Operational Model Analysis Report

Dr. Woods' House Museum, Leduc, Alberta

An evaluation of sustainability, operational models, and best practices for heritage management at Dr. Woods' House Museum.

Prepared for:

CITY OF Leduc

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Executive Summary

The Operational Model Analysis Report for Dr. Woods' House Museum (DWHM) comprehensively evaluates five operational models, integrating feasibility scoring, weighted evaluation methodologies, risk assessment, and strategic alignment with the City of Leduc's cultural and fiscal priorities. This report is intended to inform sustainable decision-making but does not provide direct recommendations in alignment with the scope defined in the RFP. Instead, it delivers detailed analyses and insights highlighting each model's strengths and challenges.

Key Findings

Feasibility and Weighted Scores

- **Hybrid Model 2: Unified Heritage Operator** emerges as the strongest option, with the highest feasibility score (4.90) and top-weighted evaluation score (4.05). It excels in financial stability and scalability with the potential for governance simplicity.
- **Hybrid Model 1: Municipal-Contractor Partnership** ranks second with a feasibility score of 4.40 and a weighted evaluation score of 3.83. It offers a flexible yet balanced approach that aligns with operational needs in contractor-supported contexts.
- **Third-Party NFP** scores the lowest feasibility score (2.80) and weighted score (2.30), reflecting financial and staffing stability vulnerabilities despite strong community alignment.
- **Municipal Oversight** and **Third-Party For-Profit** models demonstrate moderate feasibility scores (3.90 and 3.80, respectively), balancing financial sustainability with unique trade-offs in scalability and alignment with heritage goals.

Economic Performance

None of the models generates net profitability, underscoring sector-wide trends in which heritage sites rely on external funding or municipal support to sustain operations.

Staffing Needs and Risk Alignment

Hybrid models demonstrate superior adaptability in managing staffing challenges through strategic use of contractors and centralized governance. Conversely, models like Third-Party NFP face significant risks tied to volunteer dependency and recruitment challenges.

Community Engagement and Heritage Preservation

Hybrid models provide the best balance of financial sustainability and inclusivity, addressing critical risks related to community engagement, resource dilution, and heritage focus.

Cost and Risk Assessment

Staffing costs play a pivotal role in determining operational feasibility, with hybrid models showcasing moderate risks due to their reliance on contractors. By contrast, the Third-Party NFP model presents significant risks stemming from its heavy dependence on volunteers, making structured support systems essential for stability.

While none of the evaluated models achieves complete financial self-sufficiency, the analysis underscores the potential of Hybrid Model 2 as the most strategically aligned with the City's priorities. The report's findings provide a robust foundation for informed discussions on sustainable operational strategies for DWHM.

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1. Introduction

Heritage sites are vital cultural, educational, and economic assets, preserving historical narratives while fostering a sense of community identity. However, maintaining their relevance and functionality amidst a rapidly evolving environment necessitates innovative management strategies. This report examines Dr. Woods' House Museum (DWHM) in Leduc, Alberta.

1.1 Objectives of the Report

The primary objective of this report is to evaluate viable operational models for managing the Dr. Woods' House Museum (DWHM) in Leduc, Alberta. Building on the insights from Deliverable A (EM Museum Consulting 2024) and incorporating extensive public and stakeholder consultations in Deliverable B (Elevate the Path 2024), the report aims to provide a robust framework determining the best path forward for the City of Leduc to manage the museum sustainably. Specifically, this report seeks to:

1. **Identify and Evaluate Operational Models:** Explore potential management structures, including city-run operations, third-party or nonprofit management, and hybrid models. Each model is assessed against key criteria, including economic sustainability, heritage preservation, socio-cultural impact, building usability, and regulatory compliance (Aigwi et al. 2020).

2. **Incorporate Community and Stakeholder Feedback:** Reflect the values, priorities, and concerns of the City of Leduc, Council members, the heritage sector, agencies, boards, commissions, and the broader public during consultation sessions.

3. **Provide a Cost and Feasibility Analysis:** Offer a detailed assessment of each operational model's financial and operational viability, ensuring alignment with the City of Leduc's fiscal and strategic objectives.

4. **Assess Risk and Mitigation Strategies:** Identify potential risks associated with each operational model and provide practical mitigation strategies that can ensure the museum's long-term sustainability.

This report integrates comparative benchmarking insights, community consultation feedback, and expert analysis to guide the City of Leduc in selecting an operational model that ensures the Dr. Woods' House Museum remains a valuable and accessible heritage asset for future generations.

1.2 Methodology

The research underpinning this report synthesizes data from multiple sources, including:

- **Site Visit Observations:** A thorough assessment of DWHM's current operations, physical structure, and visitor engagement practices from in-situ observations and a review of historical operational records from Leduc and District Historical Society (LDHS).
- **Survey Data:** Insights derived from the Central Alberta Regional Museum Network (CARMN) survey, capturing operational and financial practices across Alberta's comparable heritage sites.

- **Case Studies:** Comparative analyses of heritage sites—including Rutherford House, Stephansson House, and Bison Lodge—to identify successful management strategies.
- **Academic and Industry Literature:** Relevant studies and frameworks, including those by Aigwi et al. (2020), Brand (1995) and Vafaie, Remøy and Gruis (2023) provided theoretical foundations for adaptive reuse while Greco, Figueira and Ehrgott (2016) provides the foundation of Multiple Criteria Decision Analysis to support the application of benchmarking best practices.

1.3 Scope of Report

This report focuses exclusively on operational models and associated cost analysis for Dr. Woods' House Museum. The analysis considers financial, regulatory, and socio-cultural dimensions. It excludes recommendations reserved for Deliverable D. The findings are informed by data collected through benchmarking, site observations, and extensive consultation sessions conducted during Deliverable B.

1.4 Context: Insights from Heritage Trends and Consultations

Key insights from prior deliverables and consultations emphasize the following:

- **Heritage Preservation Priorities:** Deliverable A highlighted the need for maintaining historical authenticity while enhancing functionality.
- **Community Engagement and Aspirations:** Feedback from Deliverable B stressed the importance of diversifying programming and establishing a unified framework for managing Leduc's heritage sites.
- **Economic and Operational Challenges:** Trends identified in Deliverable A show reliance on municipal funding and a lack of diversified revenue streams, underscoring the importance of innovative operational models.
- **Alignment with Broader Trends:** Insights from comparative analysis suggest opportunities for adaptive reuse and strategic partnerships to enhance sustainability and community impact.

This context frames the operational model analysis, ensuring findings align with local priorities and broader best practices.

2. Operational Model Options

This section explores potential operational models for the Dr. Woods' House Museum (DWHM), informed by benchmarking insights, community consultations, and comparative case studies. These models reflect the most common approaches to managing municipal heritage sites in Alberta, offering distinct opportunities to address DWHM's historic challenges while leveraging its unique assets.

By examining these models through critical success factors—economic sustainability, heritage preservation, socio-cultural engagement, building usability, and regulatory compliance—this section establishes a framework for evaluating the feasibility of each option. Community priorities, as outlined in Deliverable B, underscore the importance of balancing professional management with inclusive, community-driven programming, while insights from Deliverable A and comparable sites highlight practical strategies for addressing operational gaps.

Table 1: Summary of Operational Model Options

Model	Description	Key Features	Potential Risks
Municipal Oversight Model	Full ownership and management by the City of Leduc.	Centralized funding, staffing, and oversight.	Bureaucratic constraints could limit programming flexibility; risk of misalignment with community-driven goals.
Third-Party NFP Model	Management by a not-for-profit organization, potentially supported by grants and volunteer efforts.	Independent programming, diversified funding potential.	Dependence on external funding; potential operational instability due to volunteer reliance.
Third-Party For-Profit Model	Management by a for-profit entity aiming to integrate commercial ventures.	Focus on revenue generation.	Risk of deprioritizing heritage preservation for financial goals; potential misalignment with community expectations.
Hybrid Model 1: Municipal-Contractor Partnership	Municipality retains oversight but contracts programming and events to third-party organizations.	Collaborative approach leveraging public resources and private expertise.	Role delineation challenges; requires strong governance to balance stakeholder interests.
Hybrid Model 2: Unified Heritage Operator	Consolidated heritage management through third-party nonprofit leads operations with municipal funding and guidance for strategic goals.	Balance of operational independence and municipal oversight.	Potential for conflict between third-party goals and municipal strategic priorities.

Source: Developed for this report

2.1 Overview of Models

This framework evaluates operational models for DWHM using insights from Deliverable A (benchmarking and case studies) and Deliverable B (community consultations). The analysis emphasizes preserving the museum's cultural and historical integrity while ensuring long-term sustainability through innovative management approaches.

2.1.1 Key Community Values and Strategic Needs

Consultations highlighted several priorities:

- **Consolidated Heritage Management:** Community members strongly advocated for unifying the governance of Leduc's heritage sites to reduce silos, foster collaboration, and optimize resources.
- **Diversified and Enriched Programming:** Suggested initiatives included exploring rotating exhibits, digital tools, and partnerships to broaden audience engagement while enhancing financial resilience through diversified revenue streams.
- **Enhanced Funding Mechanisms:** Participants emphasized exploring diverse revenue streams, including grants, partnerships, sponsorships, and event-based income, to reduce reliance on municipal funding and foster financial resilience.
- **Preservation of Cultural Identity:** There was a strong emphasis on retaining the site's historical significance while integrating inclusive, modern engagement strategies.

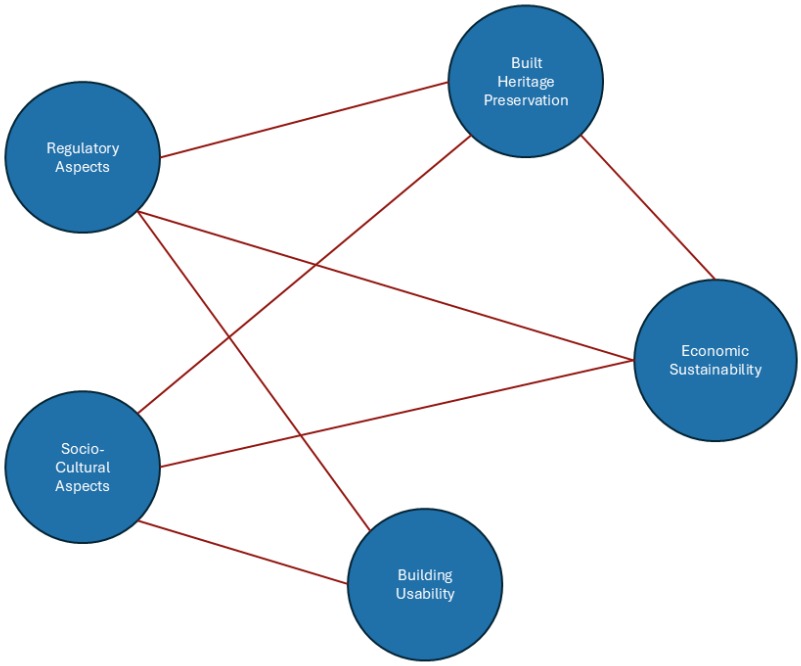
2.1.2 Critical Success Factors for Evaluation

Using data from the CARMN survey, site visits, and comparative case studies, this report evaluates each operational model against the following critical success factors as defined by Aigwi et al. (2020):

- **Economic sustainability:** The ability to maintain financial viability through diversified revenue streams and cost-effective management.
- **Heritage preservation:** The commitment to preserving the museum's cultural and historical integrity while adapting to contemporary needs.
- **Socio-cultural impact:** The capacity to foster community engagement, inclusivity, and participation through diverse and accessible programming.
- **Building usability:** How effectively the museum's physical spaces support current operations and future adaptability.
- **Regulatory compliance:** Adherence to zoning, heritage preservation standards, and accessibility requirements.

