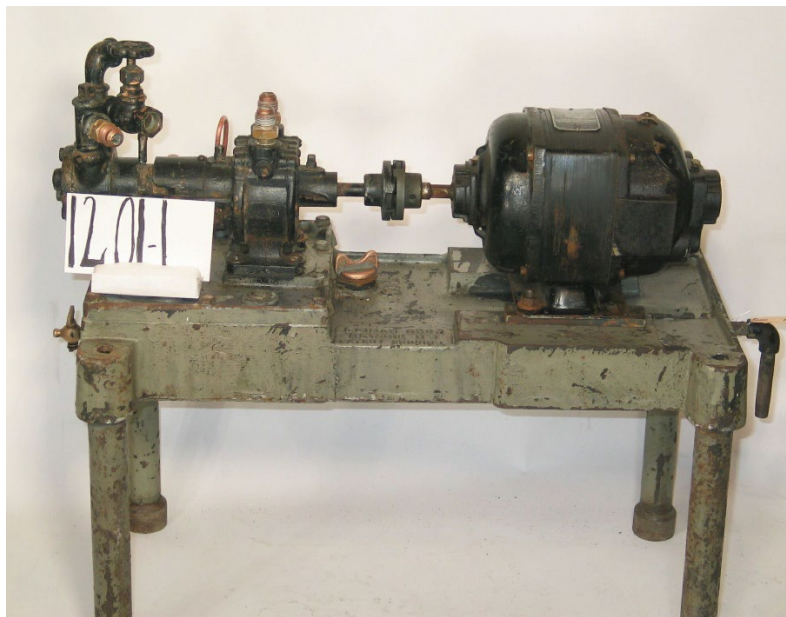
For many Canadians such devices would be an important small step towards comfortable, convenient, automated home heating. They would appear progressively in a myriad forms, as conversions for existing kitchen and parlor wood and coal burning, cast iron stoves, as well as in “modern”, sleekly designed, vented, room space heaters. Any suspicion of the devastating impact of such equipment on the earth’s atmosphere would still be a century away.

We are reminded that Ontario oil fields of Lambton County, although short lived, along with those of Pennsylvania were among the first in the world to be commercially developed by 1860. They provided an early incentive for the Canadian heating industry in the development of oil vaporizing and atomizing devices.



4.1.8 – A Pressure Atomizing Oil Burner: A rare example of an early 20th century high-pressure, electric motor driven [motor not original] oil burner assembly [HHCC Founding Artifact Collection No. 1201-1, 2003.79]

An early atomizing oil burner with direct drive, 2 stage, Tuthill gear pump, built-in oil reservoir, and brass valving, all assembled on heavy cast iron base. Such relatively crudely crafted equipment, typically erratic, and unreliable in performance would non-the-less be embraced by early adopters of automatic oil heating in Canada. In spite of its performance limitations and the acrid odor of fuel oil introduced into the home, such equipment would, non-the-less, step-by-step alter the expectation of Canadians for winter comfort, Leiman Bros, circa 1926



4.1.9 – An Infrared Heat Sensing Combustion Control for Oil Atomizing Heating Systems, Circa 1948 [HHCC Founding Artifact Collection No.12.0 8a, 2006-109]

The Minneapolis Honeywell, Type A, “Protectostat”, a late 1940’s radiant heat sensor for combustion safety control would set new standard for combustion safety for higher firing rate, oil atomizing heating systems found in large Canadian estate homes, institutions and small industrial applications



4.1.10 - A 1920's "High-Tech", Automated, Flame Monitoring System for Oil Atomizing, Home Heating Systems [HHCC Founding Artifact Collection No.12.08-3a, 12.08-4]

This 1920's, automated, state-of-the-art, combustion control system was equipped with a "Locksmith" electromagnetic combustion controller, tilting mercury bulb line voltage contractor, and thermal electric safety lock-out with manual reset [Absolute Con-Tac-Tor Corp., Model 125, No.1208-3, 2006-104]. Paired with a stack mounted, bimetal actuated, automatic heat-sensing switch [Time-O-Stat Controls Co, Model 48H, No. 1208-4, 2006-105] it would set a new standard of performance, comfort, reliability, and safety for Canadian homeowners, circa 1929.

"Electro-magnetic" controllers, along with bimetal temperature sensing devices where the "Gee Whiz", automating technologies of the 1920's through 50's. They intrigued and enabled in much the same way that "digitally" enabled technology would do a century later.



Section 2.0 – HHCC Artifact Warehouse Facilities

4.2.1 - HHCC, Large Equipment, Artifact Storage Warehouse Facility, 25 Iron Street Toronto, 2006.

In 2006, with the support of the industry, a spacious, rented, industrial-style warehouse facility provided HHCC with the capacity required for the custodial care and management of its extensive holding of Canadian material cultural and cultural property. Included were significant pieces of historic equipment, as well as the small devices [see 4.2. 2], that together shaped and enhanced the lives of Canadian in the seminal years of the early to mid-20th century.

Currently, this Equipment is in close-pack container storage awaiting the development of new warehouse facilities.



4.2.2 – HHCC Small Artifacts and Device Storage Warehouse Facility, 25 Iron Street Toronto, 2006.

As in the case of larger equipment [see 4.2.1], all small artifacts and devices are boxed, labeled, and inventoried using labels automatically generated as part of the research report. The blue tickets on some boxes indicate that selected items are currently on display or on loan etc. along with information on their location.

Currently small artifacts like larger equipment is in close-pack container storage awaiting the development of new warehouse facilities.