Figure 1 illustrates how these factors interrelate, highlighting connections such as economic sustainability's dependence on building usability and regulatory compliance. Community engagement and preservation laws also deeply link heritage preservation and socio-cultural impact.

Figure 1: Relationships Among Critical Success Factors



Source: Adapted from Aigwi et al. (2020)

2.1.3 Scoring and Evaluation Methodology

A Multi-Criteria Decision Analysis (MCDA) framework (Greco, Figueira & Ehrgott 2016) integrates these critical success factors into a transparent scoring system (Appendix A). Weighted criteria

reflect their importance in achieving DWHM's goals, such as prioritizing financial stability and community alignment. Appendix D extends this methodology to evaluate each model's feasibility, ensuring a robust, data-driven basis for strategic decision-making.

This evaluation framework underpins the feasibility analysis in Section 4 and risk assessment in Section 5, linking community priorities to operational sustainability.

2.2 Historic Operation of DWHM

The Dr. Woods' House Museum (DWHM) has historically operated under a Third-Party Not-for-Profit model, governed and managed by the Leduc and District Historical Society (LDHS). This model relied heavily on community-driven programming, volunteer-led operations, municipal funding, and occasional grant support. While this structure fostered a strong sense of local ownership and engagement, it also revealed critical operational and sustainability challenges over time.

2.2.1 Challenges and Their Impacts

Table 3 summarizes key challenges faced under the LDHS-led model, linking their impacts to operational gaps that have hindered the museum's long-term success.

Table 3: Historic Operation of DWHM Challenges and Their Impacts

Challenge	Description	Impact	Implications
Reliance on Volunteers	Declining participation due to aging members, health limitations, and a lack of younger recruits.	Reduced capacity for programming and operational tasks; inconsistent event support.	Need for structured volunteer programs, younger demographic engagement, or increased paid staffing.
Lack of Professional Expertise	Limited access to curatorial, collections, and entrepreneurial management expertise.	Inadequate collections care, missed opportunities for revenue generation, and reduced visitor engagement.	Operations require investment in staff training or partnerships with regional museums to share expertise and resources.
Limited Revenue Diversification	Overreliance on public funding, with minimal earned income from events or tours.	Financial vulnerability to lottery fluctuations; underfunded operations and maintenance.	Explore diversified revenue streams such as events, rentals, or business partnerships.
Operational Strategy Gaps	Lack of a coherent strategy for programming, collection development, exhibit turnover, staffing, and long-term planning.	Inconsistent visitor experiences, fluctuating engagement levels, and uneven financial health.	Develop a strategic plan and curatorial and collections management strategy aligned with municipal and community goals to stabilize operations.
Maintenance and Conservation	High costs of structural repairs and preservation efforts.	Strain on operational budgets; risk of long-term damage to the historic building and collection.	Pursue targeted conservation grants, strategically deaccession irrelevant objects, and reduce artifact storage burdens.

Challenge	Description	Impact	Implications
Accessibility Limitations	Lack of ramps or other mobility accommodations. Perception of exclusivity of use by LDHS within the community.	Exclusion of visitors with mobility challenges; failure to meet modern inclusivity standards; alienation of site from local community for public use.	Seek grants for digital access, accessibility improvements and explore adaptive use of outdoor spaces.

Source: Developed for this report

2.2.2 Linking Challenges to Proposed Models

While the Third-Party Not-for-Profit model demonstrated periods of success—most notably during robust programming years like 2015—the reliance on volunteers, limited strategic focus, and minimal revenue diversification created significant vulnerabilities. Insights from Deliverable A, community consultations, and operational records suggest that transitioning to a professionalized and diversified operational model would address many of these challenges.

Key benefits of the proposed models other than Third-Party Not-for-Profit include:

- **Municipal Oversight**
  - Consistent staffing and stable funding to mitigate reliance on volunteers.
  - Professional management adheres to municipal policies for accessibility and preservation.
- **Third-Party For Profit**
  - Entrepreneurial expertise drives diversification of revenue streams.
  - Emphasis on usability and cost-efficiency ensures financial stability.
- **Hybrid Models**
  - Municipal stability paired with external expertise enhances strategic planning.
  - Partnership and collaborative governance can expand programming and accessibility.
  - **Hybrid Model 2 - Unified Heritage Operator**
    - Resource-sharing across sites improves collections care and cost efficiency by reducing redundancy and resource downtime.
    - Reduces silos, promoting profession management and cohesive alignment with community goals.

The historical operation of DWHM under the Third-Party Not-for-Profit model underscores critical lessons for its future sustainability. Addressing challenges such as reliance on volunteers, limited revenue diversification, and operational strategy gaps requires transitioning to a model that balances professional management with community engagement.

Each proposed operational model offers distinct opportunities to address these gaps while aligning with community priorities. For example, Municipal Oversight ensures professionalized staffing and adherence to accessibility and preservation standards, while Hybrid Models combine municipal stability with innovative partnerships.

Building on this foundation, consultation insights offer a closer look at community-driven perspectives. These insights are instrumental in shaping the evaluation of operational models in subsequent sections.

2.3 Consultation Insights on Operational Preferences

Community feedback highlighted the importance of balancing professional management with community-driven engagement. Across all models, participants emphasized inclusivity, sustainability, and programming innovation as critical to DWHM's success. Key insights included the need for unified governance to reduce silos, diversified funding mechanisms to ensure financial resilience and programming that reflects the community's diverse cultural heritage. This feedback aligns with broader trends in heritage management, emphasizing the value of collaboration and adaptive use in sustaining historical sites.

2.3.1 Strengths

Municipal Oversight Model

- Provides strategic alignment with municipal priorities, access to professional staff, and stable funding to reduce reliance on fluctuating revenue streams. One participant noted, *"The City's role ensures that the museum remains a core cultural asset, aligned with Leduc's broader goals."*

Third-Party Not-for-Profit Model Strengths

- Leverages local knowledge and fosters grassroots engagement, encouraging volunteerism and community-driven initiatives. A stakeholder commented, *"A nonprofit model could bring the creativity and passion needed to energize the museum's programming."*

Third-Party For-Profit Model Strengths

- It emphasizes revenue generation and efficiency, potentially diversifying income streams through tourism and events. However, feedback cautioned against prioritizing profit over heritage preservation. One stakeholder emphasized, "*Heritage must remain a public good, not just a private enterprise."*

Hybrid Model Strengths

- Combine municipal stability with third-party innovation, balancing financial support with programming flexibility. One participant emphasized, *"A partnership approach allows the city to retain influence while bringing in fresh ideas and expertise."*

2.3.2 Challenges

Municipal Oversight Model Challenges

- Risks include slow decision-making due to bureaucracy and risk-averse programming, potentially limiting innovation and community engagement. A participant observed, *"While stable, city oversight can be rigid, missing opportunities for dynamic engagement."*

Third-Party Not-for-Profit Model Challenges

- Faces financial instability and challenges in maintaining professional expertise, with reliance on volunteers introducing sustainability risks. A participant noted, *"Volunteer-run models often struggle with continuity and professionalism over time."*

Third-Party For-Profit Model Challenges

- Potential misalignment with community values and heritage goals, equity concerns due to revenue-driven operations, and exposure to market risks were frequently highlighted. One participant noted, *"Turning a cultural site into a business risks losing its heart and mission as a place of learning and connection."*

Hybrid Model Challenges

- Require robust governance to delineate roles and responsibilities. Legal frameworks may be necessary to access nonprofit benefits, and collaboration risks misaligned priorities if communication falters. One stakeholder observed, *"Clear roles and responsibilities are essential to avoid confusion and conflict in hybrid models."*
- If Hybrid Model 2—Unified Heritage Operator is chosen, a legal structure for an entity separate from the municipality, such as a Part 9 Company (Alberta Companies Act), may be required to benefit from non-profit status and access grants.

Community input highlights a preference for operational models that combine professional oversight, financial sustainability, and community engagement. These insights guide the evaluation of models, balancing the strengths and challenges identified.

2.4 Observations from Comparable Sites

This section draws lessons from comparable heritage sites, examining their operational models, strengths, and challenges to inform the operational strategy for the Dr. Woods' House Museum (DWHM). *Table 2* summarizes key observations.

Table 2: Summary of Operational Model Observations for Key Comparable Sites

Site	Operational Model	Strengths	Challenges
Rutherford House	Hybrid (Provincial + Independent)	Stable funding; diversified revenue streams (admissions, rentals, programming fees); strong educational and community-focused programming.	Regulatory constraints; loss of volunteer group reduced community participation.
Stephansson House	Provincial Management	High preservation standards; strong focus on historical education and authenticity.	Limited revenue diversification; constrained programming flexibility.
Bison Lodge	Third-party Nonprofit	Community-driven; revenue from events, tours, and rentals.	Aging volunteer base; financial challenges with modernization.

Site	Operational Model	Strengths	Challenges
Canmore Museum	Multi-Stream (Municipal + Grants)	Effective partnerships; diversified funding enhances programming flexibility.	High competition for tourism revenue and grants; innovation required to stay relevant.
Distillery District	Adaptive Reuse (Retail + Events)	Balanced heritage preservation with diversified revenue streams from retail, events, and tourism.	High maintenance costs; risk of commercial priorities overshadowing heritage goals.

Source: Developed for this Report

2.4.1 Lessons for Dr. Woods' House Museum

Rutherford House

Diversified revenue streams from admissions, rentals, and programming fees ensure financial stability, while educational and seasonal events attract diverse audiences. However, the loss of community participation due to the dissolution of the "Friends of Rutherford House Society" highlights the need for sustained volunteer engagement and partnerships.

Implications for DWHM: Stable funding and diverse revenue sources are critical, but proactive volunteer engagement and long-term partnerships are equally essential.

Stephansson House

Provincial oversight ensures strong preservation standards and historical education but limits flexibility in modern programming or revenue diversification.

Implications for DWHM: While strict preservation models protect heritage assets, a balanced approach is needed to allow adaptive reuse and innovative programming.

Bison Lodge

This community-driven model demonstrates the value of volunteer engagement and event-based revenue. However, aging volunteers and limited access to modernization funds through public grants pose significant risks.

Implication for DWHM: Structured volunteer programs and sustainable staffing solutions are needed to ensure operational resilience. A funding strategy for capital to address accessibility and modernization needs is essential.

Canmore Museum

Multi-stream funding through municipal support, grants, and partnerships enables programming flexibility and community impact. However, high competition for grants and tourism dollars necessitates innovative programming and a clear strategic focus.

Implication for DWHM: Diversified funding and local partnerships offer growth potential, but strategic planning is needed to compete effectively.

Distillery District

Adaptive reuse balances preservation with revenue generation, demonstrating how heritage sites can integrate retail, events, and tourism. However, high maintenance costs and commercial pressures risk overshadowing cultural goals.

Implication for DWHM: Adaptive reuse offers revenue opportunities, but clear oversight is required to prioritize heritage and cultural integrity.

2.4.2 Leveraging Insights for DWHM's Strategic Advantage

DWHM stands out for its distinct historical and cultural value within Leduc, offering opportunities to address challenges faced by comparable sites while capitalizing on its unique assets. The following synthesis of key observations highlights how DWHM can align with proven strategies while leveraging its strengths:

1. **Economic Sustainability**
    - **Diversified Revenue Streams:** Rutherford House and the Distillery District exemplify how varied income sources—such as rentals, programming fees, and retail—can stabilize finances. These models align with DWHM's potential to reduce reliance on municipal funding by incorporating adaptive programming and partnerships with local businesses.
    - **Maximizing Existing Resources:** Unlike some benchmarks, DWHM benefits from its manageable scale and strong local recognition, which allow it to experiment with smaller-scale revenue streams such as workshops or niche events without overextending resources.
2. **Heritage Preservation**
    - **Balancing Preservation and Adaptability:** Stephansson House's focus on historical authenticity underscores the importance of preserving DWHM's heritage elements. However, adaptive reuse practices seen in the Distillery District highlight opportunities for DWHM to blend preservation with modern functionality. For instance, DWHM's outdoor spaces could be reimagined for revenue-generating activities while respecting the historical integrity of the property.
    - **Strengthening Asset Management:** DWHM's historical artifacts and collection of regional archives represent underutilized assets that, if curated effectively, could enhance both educational programming and revenue potential through exhibitions or research collaborations.
3. **Socio-Cultural Engagement**
    - **Expanding Community Connections:** Bison Lodge and Canmore Museum highlight the importance of fostering local partnerships to enhance programming. DWHM can leverage its ties to the community to establish partnerships with schools, Indigenous groups, and cultural organizations, expanding its audience while deepening engagement.
    - **Utilizing Outdoor and Seasonal Programming:** Unique to DWHM, its outdoor spaces and accessibility to local schools present opportunities to develop niche programming

that enhances visitor experiences, such as historical reenactments, seasonal markets, or partnerships with local artisans.

4. **Operational Flexibility**

    - **Hybrid Model Benefits:** Rutherford House demonstrates the sustainability of hybrid approaches that balance public funding stability with programming flexibility. DWHM could adopt a similar model, engaging contractors for specialized programming while retaining municipal oversight for strategic direction.
    - **Innovating While Maintaining Integrity:** The Distillery District's challenges in balancing commercial and heritage priorities are instructive. DWHM must ensure that efforts to diversify revenue streams do not overshadow its cultural and historical mission. Clear governance structures and stakeholder alignment will be essential to achieving this balance.

By aligning with these insights, DWHM has the potential to overcome the challenges experienced under its historic operational model while taking advantage of its unique assets to foster financial sustainability, community engagement, and operational resilience.

2.5 Summary

The operational models analyzed in this section provide DWHM with a range of opportunities to achieve financial sustainability, enhance community engagement, and preserve its historical legacy.

2.5.1 Strengths

- DWHM benefits from strong local recognition, cultural authenticity, and a central location, positioning it as a key heritage asset within Leduc.

2.5.2 Opportunities

- Hybrid models and adaptive reuse strategies offer innovative pathways to diversify revenue, expand programming, and foster partnerships, while municipal oversight ensures professional management and funding stability.

2.5.3 Challenges

- Achieving full cost recovery remains unlikely, emphasizing the need for municipal subsidization. Further, balancing operational flexibility with alignment to municipal goals and addressing volunteer and staffing stability are critical areas requiring attention.

The synthesis of community feedback, benchmarking insights, and lessons from comparable sites lays a robust foundation for evaluating the feasibility of these models in subsequent sections.

3. Operational Model Evaluation and Analysis

This section outlines the comprehensive evaluation framework used to assess operational models for the Dr. Woods' House Museum (DWHM). By integrating lessons from Deliverables A and B, academic literature, and community feedback, the analysis balances financial sustainability, cultural preservation, and community engagement.

3.1 Evaluation Framework

The evaluation framework draws on the performance-based planning methodology outlined by (Aigwi et al. 2020), which emphasizes balancing diverse stakeholder objectives through clearly defined and weighted criteria. These criteria are the foundation for assessing adaptive reuse and operational sustainability in a heritage context.

- **Economic Sustainability (30%):** Evaluates the capacity for diversified revenue streams and efficient cost management, ensuring long-term financial health.
- **Heritage Preservation (25%):** Measures the degree to which models safeguard cultural authenticity while allowing for adaptive reuse.
- **Socio-Cultural Engagement (20%):** Assesses the effectiveness of programming in fostering community connections and inclusivity.
- **Building Usability (15%):** Considers adaptability and operational suitability without compromising the property's historical character.
- **Regulatory Compliance (10%):** Ensures adherence to legal and safety standards, facilitating seamless integration of new operational frameworks.

These parameters constitute a rigorous and academically valid performance-based framework (Aigwi et al. 2020) refined for the specific context of Alberta-based municipal heritage management.

3.2 Methodology for Scoring and Weighting

The evaluation employs the Multi-Criteria Decision Analysis (MCDA) method, as articulated by (Greco, Figueira & Ehrgott 2016). This approach offers a structured and transparent system for evaluating and ranking operational models based on the weighted critical success factors.

- **Scoring Framework:** Each operational model is rated against the five criteria on a scale from 1 (low alignment) to 5 (high alignment).
- **Weighting:** Criteria are assigned relative weights to reflect their importance to DWHM's goals, with economic sustainability receiving the highest weight, at 30%.
- **Aggregate Scores:** Weighted scores are summed to determine an overall score, clearly ranking each model's alignment with strategic objectives.

Appendix A includes the full scoring methodology, Appendix B presents the detailed scoring results for each operational model against the Aigwi framework, and Appendix D outlines the methods and analysis of the Feasibility Factor.

3.3 Validation of Use of Academic Model and Methodology

Aigwi et al. (2020) emphasize the need for performance-based decision-making in heritage contexts, focusing on interdependencies among critical factors. Figure 1 (Section 2) highlights these interrelationships and demonstrates the interconnected impacts of economic, cultural, and operational dimensions.

The MCDA methodology ensures these interdependencies are quantitatively addressed, allowing for balanced trade-offs between competing objectives. For example:

- Economic Sustainability directly interacts with Regulatory Compliance, as operational costs can be influenced by accessibility and preservation requirements.
- Socio-Cultural Engagement overlaps with Heritage Preservation, as community programming often depends on the authenticity and cultural value of the site.

This integrated approach ensures that recommendations for DWHM are grounded in both robust theoretical underpinnings and practical relevance to Leduc's strategic goals.

With this framework established, the analysis proceeds to evaluate each operational model in detail, synthesizing findings to inform actionable recommendations in subsequent sections. The results demonstrate the practical application of academic models, enhancing the transparency and rigor of decision-making for DWHM.

3.4 Analysis of Operational Models

The final scoring (Table 3) provides a comparative evaluation of all operational models. Each model's strengths and weaknesses are analyzed to highlight its relative suitability for DWHM.

Table 3: Comparative Weighted Evaluation of Operating Models

Operating Model	Economic Sustainability (30%)	Heritage Preservation (25%)	Socio-Cultural Engagement (20%)	Building Usability (15%)	Regulatory Compliance (10%)	Total Weighted Score
Municipal Oversight Model	0.90	0.75	0.60	0.45	0.40	**3.10**
Third-Party NFP Model	0.60	0.50	0.60	0.30	0.30	**2.30**
Third-Party For-Profit Model	1.20	0.75	0.60	0.60	0.30	**3.45**
Hybrid Model 1: Municipal-Contractor Partnership	1.20	0.88	0.80	0.60	0.35	**3.83**
Hybrid Model 2: Unified Heritage Operator	1.35	1.00	0.70	0.60	0.40	**4.05**

Source: Developed for this report from (Aigwi et al. 2020; City of Leduc 2021; Elevate the Path 2024; EM Museum Consulting 2024; Vafaie, Remøy & Gruis 2023)

3.4.1 Summary of Findings

- **Hybrid Model 2: Unified Heritage Operator** achieves the highest score (4.05), balancing financial sustainability, preservation consistency, and strategic oversight. Challenges include some governance complexity and limitations on grassroots engagement.

- **Hybrid Model 1: Municipal-Contractor Partnership** scores second (3.83), excelling in programming flexibility and leveraging municipal stability but with variability in preservation and compliance.
- **Third-Party For-Profit Model** ranks third (3.45), emphasizing revenue generation and adaptive reuse but risking inclusivity and heritage authenticity.
- **Municipal Oversight Model** (3.10) provides stable funding and regulatory compliance but lacks innovation and adaptability.
- **Third-Party NFP Model** (2.30) demonstrates strengths in community-driven engagement but struggles with financial resilience and professional expertise.

3.5 Summary

The evaluation framework applied in this section provides a data-driven and holistic analysis of operational models for the Dr. Woods' House Museum (DWHM). Drawing on the Multi-Criteria Decision Analysis (MCDA) methodology and performance-based parameters (Aigwi et al. 2020), this evaluation prioritizes financial sustainability, heritage preservation, and alignment with community values.

Key findings include:

- **Hybrid Model 2: Unified Heritage Operator** achieves the highest overall score (4.05) by integrating financial sustainability, consistent preservation standards, and strategic oversight. However, it poses challenges in governance complexity and requires robust systems to ensure equitable resource allocation across heritage sites.
- **Hybrid Model 1: Municipal-Contractor Partnership** scores second (3.83), balancing municipal stability with external innovation. While it excels in programming flexibility, it exhibits preservation consistency and regulatory compliance variability.
- **Third-Party For-Profit Model** ranks third (3.45), demonstrating strong revenue generation and adaptive reuse potential. However, it risks deprioritizing heritage authenticity and inclusivity.
- **Municipal Oversight Model** (3.10) offers stable funding and regulatory compliance but lacks programming innovation and adaptability to evolving community needs.
- **Third-Party NFP Model** (2.30) fosters community-driven engagement but struggles with financial resilience, professionalization, and strategic alignment.