Section 3.0 HHCC Programing

Displays, Exhibitions, and Interactive Educational Websites

4.3.1 – Example of HHCC Display Graphics Produced for National Display, 2008

Theme: The Automation of Central Heating in Canada, The Arrival of the Time-Temperature Driven Electric Switch, The Mineapolis Honeywell Chronotherm



From the National Collection of the HVACR Heritage Centre Canada, Accession No's. 2006-092

A Special Educational Exhibition: "Warming Up, Automatic Space Heating and Social Change in Canada, 1867 to 1967".

Copyright 2010, HVACR Heritage Centre Canada, A Virtual Museum and Learning Centre,
Telling the Stories of Canada's Rich Heritage of Space Heating Technology, Doc. HVACR1002J-18

4.3.2 - HHCC Permanent Rotating Display, Ontario Refrigeration and Air Conditioning Association [ORAC] Head Office 2006

Theme: Explorations in the Evolution of “Smart System” Refrigeration Technology. The Automatic Expansion Valve, Its Early Years and Contributions to Household and Commercial Refrigeration and Air Conditioning in Canada,



4.3.3 - HHCC National Display, The Canadian Mechanical Exposition [CMX], 2008

Theme: Automatic Central Heating in Canada, The Age of the Electro-Magnetic Controller,
1860 -1960



4.3.4 - HHCC National Display, The Canadian Mechanical Exposition [CMX], 2008

Theme: Progress, Innovation, and the Arrival of Automatic Refrigeration in Canada,



4.3.5 - HHCC National Display, The Canadian Mechanical Exposition [CMX] 2006

Theme: Defining Moments in the Evolution of the HVACR Industry, Some Jewels Recalled,
The Little Things that Made it Work and Changed the Lives of all Canadians Forever



The “Buss Fusestat”, 1934, later the Fusetron, an Early Step in the Evolution of Personal And Property Damage Protection Resulting from Electric Motor Overheating
(HHCC Accession No. 2006-206; ID No.330; Classification Code 6.06-5)



The Buss “Fusestat in Use
FHP Capacitor Start, Refrigeration Motor, by Delco, Model M1035,
McKinnon Industries, Ont. Equipped with Fusestat/fusetron
(HHCC Accession No. 2006-156, Classification Code 16.02-1)

**HVACR Heritage Centre Canada
Letters Patent⁴²**

The charitable objects of the Corporation were originally established in the Letters Patent issued by Industry Canada on September 23, 2002, as amended by the Supplementary Letters Patent on October 15, 2003. The current charitable objects of the Corporation are set out below for ease of reference:

1. *To further, promote, support and facilitate the study, research and understanding of the history and development of the heating, ventilation, air conditioning and refrigeration industry in Canada and abroad (“HVACR Industry”).*
2. *Provide that these objects shall include only those which are exclusively charitable at law, and in furtherance of the foregoing:*
 - (a) *to identify, retrieve and preserve historical artifacts and archival resources of the HVACR Industry;*
 - (b) *to establish, operate and maintain a centre or centres to publicly make available the historical artifacts, archival resources and educational materials of the HVACR Industry through all available means, including exhibits, publications and the use of electronic and internet communications and interactions;*
 - (c) *to commission research and communicate the results therefrom to further the study and understanding of the HVACR Industry;*
 - (d) *to educate individuals working in the HVACR Industry, as well as the general public about the HVACR Industry;*
 - (e) *to promote, support, facilitate and co-ordinate dialogue, networking and strategic partnerships between individuals, groups and organizations in the various sectors of the HVACR Industry in order to further the study and understanding of the HVACR Industry;*
 - (f) *to promote, develop, and distribute educational, resource, and study materials for individuals, groups and organizations to further the study and understanding of the HVACR Industry;*
 - (g) *to develop, organize and conduct classes, meetings, tutorial, discussions, activities, programs, courses, seminars, conferences, workshops, and symposiums for individuals, groups and organizations to further the study and understanding of the HVACR Industry;*

⁴² From original text, “Final Report to Board of Directors”, June 4, 2004, Carter Associates, re-formatted

- (h) *to establish, own, and/or operate one or more publishing offices, printing plants, distribution centres, or retail facilities for the publication, printing distribution and sale of all types of literature and publications directly related to the objects of the Corporation;*
- (i) *to produce programs and materials directly related to the objects of the Corporations for presentation, broadcast and distribution on any means of audio, visual, computer, electronic or other forms of communication as may become available from time to time;*
- (j) *to acquire and hold land for the purposes of the Corporation;*
- (k) *to receive and maintain a fund or funds for the objects of the Corporation and to apply from time to time all or part of the income and/or capital thereof for the said objects, and for the benefit of charitable organizations that are registered as such under the Income Tax Act (Canada), as amended from time to time, and that have charitable objects similar to the objects of the Corporation;*
- (l) *to associate, co-operate and affiliate with any association or organization, incorporated or unincorporated, with charitable objects similar to the objects of the Corporation;*
- (m) *to give property and funds of the Corporation to “qualified donees” as defined under the Income Tax Act (Canada), as amended from time to time, to further the objects of the Corporation; and*
- (n) *to carry on “related businesses” within the meaning of the Income Tax Act (Canada) as amended from time to time, in furtherance of the objects of the Corporation.*

It is essential that all activities of the Corporation fall within the parameters of the charitable objects. Any activities outside the stated charitable purpose would be *ultra vires* the statutory authority given to the Corporation at its inception and would be null and void. This could mean that the members of the Board would be held personally liable for losses to the Corporation arising out of activities authorized by the Directors that were outside of the corporate authority set out in the Letters Patent, the October 15, 2003 Supplementary Letters Patent and any subsequent Supplementary Letters Patent.