This analysis underscores the importance of aligning operational models with DWHM's critical success factors and strategic goals. While Hybrid Model 2 offers the strongest potential, each model presents trade-offs that require careful consideration in relation to financial, cultural, and operational priorities.

Building on these findings, Section 4 will quantify the financial implications of each operational model, integrating staffing projections, capital requirements, and revenue potential. By linking the qualitative insights from Section 3 with detailed cost analysis, Section 4 provides a comprehensive foundation for selecting a sustainable operational strategy.

4. Cost and Feasibility Analysis

This section evaluates the financial and operational feasibility of proposed operational models for the Dr. Woods' House Museum (DWHM). Building on the evaluation results in Section 3, this analysis incorporates historical financial data, community priorities, sector benchmarks, and staffing requirements to provide a holistic foundation for sustainable decision-making.

4.1 Methodology

The analysis employs a Multi-Criteria Decision Analysis (MCDA) approach (Greco, Figueira & Ehrgott 2016), balancing quantitative and qualitative dimensions. The analysis integrates four primary dimensions:

4.1.1 Cost Projections

Operational costs are based on historical records (Appendix C, Section C.2.1) and adjusted for inflation and updated staffing estimates (Appendix C, Section C.5). Capital investments range from minimal retrofitting in maintenance-based models to higher investments for adaptive reuse in Hybrid and For-Profit models (Appendix C, Section C.2.2).

4.1.2 Revenue Potential

Revenue potential considers income sources such as events, rentals, grants, and partnerships. These are informed by Deliverable A benchmarks and comparable heritage sites (Appendix C, Section C.3.1).

4.1.3 Scalability and Growth

Programming expansion opportunities are assessed, including new initiatives, partnerships, and visitor growth (Appendix C, Section C.4).

4.1.4 Staffing Requirements

Staffing needs reflect FTEs, part-time staff, volunteer contributions, and contracted expertise (Appendix C, Section C.5). Feasibility aligns these dimensions with financial sustainability, scalability, and community goals (Appendix D).

4.2 Operational Model Summaries and Analysis

4.2.1 Option 1: Municipal Oversight Model (Figure 2)

This model features direct management of DWHM by the City of Leduc, ensuring consistent funding, maintenance, and compliance. However, it limits flexibility in programming and reduces community engagement opportunities.

Staffing Needs: 1–2 FTEs and 10–15 part-time hours/week to cover administration, programming, and maintenance. Volunteer reliance is minimal, reflecting municipal funding stability.

Feasibility Score: 3.90

Figure 2: Municipal Oversight Model

Source: Developed for this report

Municipal oversight offers high cost predictability and governance simplicity (Appendix D, Section D.4), though limited scalability restricts its adaptability to evolving community needs (Appendix C, Section C.4).

4.2.2 Option 2: Municipal Oversight Model (Figure 2)

Under this model, a non-profit organization manages DWHM operations. While fostering community engagement, it faces financial and professional stability challenges due to reliance on grants, donations, and volunteers.

Staffing Needs: 0.5–1 FTE, 5–10 part-time hours/week, and 500–700 annual volunteer hours. Heavy reliance on volunteers introduces retention and burnout risks.

Feasibility Score: 2.80

Figure 3: Third-Party NFP Operational model

Source: Developed for this report

This model reflects strong community alignment but struggles with scalability and financial sustainability, as detailed in Appendix D (Section D.4).

4.4.3 Option 3: Third-Party For-Profit Operational Model (Figure 4)

The For-Profit Model emphasizes financial sustainability through revenue-driven operations, leveraging tourism and event income while risking heritage and community alignment.

Staffing Needs: 1–2 FTEs, 15–20 part-time hours/week, minimal volunteer use, and specialized contracted expertise for revenue-driven activities.

Feasibility Score: 3.80

Figure 4: Third-Party For-Profit Operational model

Source: Developed for this report

Scalability and revenue generation are strengths (Appendix C, Section C.3.1), but trade-offs in cultural goals and financial risks reduce its alignment with DWHM's heritage objectives (Appendix D, Section D.4).

4.4.4 Option 4: Hybrid Model 1- Municipal-Contractor Partnership

This hybrid approach combines municipal oversight with contracted third-party management for programming and operations. It balances stability with creative flexibility.

Staffing Needs: 0.5–1 FTE, 10–15 part-time hours/week, 200–300 volunteer hours, and event-specific contracted expertise.

Feasibility Score: 4.40

Figure 5: Hybrid Model 1 – Municipal-Contractor Partnership

Source: Developed for this report

Governance complexity presents challenges, but strong financial stability and innovative programming enhance its feasibility (Appendix D, Section D.4).

4.4.5 Option 5: Hybrid Model 2 – Unified Heritage Operator (Figure 6)

A centralized operator manages multiple heritage sites in Leduc under municipal oversight. The model maximizes efficiency and strategic alignment across sites but demands robust governance to ensure equity.

Staffing Needs: 1.5–2.5 FTEs, 15–20 part-time hours/week, 300–500 volunteer hours, and site-wide contracted expertise.

Feasibility Score: 4.90

Figure 6: Hybrid Model 2 – Unified Heritage Operator

Source: Developed for this report

This model achieves the highest feasibility score, excelling in scalability and revenue generation (Appendix D, Section D.4).

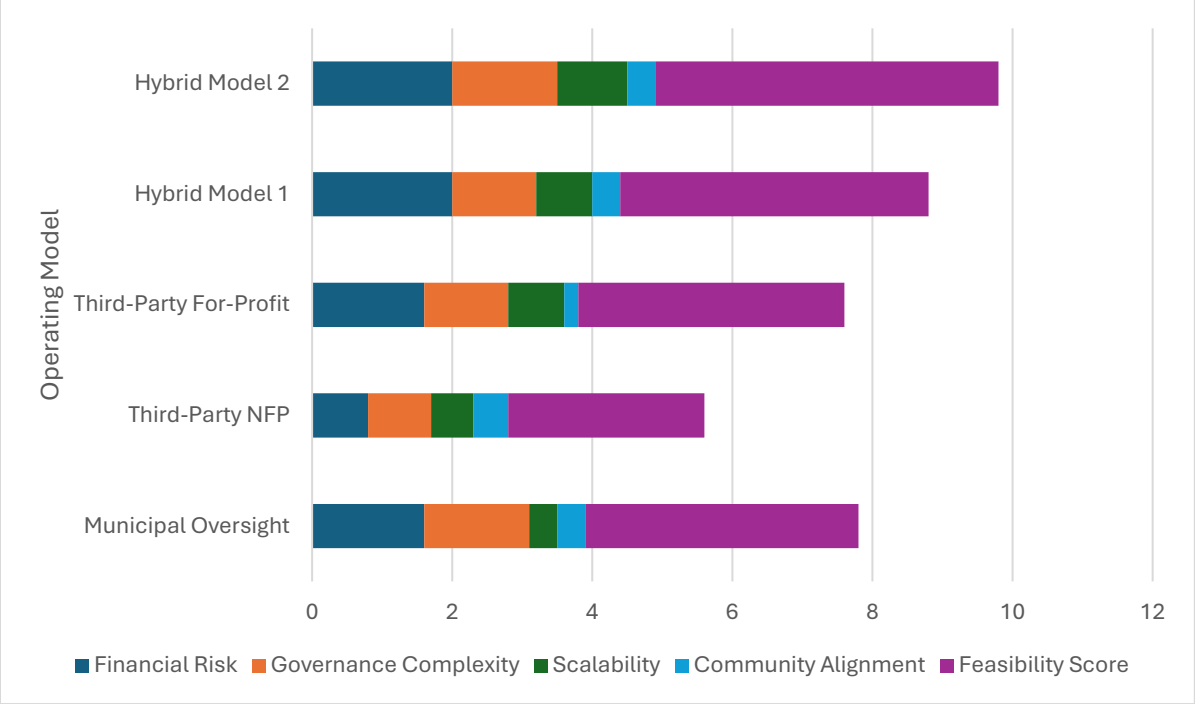
4.7 Cost and Feasibility Analysis for Each Option

The financial and operational feasibility of each model is visualized in Figures 2–6, with comparative feasibility scores in Figure 7. These scores reveal trade-offs between stability, scalability, and alignment with community goals:

- **Municipal Oversight:** Predictable costs and governance yield high feasibility (3.90).
- **Third-Party NFP:** Strong community engagement is offset by financial and scalability risks (2.80).
- **Third-Party For-Profit:** Revenue generation is a strength, but cultural alignment challenges lower feasibility (3.80).

- **Hybrid Model 1: Municipal-Contractor Partnership:** Balanced financial stability and innovation enhance feasibility (4.40).
- **Hybrid Model 2: Unified Heritage Operator:** Excelling in all dimensions, it emerges as the most sustainable option (4.90).

Figure 7: Comparative Feasibility Scores by Operational Model



Source: Developed for this report based on Feasibility Scoring Methodology (Appendix D)

4.8 Summary

Feasibility scores highlight the strengths and limitations of each operational model:

- **Municipal Oversight:** High stability but limited adaptability.
- **Third-Party NFP:** Community-driven but financially vulnerable.
- **Third-Party For-Profit:** Revenue-focused but culturally misaligned.
- **Hybrid Model 1: Municipal-Contractor Partnership**: Strong balance of innovation and stability.
- **Hybrid Model 2: Unified Heritage Operator:** The most viable approach for sustainability and strategic alignment.

These insights provide a foundation for Section 5: Risk Assessment, which further analyzes each model's trade-offs and challenges.

5. Risk Assessment

This section evaluates the risks associated with each proposed operational model for the Dr. Woods' House Museum (DWHM) and outlines mitigation strategies to address these risks. The analysis integrates consultation insights, sector benchmarks, and feasibility scoring (Appendix D) to provide actionable recommendations.

5.1 Overall Risk Level, Identified Risks and Mitigation Strategies for Each Operational Model

To assess and compare risks across models, the following risk categories were applied for clarity and consistency:

- **Operational:** Daily operations, scalability, and programming adaptability challenges.
- **Financial:** Risks from funding instability, grant dependencies, or revenue variability.
- **Governance:** Issues arising from leadership structures, role conflicts, or administrative complexity.
- **Human Resources:** Risks associated with employee retention, turnover, volunteer dependency, or reliance on specialized expertise.
- **Community Engagement:** Alignment with community values, inclusivity, and heritage preservation.
- **Regulatory Compliance:** Adherence to municipal bylaws and standards, ensuring alignment with heritage preservation.

A comprehensive table detailing specific risks and tailored mitigation strategies for each operational model is presented in Appendix E, Table E.1. Highlights of key risks and strategies include:

- **Municipal Oversight:** Low risk overall but limited scalability and adaptability. Mitigation strategies focus on diversifying revenue streams, fostering community input, and implementing staff cross-training programs.
- **Third-Party NFP:** Moderate risk due to financial instability and volunteer dependency. Structured volunteer management programs and multi-year funding agreements are critical mitigation measures.
- **Third-Party For-Profit:** Moderate risk stemming from regulatory compliance, community misalignment, and staff turnover. Mitigation includes contractual heritage preservation requirements, competitive salary structures, and performance monitoring.
- **Hybrid Model 1: Municipal-Contractor Partnership:** Moderate to low risk. Governance clarity, local engagement integration, and long-term contractor agreements mitigate identified challenges.
- **Hybrid Model 2: Unified Heritage Operator:** Low risk overall. Strategies emphasize governance frameworks, resource pooling, and site-specific identity planning to address engagement and operational risks.

5.2 Tailored Mitigation Strategies for Staffing Challenges

Staffing risks consistently emerge across models, particularly in volunteer-dependent and profit-driven approaches. Key mitigation strategies include:

- **Cross-Model Training:** Equip staff with versatile skills to ensure continuity during transitions or staff shortages.
- **Succession Planning:** Anticipate leadership turnover by identifying and training internal candidates for key roles.
- **Volunteer Retention Programs:** Enhance volunteer engagement through recognition initiatives, structured training, and intergenerational recruitment.
- **Competitive Compensation:** Build attractive salary packages for specialized roles in profit-driven and hybrid models to reduce turnover risks.

5.3 Risk Assessment Summary

The consolidated risk and mitigation strategy analysis highlights the trade-offs inherent in each operational model, integrating feasibility scores (Appendix D) and the weighted evaluation scores (Table 3) to provide a nuanced understanding of their strengths and limitations.

5.3.1 Key Findings

While Hybrid Model 2: Unified Heritage Operator emerges as the strongest option based on its feasibility score and weighted evaluation (4.90 and 4.05, respectively), Hybrid Model 1: Municipal-Contractor Partnership remains a compelling secondary choice. Its ability to leverage contractor flexibility while maintaining a strong governance framework makes it well-suited for contexts where dynamic programming and localized adaptability are prioritized.

- **Municipal Oversight (Feasibility Score: 3.90; Weighted Score: 3.10):** This model offers secure funding and low operational risk, ensuring staffing stability and compliance with regulatory standards. However, its limited scalability and programming adaptability lower its socio-cultural engagement score (0.60) and heritage preservation potential (0.75). While the low-risk profile makes this a stable choice, its inability to adapt to evolving community needs reduces its long-term viability as a dynamic operational strategy.

- **Third-Party NFP (Feasibility Score: 2.80; Weighted Score: 2.30):** Despite its strong alignment with socio-cultural engagement (0.60) and grassroots community involvement, this model faces significant financial instability due to unpredictable grant funding and high volunteer dependency. Low scores in economic sustainability (0.60) and building usability (0.30) underscore its operational fragility. Strengthening governance structures, volunteer retention strategies, and diversifying funding sources are critical to mitigating these challenges.

- **Third-Party For-Profit (Feasibility Score: 3.80; Weighted Score: 3.45):** Excelling in economic sustainability (1.20) and building usability (0.60), this model achieves financial robustness and scalability. However, its weaker performance in heritage preservation (0.75) and socio-cultural engagement (0.60) reflects potential misalignment with community and heritage objectives. Mitigation strategies, such as enforcing heritage preservation standards in contracts and ensuring competitive compensation, are essential for balancing profitability with cultural integrity.

- **Hybrid Model 1: Municipal-Contractor Partnership (Feasibility Score: 4.40; Weighted Score: 3.83):** This model effectively balances municipal stability and contractor-driven programming flexibility. High scores in economic sustainability (1.20), heritage preservation (0.88), and socio-cultural engagement (0.80) highlight its well-rounded performance. However, governance complexity and contractor availability risks require proactive role delineation and long-term contracting strategies. This model is particularly viable in contexts prioritizing programming adaptability and moderate financial risk.

- **Hybrid Model 2: Unified Heritage Operator (Feasibility Score: 4.90; Weighted Score: 4.05):** As the highest-scoring model, Hybrid Model 2 demonstrates exceptional alignment with economic sustainability (1.35), heritage preservation (1.00), and scalability goals. Its centralized governance ensures resource optimization while maintaining strategic alignment across multiple sites. Risks of resource dilution and reduced site-specific focus can be mitigated through identity plans for individual sites and proactive community engagement. This model stands out as the most comprehensive and sustainable option for DWHM.

Mitigating risks across all models requires tailored strategies, including competitive staffing packages, structured volunteer programs, and robust governance frameworks. These insights provide the City of Leduc with a comprehensive foundation for selecting the operational model best aligned with its cultural and fiscal priorities while addressing inherent risks.

These insights provide a comprehensive foundation for decision-making in Deliverable D, aligning operational strategies with the City of Leduc's cultural and fiscal priorities while addressing inherent risks.

6. Recommendations and Next Steps

This section synthesizes the insights from the operational model evaluations, cost and feasibility analysis, and risk assessments to provide recommendations for the City of Leduc. While each model offers distinct advantages, the analysis highlights critical considerations for ensuring the sustainability of the Dr. Woods' House Museum (DWHM). These recommendations are informed by expert analysis, community input, and sector trends, as detailed throughout this report.

6.1 Key Observations

6.1.1 Financial Sustainability Challenges

None of the operational models assessed generate a net profit when accounting for realistic staffing costs. This reflects broader trends in the heritage sector, where operations often require external funding or municipal subsidies to sustain programming and maintenance. The CARMN survey supports this finding, (EM Museum Consulting 2024) highlighting that few heritage sites achieve financial self-sufficiency and rely heavily on grants, volunteers, and government funding to offset operating deficits.

6.1.2 Suitability of Third-Party Models

While Third-Party NFP and For-Profit models offer community engagement and revenue-generation potential, they face significant challenges in financial sustainability. Third-party operators cannot

typically operate at a loss over extended periods, a condition that municipal funding models can better accommodate. This financial gap could deter potential third-party operators or limit their ability to deliver robust programming.

6.1.3 Suitability of Third-Party Models

The Hybrid Models offer the most feasible balance between financial sustainability, community alignment, and operational scalability. Hybrid Model 1 introduces flexibility through contractor innovation, while Hybrid Model 2 provides centralized governance and resource optimization. However, both models rely on strong governance structures and ongoing municipal support to mitigate risks.

6.1.4 Community Value and Stakeholder Expectations

Community consultation underscored the importance of inclusivity, programming innovation, and maintaining DWHM's cultural integrity (Elevate the Path 2024). These values must guide any operational decisions, emphasizing the need for robust volunteer engagement, transparent governance, and alignment with community priorities.

6.2 Recommendations

6.2.1 Acknowledge and Prioritize Municipal Involvement in Funding

Regardless of the chosen operational model, sustained municipal financial support will be critical to offset operating deficits and ensure stability. This aligns with sector best practices, as evidenced by benchmarking data from Deliverable A and insights from comparable heritage sites (EM Museum Consulting 2024).

6.2.2 Explore Hybrid Model 2 as the Preferred Option

The Hybrid Model 2: Unified Heritage Operator demonstrates the highest feasibility score (4.90), offering a centralized approach that balances financial sustainability, scalability, and strategic alignment. This model maximizes resource efficiency across heritage sites, reducing duplication while fostering innovation in programming and community engagement. Further, it was an option offered through the consultation phase as aligning with both municipal and community values.

6.2.3 Establish Contingency Plans for Third-Party Models

Should the City pursue Third-Party NFP or For-Profit models, contingency plans must be developed to address financial shortfalls. These plans could include:

- Municipal subsidies for critical functions (e.g., building maintenance).
- Structured partnerships to provide financial guarantees for contractors or operators.
- Volunteer engagement programs to reduce staffing costs.

6.2.4 Incorporate Transparent Governance Structures

Hybrid models require clear governance frameworks to delineate roles, responsibilities, and accountability mechanisms. This includes formalizing contractor agreements (Hybrid Model 1) or ensuring equitable site representation under centralized governance (Hybrid Model 2), ideally through a nonprofitmaking entity incorporated adjacent to the municipality to increase eligibility for grants and support from private foundations.

6.2.5 Leverage Community Partnerships

To address inherent financial challenges, the City should cultivate partnerships with local businesses, cultural organizations, and educational institutions. These collaborations can enhance programming, increase revenue potential, and bolster community support.

6.3 Next Steps

This section outlines the recommended next steps to ensure the successful implementation of an operational model for the Dr. Woods' House Museum. These steps are divided into actions that EM Museum Consulting will complete as part of Deliverable D and those that the City of Leduc should consider as part of its long-term strategic planning.

6.3.1 Consultant Deliverable D: Final Report and Presentation

As outlined in the scope of work, Deliverable D: Recommendations Report and Council Presentation will include:

- **Refined Recommendations:** Finalized operational strategies, prioritizing sustainability, community engagement, and financial feasibility based on the analysis in this report.
- **Summary Report:** A detailed summary including cost estimates, staffing projections, and risk mitigation strategies to support decision-making.
- **Presentation to City Council:** A concise and accessible presentation of the findings and recommendations tailored for municipal decision-makers.

6.3.2 Consultant Deliverable: Final Report and Presentation

Following receipt of Deliverable D, the City of Leduc should consider the following steps to implement the chosen operational model effectively:

1. **Develop a Transition Plan**
   Establish a clear roadmap to transition to the recommended operational model. This plan should outline specific milestones, timelines, and required resources for implementation.

2. **Stakeholder Engagement**
   Facilitate additional stakeholder workshops to solidify community and partner alignment with the selected operational model. These discussions should identify roles, responsibilities, and collaborative opportunities.

3. **Detailed Financial Planning**
   Create a comprehensive five-year financial plan, addressing:
   - Funding diversification (e.g., grants, municipal budgets, partnerships).
   - Budgetary contingencies for revenue shortfalls or cost escalations.
   - Long-term staffing and operational costs.

4. **Pilot Programming**
   Test new programming initiatives or revenue-generation strategies to gauge community interest and scalability. Insights from these pilots can inform the full rollout of the chosen model.

5. **Monitoring and Evaluation Framework**
   Develop a framework to monitor and evaluate the performance of the operational model over time. Key performance indicators (KPIs) include:
   - Visitor attendance and programming participation.
   - Financial performance metrics.
   - Community satisfaction and stakeholder engagement.

6. **Adapt to Sector Trends**
   Review trends and best practices from sector organizations such as CARMN, Alberta Museums Association, and Canadian Museums Association regularly to align all heritage operations with emerging innovations in heritage management.

7. Concluding Remarks

The Hybrid Models, particularly the Unified Heritage Operator, demonstrate the most substantial potential for sustainability and scalability, aligning operational goals with the City's strategic priorities. However, regardless of the selected model, implementing these recommendations will depend on proactive planning, continued stakeholder engagement, and alignment with best practices in heritage management.

This report equips the City of Leduc with the tools to make informed decisions about the future of the Dr. Woods' House Museum, ensuring its legacy as a vibrant and sustainable community asset for generations to come.

Citations

Historical Resources Act 2022 (AB), s. 27.

Aigwi, IE, Ingham, J, Phipps, R & Filippova, O 2020, 'Identifying Parameters for a Performance-Based Framework: Towards Prioritising Underutilised Historical Buildings for Adaptive Reuse in New Zealand', *The University of Auckland Business School Research Paper Series, Forthcoming, Cities*, vol. 102, p. 102756.

American Alliance of Museums 2024, *Welcome to TrendsWatch*, viewed 17-Dec-2024, https://www.aam-us.org/2024/01/16/welcome-to-trendswatch-2/.

Arts Management & Technology Laboratory 2019a, *Case Study II: Digital Engagement and Experience Design*, viewed 10-Dec-2024, https://amt-lab.org/blog/2019/10/case-study-ii-digital-engagement-and-experience-design.

Arts Management & Technology Laboratory 2019b, *They Hybrid Museum Experience: Case Studies in Digital Engagement and Experience Design*, viewed 10-Dec-2024, https://amt-lab.org/blog/2019/9/the-hybrid-museum-experience-case-studies-in-digital-engagement-and-experience-design-in-the-museum-space.

BC Museums Association 2023, *BCMA 2023 Sector Survey | Salary Report*, n.d., viewed 17-Dec-2024, https://museum.bc.ca/brain/bcma-2023-sector-survey-salary-report/.

Brand, S 1995, *How Buildings Learn: What happens after they're built*, Viking Penguin, New York.

National Building Code - 2023 Alberta Edition 2023 (Canada), s.

Canadian Museums Association 2016, *National Compensation Survey Results 2016 Edition*, viewed 17-Dec-2024.

Canadian Museums Association 2024, *YCW Wage Guide*, October 2024, viewed 17-Dec-2024, https://www.museums.ca/site/aboutthecma/careersheritageycw/ycwp/wage_guide.

City of Leduc 2021, *City of Leduc Cultural Development Plan*, viewed 15-Dec-2024,

City of Leduc 2023, *Strategic Plan 2023-2026*, viewed 15-Dec-2024,

City of Toronto 2016, *Distillery District Heritage Conservation Study*, viewed 10-Nov-2024,

Elevate the Path 2024, *What We Heard: Engagement & Consultation Report*, viewed 17-Dec-2024.

Elshaer, IA, Fayyad, S, Ammar, S, Abdulaziz, TA & Mahmoud, SW 2022, 'Adaptive reuse of heritage houses and hotel conative loyalty: Digital technology as a moderator and memorable tourism and hospitality experience as a mediator', *Sustainability*, vol. 14, no. 6, pp. 1-13.

EM Museum Consulting 2024, *Heritage Trends and Benchmarking Report: An evaluation of sustainability, operational models, and best practices for heritage management at Dr. Woods' House Museum*, viewed 17-Nov-2024.

Explore Edmonton 2021, *Tourism Master Plan: Edmonton 2021-2030*, viewed 18-Dec-2024,

Government of Alberta 2024a, *Consumer Price Index, Year-over-Year Percentage Change, Canada and Alberta*, 3-Oct-2024, viewed 15-Dec-2024, https://open.alberta.ca/opendata/consumer-price-index-year-over-year-percentage-change-canada-and-alberta.

Government of Alberta 2024b, *Historical sites and museums attendance: Visitor attendance for 18 historic sites and museums in Alberta*, 16-Dec-2024, viewed 16-Dec-2024, https://economicdashboard.alberta.ca/dashboard/historical-sites-and-museums-attendance/.

Government of Canada 2024a, *Labour Market Information Wage Report by Occupation*, viewed 29-Dec-2024, https://www.jobbank.gc.ca/wagereport/occupation.

Government of Canada 2024b, *Wages | Museum Technician in Canada*, 3-Dec-2024, viewed 17-Dec-2024, https://www.jobbank.gc.ca/marketreport/wages-occupation/16240/ca;jsessionid=05D462EF779092A671929B471EDEC760.jobsearch74.

Greco, S, Figueira, J & Ehrgott, M 2016, *Multiple Criteria Decision Analysis*, 2 edn, Springer Science + Business Media, New York.

Hager, MA & Brudney, JL 2004, *Volunteer Management Practices and Retention of Volunteers*, The Urban Institute Washington, DC.

Hester, PT & Velasquez, M 2013, 'An analysis of multi-criteria decision making methods mission creep view project systemic thinking view project an analysis of multi-criteria decision making methods', *International Journal of Operations Research*, vol. 10, no. 2, pp. 56-66.

Inflation Calculator 2024, *2023 CPI and Inflation Rates for Alberta*, 2024, viewed 15-Dec-2024, https://inflationcalculator.ca/2023-cpi-and-inflation-rates-for-alberta/.

Kury de Castillo, C 2024, ''It's the same as a cut': municipalities say infrastructure funding in Alberta budget falls short', *Global News*, 4-Mar-2024, viewed 17-Dec-2024,

https://globalnews.ca/news/10332251/its-the-same-as-a-cut-municipalities-say-infrastructure-funding-in-alberta-budget-falls-short-of-needs/.

Shipley, R, Utz, S & Parsons, M 2006, 'Does adaptive reuse pay? A study of the business of building renovation in Ontario, Canada', *International journal of heritage studies*, vol. 12, no. 6, pp. 505-520.

Tang, D 2024, 'Operational Efficiency Strategy for Small Historical Museum in Cultural Tourism', *Flevy.com*, viewed 17-Dec-2024, https://flevy.com/topic/competitive-assessment/case-operational-efficiency-strategy-small-historical-museum-cultural-tourism.

Taylor, K & Verdini, G 2021, *Management planning for cultural heritage: Places and their significance*, Routledge, Oxon.

Vafaie, F, Remøy, H & Gruis, V 2023, 'Adaptive reuse of heritage buildings: A systematic literature review of success factors', *Habitat International*, vol. 142, pp. 1-18.

van Vliet, E. Interviewed by Erin McDonald. 31 October 2024, Edmonton.

Appendix A: Detailed Scoring and Weighting Methodology

A.1 Overview

This appendix outlines the evaluation framework used to assess the potential Dr. Woods' House Museum (DWHM) operational models. This methodology integrates insights from Deliverables A and B, with adaptive reuse success factors from Aigwi et al. (2020) and Vafaie, Remøy and Gruis (2023). It also incorporates strategic priorities identified in the City of Leduc's Cultural Development Plan (City of Leduc 2021). This integration ensures the evaluation reflects academic best practices and the community's vision for cultural sustainability, inclusivity, and identity.

A.2 Scoring Framework

The evaluation focuses on five critical success factors, each weighted according to its significance for achieving DWHM's strategic objectives. These factors draw from benchmarking data, academic research, and community consultations, creating a balanced and robust assessment framework. Table A1 outlines the criteria, weights, and their theoretical and strategic links. This structured framework aligns DWHM's evaluation with best practices while incorporating insights from Deliverables A and B, academic literature, and community feedback. The following section will detail the scoring and weighting methodology for these criteria.

Table A1: Scoring Framework

Criterion	Weight (%)	Definition	Link to Academic Literature
Economic Sustainability	30%	The ability to maintain financial viability through revenue diversification and cost efficiency.	Property value, operational savings, and self-sustenance (Aigwi et al. 2020), fostering cultural tourism (City of Leduc 2021)
Heritage Preservation	25%	Capacity to preserve cultural authenticity and historical integrity while enabling adaptive reuse.	Authenticity, material reversibility, and minimum intervention (Vafaie, Remøy & Gruis 2023), conserving cultural assets (City of Leduc 2021).
Socio-Cultural Aspects	20%	Effectiveness in fostering public interest, inclusive programming, and community attachment.	Shared identity (Aigwi et al. 2020), inclusivity (Vafaie, Remøy & Gruis 2023), cultural pride (City of Leduc 2021)
Building Usability	15%	Functional adaptability of the building for current and future uses, balancing modern needs with historical context.	Infrastructure adaptability (Vafaie, Remøy & Gruis 2023), leveraging heritage spaces (City of Leduc 2021).
Regulatory Compliance	10%	Adherence to legal, zoning, and safety requirements while addressing heritage protection mandates.	Legal compliance (Aigwi et al. 2020), alignment with cultural policies (City of Leduc 2021).

Source: Developed for this report from Aigwi et al. (2020); City of Leduc (2021); Vafaie, Remøy and Gruis (2023)

A.2.1 Economic Sustainability

Economic sustainability ensures the long-term viability of heritage sites by diversifying revenue sources and managing financial resources effectively. This criterion emphasizes reducing

dependency on single funding streams, such as municipal grants, and adopting innovative revenue models, including events, partnerships, and retail operations.

Key Metrics

- Percentage of self-generated revenue.
- Long-term cost projections for maintenance and programming.

Rationale

Successful heritage projects like Rutherford House demonstrate the importance of combining rental income, programming fees, and public funding for financial stability (Elshaer et al. 2022, p. 10; Shipley, Utz & Parsons 2006, pp. 510-513).

A.2.2 Heritage Preservation

Preserving heritage sites' cultural and architectural integrity is a cornerstone of operational success (Aigwi et al. 2020). This criterion evaluates how well a model maintains historical authenticity while adapting to contemporary uses.

Key Metrics

- Compliance with heritage preservation standards.
- Stakeholder perceptions of cultural value preservation.

Rationale

Research highlights that adaptive reuse projects succeed when they maintain core heritage elements while incorporating contemporary functionality (Vafaie, Remøy & Gruis 2023, pp. 3-6). For instance, Stephansson House prioritizes preservation but struggles with modern engagement flexibility, a lesson directly applicable to DWHM.

A.2.3 Socio-Cultural Engagement

Socio-cultural engagement reflects the model's ability to connect with the community and foster participation through inclusive programming and events.

Key Metrics

- Diversity of cultural programs offered.
- Percentage of local community involvement in governance and operations.

Rationale

Deliverable B highlighted the community's desire for accessible, inclusive programming that reflects Leduc's diverse population. Community-driven models like Bison Lodge excel at engaging local stakeholders but require structural support for scalability (Deliverable B, pp. 8-12).

A.2.4 Building Usability

Building usability assesses how well the museum's physical space supports operational efficiency and adaptability to future needs. This criterion evaluates current infrastructure and the feasibility of upgrades or retrofits.

Key Metrics

- Functional adaptability for events, exhibits, and rentals.

- Costs associated with retrofitting or infrastructure improvements.

A.2.5 Regulatory Compliance

This criterion evaluates how well an operational model adheres to local, provincial, and federal regulations while maintaining flexibility to meet emerging compliance standards.

Key Metrics

- Alignment with municipal zoning and heritage bylaws.
- Readiness to address future regulatory changes (e.g., accessibility requirements.

Rationale

Regulatory challenges are a recurring issue for adaptive reuse projects, particularly in meeting modern accessibility and safety standards without compromising historical integrity (Shipley, Utz & Parsons 2006, pp. 508-510).

A.3 Scoring Rubric

The scoring rubric evaluates the performance of operational models against each criterion. Scores are assigned on a 1–5 scale, reflecting the degree to which a model addresses the criterion.

Economic Sustainability (30%)

1	2	3	4	5
Does not meet expectations	Minimally meets expectations	Adequately meets expectations	Exceeds expectations	Significantly exceeds expectations
Revenue generation is minimal, and the model relies heavily on municipal or external funding without diversification. Maintenance and programming costs exceed financial capacity.	Limited revenue generation with some effort to diversify funding, but financial sustainability remains fragile. Costs are inconsistently managed, causing periodic deficits.	Adequate revenue generation with balanced funding streams, including municipal, grant, and self-generated income. Maintenance and programming costs are covered without significant financial strain.	Revenue streams are diversified, with consistent income from events, rentals, and partnerships reducing dependency on external funding. Maintenance and operational costs are met with surpluses for reinvestment.	Exceptional revenue diversification supports operational innovation and long-term stability. Costs are consistently managed, and significant self-generated surplus funding is reinvested into heritage preservation and programming.

Heritage Preservation (25%)

1	2	3	4	5
Does not meet expectations	Minimally meets expectations	Adequately meets expectations	Exceeds expectations	Significantly exceeds expectations
Heritage elements are neglected, with	Minimal preservation	Heritage elements are preserved	Strong preservation	Preservation efforts significantly

little compliance with preservation standards. Cultural and historical authenticity is significantly compromised.	efforts meet basic standards but fail to prioritize the cultural and architectural integrity of the site.	adequately, complying with preservation standards and basic alignment to community expectations.	practices ensure compliance with all standards and actively maintain cultural authenticity while incorporating adaptive reuse.	exceed standards, safeguarding heritage integrity while integrating innovative adaptive reuse that enhances community engagement.

Socio-Cultural Engagement (20%)

1	2	3	4	5
Does not meet expectations	Minimally meets expectations	Adequately meets expectations	Exceeds expectations	Significantly exceeds expectations
Community engagement is minimal, with limited programming that fails to address diverse audiences or needs. Participation and stakeholder involvement are negligible.	Programming is sporadic and lacks inclusivity, attracting limited community participation. Stakeholder involvement is present but inconsistent.	Community programming is adequately inclusive and attracts consistent participation across diverse audiences. Stakeholder involvement meets basic expectations.	Inclusive, dynamic programming engages diverse community groups, with active stakeholder partnerships driving consistent participation.	Programming is highly inclusive and innovative, fostering deep community connections. Robust stakeholder partnerships drive exceptional engagement across all demographics.

Building Usability (15%)

1	2	3	4	5
Does not meet expectations	Minimally meets expectations	Adequately meets expectations	Exceeds expectations	Significantly exceeds expectations
The physical space is poorly adapted, limiting operational efficiency and visitor accessibility. Retrofitting costs are prohibitively high or impractical.	The space has limited usability, with minimal operational efficiency or adaptability for future programming. Retrofitting is feasible but costly.	The space is adequately usable, supporting current programming needs with manageable retrofitting costs. Accessibility meets basic standards.	The space is efficiently designed, allowing for flexible programming and improved accessibility with minimal retrofitting required.	The space is fully optimized, supporting diverse and dynamic programming with excellent accessibility and minimal maintenance costs.

Regulatory Compliance (10%)

1	2	3	4	5
Does not meet expectations	Minimally meets expectations	Adequately meets expectations	Exceeds expectations	Significantly exceeds expectations
The model fails to meet critical regulatory requirements, resulting in significant operational risks.	Compliance is minimal, meeting only the basic regulatory standards. Potential risks from emerging requirements are high.	The model meets regulatory requirements adequately, ensuring safe and lawful operations. Risks from emerging requirements are manageable.	Compliance exceeds current standards, ensuring proactive alignment with anticipated regulatory changes.	The model is fully compliant, with exceptional alignment to current and emerging standards, showcasing leadership in accessibility and sustainability practices.

A.4 Weighted Scoring Methodology

The evaluation uses a Multi-Criteria Decision Analysis (MCDA) approach (Greco, Figueira & Ehrgott 2016), ensuring transparency and objectivity in the scoring process. Scores for each criterion are multiplied by their respective weights, and the total weighted score is the sum of these calculations. This method quantifies the relative alignment of each operational model with DWHM's goals.

A.4.1 Example Calculation

For a hypothetical model, the following scores are assigned:

Criterion	Score	Weight (%)	Weighted Score
Economic Sustainability	4	30%	1.20
Heritage Preservation	3	25%	0.75
Socio-Cultural Engagement	4	20%	0.80
Building Usability	3	15%	0.45
Regulatory Compliance	5	10%	0.50
Total Weighted Score			**3.70**

A.5 Validation of Framework

The evaluation framework aligns with best practices for heritage adaptive reuse, ensuring it addresses the unique challenges and opportunities for DWHM. (Aigwi et al. 2020)emphasize the interdependence of factors such as financial sustainability and community engagement, underscoring the importance of a balanced and nuanced approach. This methodology provides a robust foundation for the cost and feasibility analysis in Section 4 and risk mitigation strategies in Section 5.

Refer to Appendix B for detailed scores for each criterion for each operational model.

Appendix B: Detailed Scores by Operational Model

This appendix provides a detailed account of the scores assigned to each operational model, including strengths, challenges, and the rationale for each criterion. These detailed breakdowns complement the summary presented in Section 3 and align with the evaluation framework described in Appendix A.

Table B.1: Scoring Breakdown for Municipal Oversight Model

Criterion	Strengths	Challenges	Score (1–5)	Weighted Score	Rationale
Economic Sustainability (30%)	- Reliable municipal funding covers core costs.	- Heavy reliance on municipal funding. - Lack of diversified income sources (e.g., partnerships, rentals)	**3**	**0.90**	Stable municipal funding ensures cost recovery but limits opportunities for diversified revenue generation, as municipal models often prioritize compliance over (Aigwi et al. 2020).
Heritage Preservation (25%)	- Mandated preservation under the Municipal Historic Resources Act. - Consistent maintenance practices. - Alignment with Leduc's Cultural Plan.	- Bureaucratic constraints impacting adaptive reuse potential. - Risk of bureaucratic delays in responding to preservation needs.	**3**	**0.75**	Preservation practices meet standards but lack the flexibility to integrate innovative adaptive reuse strategies as described by (Vafaie, Remøy & Gruis 2023)
Socio-Cultural Engagement (20%)	- Aligns with Leduc's Cultural Development Plan. - Stable funding supports consistent programming. - Potential for professional staff.	- Risk of bureaucratic and risk-averse programming. - Limited grassroots innovation and diverse audience engagement.	**3**	**0.60**	Programming aligns with municipal goals and provides stability but lacks the flexibility and inclusivity seen in community-driven or hybrid models.
Building Usability (15%)	- Consistent maintenance ensures operational functionality. - Compliance with safety and accessibility regulations. - Potential access to municipal funding for retrofitting.	- Limited adaptability for modern needs. - Bureaucratic delays in infrastructure upgrades.	**3**	**0.45**	Building meets baseline usability and accessibility standards but lacks proactive adaptations for diverse programming or future needs.
Regulatory Compliance (10%)	- Adherence to the Municipal Historic Resources Act. - Consistent compliance with safety and accessibility standards. - Predictable municipal funding for regulatory needs.	- Bureaucratic delays may reduce responsiveness. - Focus on meeting minimum standards without exceeding expectations.	**4**	**0.40**	Strong adherence to all legal requirements with municipal oversight ensuring compliance, but limited evidence of exceeding standards or innovation.
				3.10	**Total Weighted Score**

Source: Developed for this report from (AB 2022; Aigwi et al. 2020; City of Leduc 2021; Elevate the Path 2024; EM Museum Consulting 2024)

Table B.2: Scoring Breakdown for Third-Party NFP Operational Model

Criterion	Strengths	Challenges	Score (1–5)	Weighted Score	Rationale
Economic Sustainability (30%)	- Potential for revenue diversification through grants and events. - Community-driven initiatives like "Teas" and memory kits. - Access to broader grant opportunities.	- Reliance on external grants and volunteers introduces financial instability and fragility. - Limited capacity for reinvestment.	**2**	**0.60**	Revenue potential exists, but reliance on unstable funding sources and volunteer efforts introduces variability, creating financial instability that limits long-term planning.
Heritage Preservation (25%)	- Community-driven commitment to preservation. - Basic maintenance ensured site functionality.	- Lack of professional expertise limited best practices in preservation. - Minimal adaptive reuse or modernization efforts.	**2**	**0.50**	While community commitment may ensure basic maintenance, the lack of professionalism and adaptive reuse innovation hinders preservation excellence.
Socio-Cultural Engagement (20%)	- Community-driven programming can reflect local values. - Volunteer-led efforts can foster community attachment.	- Reliance on volunteers limits reliability, scalability and innovation. - Inconsistent audience reach and limited inclusivity in programming.	**3**	**0.60**	Volunteer-driven efforts promote localized engagement but lack the scalability and inclusivity required to attract diverse audiences consistently.
Building Usability (15%)	- Consistent basic maintenance ensures operational functionality. - Volunteers creatively use space for programming.	- Lack of resources for retrofitting or modernization. - No proactive optimization for diverse or future programming needs.	**2**	**0.30**	Building usability meets basic operational needs but lacks the capacity for significant adaptations to align with modern programming or community expectations.
Regulatory Compliance (10%)	- Adherence to Municipal Historic Resource designation. - Basic safety and zoning requirements met.	- Reliance on municipal funding for compliance. - Limited proactive capacity to address emerging regulatory standards.	**3**	**0.30**	Basic compliance ensures operational legitimacy, but gaps in expertise and reliance on municipal intervention limits opportunities to exceed standards.
				2.30	**Total Weighted Score**

Source: Developed for this report from (Aigwi et al. 2020; City of Leduc 2021; Elevate the Path 2024; EM Museum Consulting 2024)

Table B.3: Evaluation of Third-Party For-Profit Operational Model

Criterion	Strengths	Challenges	Score (1–5)	Weighted Score	Rationale
Economic Sustainability (30%)	- Strong focus on revenue diversification through tourism, retail, and events. - Operational efficiency drives profitability. - Potential for innovative adaptive reuse strategies.	- Profit-driven focus may deprioritize heritage goals. - Dependency on market success introduces financial risks. - Reduced access for underserved audiences.	**4**	**1.20**	Diversified revenue streams and operational efficiency support financial sustainability, though profit-driven priorities may compromise heritage goals.
Heritage Preservation (25%)	- Adaptive reuse integrates modern uses with heritage preservation. - Access to professional expertise ensures compliance.	- Profit-driven focus may deprioritize long-term preservation. - Risk of over-commercialization detracting from authenticity.	**3**	**0.75**	Adaptive reuse aligns with preservation goals but risks being deprioritized in favor of commercial interests, as noted in comparable sites like the Distillery District (City of Toronto 2016).
Socio-Cultural Engagement (20%)	- Innovative programming attracts diverse audiences. - Broader reach through tourism, retail, and events.	- Focus on profit may reduce inclusivity. - Reduced emphasis on local identity and cultural relevance. - Accessibility barriers from high costs.	**3**	**0.60**	Models show programming is innovative and broad-reaching but can lack the inclusivity and local focus needed for deep community attachment.
Building Usability (15%)	- Strong focus on adaptive reuse maximizes functionality. - Capital availability supports infrastructure upgrades. - Multi-use spaces attract diverse purposes.	- Risk of over-commercialization reducing heritage focus. - Potential misalignment between revenue goals and historic integrity and alignment with Municipal Historic Resource designation.	**4**	**0.60**	Building usability is highly adaptable and functional for modern uses, though heritage-focused programming may be deprioritized for profitability.
Regulatory Compliance (10%)	- Professional expertise ensures compliance. - Incentives to maintain public reputation and operational safety. - Alignment with the Municipal Historic Resources Act.	- Profit-driven focus may deprioritize exceeding standards. - Potential for cost-saving shortcuts in emerging compliance trends.	**3**	**0.30**	While compliance is typically achieved, profit-oriented models may deprioritize emerging regulatory needs, posing long-term risks (Vafaie, Remøy & Gruis 2023)
				3.45	**Total Weighted Score**

Source: Developed for this report from (Aigwi et al. 2020; City of Leduc 2021; City of Toronto 2016; Elevate the Path 2024; EM Museum Consulting 2024)

Table B.4: Evaluation of Hybrid Operational Model 1: Municipal-Contractor Partnership

Criterion	Strengths	Challenges	Score (1–5)	Weighted Score	Rationale
Economic Sustainability (30%)	- Municipal oversight ensures core cost recovery. - Contractors provide revenue flexibility through events and rentals.	- Financial performance depends on contractor capabilities. - Lack of long-term financial planning integration.	**4**	**1.20**	Financial stability is supported by municipal funding, but reliance on contractor-driven revenue generation adds variability.
Heritage Preservation (25%)	- Municipal standards ensure baseline compliance. - Contractors bring site-specific adaptive reuse opportunities.	- Contractor expertise and focus on preservation vary. - Role delineation challenges may lead to inconsistent preservation efforts.	**3.5**	**0.88**	Preservation is effective but risks variability due to contractor expertise and prioritization differences.
Socio-Cultural Engagement (20%)	- Contractors foster localized and innovative programming tailored to community needs. - Strong potential for grassroots engagement.	- Misalignment between stakeholders may dilute impact. - Reliance on contractor initiative could limit consistency. - Limited inclusivity if contractors focus on niche audiences.	**4**	**0.80**	Contractor innovation fosters localized engagement but requires robust municipal oversight to ensure inclusivity and alignment with community priorities
Building Usability (15%)	- Contractors bring creative, site-specific adaptations. - Municipal oversight ensures maintenance and safety standards.	- Governance delays can hinder infrastructure upgrades. - Coordination challenges limit proactive improvements. - Potential conflicts between preservation and modern functionality. - Limited autonomy for contractors.	**4**	**0.60**	Site-specific adaptations improve usability, but governance complexity may delay broader improvements or retrofits.
Regulatory Compliance (10%)	- Municipal oversight ensures adherence to core regulations. - Contractors may bring additional compliance expertise.	- Split responsibilities risk delays in addressing emerging compliance requirements. - Governance complexity hinders alignment.	**3.5**	**0.35**	Split governance responsibilities create potential delays in regulatory responses, underscoring the need for clear accountability
				3.83	**Total Weighted Score**

Source: Developed for this report from (Aigwi et al. 2020; City of Leduc 2021; Elevate the Path 2024; EM Museum Consulting 2024)

Table B.5: Evaluation of Hybrid Operational Model 2: Unified Heritage Operator

Criterion	Strengths	Challenges	Score (1–5)	Weighted Score	Rationale
Economic Sustainability (30%)	- Unified management improves resource efficiency. - Diversified revenue streams span multiple sites. - Stable municipal funding ensures core cost recovery.	- Initial transition costs may strain budgets. - Complexity in coordinating income streams across sites. - Heavy reliance on municipal support.	**4.5**	**1.35**	Resource sharing across multiple sites enhances financial resilience and reduces redundancy, aligning with adaptive reuse efficiencies
Heritage Preservation (25%)	- Centralized standards ensure consistency. - Professional expertise supports high-quality preservation. - Integrated planning allocates resources strategically.	- Resource allocation tensions may deprioritize some sites. - Standardization risks reduced site-specific flexibility. - Governance delays hinder response time.	**4**	**1.00**	Strong preservation strategies ensure consistency and quality, though challenges include site-specific flexibility and prioritization conflicts.
Socio-Cultural Engagement (20%)	- Unified programming ensures consistent quality. - Strong partnerships enhance audience diversity. - Municipal oversight aligns with community priorities.	- Over-standardization may limit site-specific engagement. - Centralized management risks alienating grassroots connections at individual sites and for niche communities. - Governance complexity may dilute impact.	**3.5**	**0.70**	Programming consistency and alignment with community priorities are strengths, but site-specific engagement and inclusivity could be better addressed.
Building Usability (15%)	- Centralized planning supports strategic retrofitting. - Flexible programming encourages diverse space use. - Maintenance standards upheld through municipal funding.	- Resource allocation tensions create uneven site upgrades. - Bureaucratic delays hinder timely improvements. - Standardization limits adaptability for unique site needs.	**4**	**0.60**	Strategic retrofitting enhances usability across sites, though resource allocation tensions could create disparities in infrastructure upgrades.
Regulatory Compliance (10%)	- Municipal oversight ensures adherence to regulations. - Centralized management streamlines compliance efforts. - Professional expertise supports proactive adherence.	- Governance delays may hinder responses to emerging regulations. - Resource prioritization could lead to gaps at some sites. - Heavy reliance on municipal resources for compliance funding.	**4**	**0.40**	Strong regulatory compliance is consistently achieved through centralized management and municipal oversight, but challenges exist in governance efficiency.
				4.05	**Total Weighted Score**

Source: Developed for this report from (Aigwi et al. 2020; City of Leduc 2021; Elevate the Path 2024; EM Museum Consulting 2024)

Appendix C: Assumptions for Cost Analysis

This appendix outlines the key assumptions used to evaluate the cost of operational models for the Dr. Woods' House Museum (DWHM). These assumptions are based on historical financial records, benchmarking data from comparable sites, stakeholder feedback from Deliverable B, and sector best practices.

C.1 General Assumptions

1. **Planning Horizon:** The analysis assumes a five-year operational period for financial projects. A five-year operational period for financial projections is a standard practice in cultural heritage management (Taylor & Verdini 2021) and aligns with the strategic planning cycles of the City of Leduc (City of Leduc 2021, 2023).

2. **Inflation Rate**: Operational and maintenance costs are adjusted for a conservative annual inflation rate of 2.5%, in line with historical averages in Alberta (Government of Alberta 2024a; Inflation Calculator 2024).[1]

3. **Visitor Attendance**:

    - Baseline Attendance: Estimated at 1,400-2,100 visitors annually, extrapolated from benchmarks (Government of Alberta 2024b)[2].

    - **Growth Projections:** Hybrid models are assumed to increase attendance by 10-20% due to enhanced programming and marketing. Implementing digital engagement tools (Arts Management & Technology Laboratory 2019b), interactive experiences (Arts Management & Technology Laboratory 2019a), and targeted marketing strategies has led to significant increases in visitor numbers across different institutions (American Alliance of Museums 2024; Tang 2024).

4. **Economic Context**: The models reflect current economic conditions in Alberta, including municipal budget constraints (Kury de Castillo 2024) and community interest in heritage preservation (Elevate the Path 2024).

C.2 Cost Assumptions

C.2.1 Operational Costs

1. **Municipal Oversight**
   Annual Costs: $100,000-$130,000
   Historical financial records from LDHS operations show annual total expenditures of $37,643.60 (2017), $40,455.00 (2019) and $40,988.11 (2021). Adjusted for inflation (2.5%

[1] Note: Inflation rates are subject to change due to various economic factors. Regular updates from authoritative sources like Statistics Canada and Alberta's official publications should be consulted to ensure projections remain accurate.

[2] Visitor attendance for Dr. Woods' House Museum (DWHM) is estimated based on the average visitor numbers for Rutherford House (3,986 visitors) and Stephansson House (1,708 visitors) in 2024, as reported by Alberta Historical Sites and Museums. Assuming DWHM operates on a smaller scale with fewer resources, its attendance is estimated at 50–75% of the average for these sites, resulting in an estimated range of 1,400–2,100 visitors annually (Government of Alberta 2024b).

per year) (Government of Alberta 2024a), these costs exclude the part-time employees historically funded by LDHS. Operational cost projections now reflect a professional staffing structure.

- Staffing: 1–2 FTE positions ($65,000–$85,000 annually).
- Part-Time Staffing: Seasonal staff support ($5,000–$10,000 annually).
- Maintenance & Utilities: Core operational expenses, including utilities, insurance, and basic maintenance ($30,000–$35,000 annually).
- Programming: Minimal expenses for supplies and incidental event costs ($5,000–$75,000 annually).

This model relies on stable municipal funding, ensuring predictable operations while minimizing reliance on external grants or fundraising, though some wage subsidy opportunities exist through government programs.

2. **Third-Party Not-for-Profit**
   Annual Costs: $72,500-$99,500
   This volunteer-driven model leverages community engagement while maintaining a baseline of professional staffing. Key cost components include:

   - Staffing: 0.5–1 FTE ($30,000–$50,000 annually).
   - Volunteer Management: Coordination costs ($7,500 annually).
   - Maintenance & Utilities: Consistent with LDHS historical records ($30,000–$35,000 annually).
   - Programming: Minimal costs aligned with baseline programming efforts ($5,000-$7,000)

   Although cost-efficient, this model faces potential variability due to the reliance on grants, donations, and volunteers, which can introduce financial and operational instability.

3. **Third-Party For-Profit**
   Annual Costs: $125,000-$175,000
   For-profit models focus on operational efficiency and revenue generation while maintaining professional staffing levels. Key cost components include:

   - Staffing: 1–2 FTE ($80,000–$120,000 annually).
   - Programming & Marketing: Enhanced public engagement efforts ($15,000–$20,000 annually).
   - Maintenance & Utilities: Consistent with Municipal Oversight projections ($30,000–$35,000 annually).

   For-profit models balance higher staffing and marketing costs with potential for diversified revenue streams. Risks include market dependency and reduced emphasis on heritage preservation.

4. **Hybrid Models**

   Hybrid Model 1: Contractor-Based Approach
   Annual Costs: $90,000-$135,000
   This model integrates municipal oversight with contracted expertise to manage specific programs and events. Cost assumptions include:
   - Staffing: 0.5–1 FTE ($50,000–$85,000 annually), plus contractor fees.
   - Programming Expansion: Scalable programming costs ($10,000–$15,000 annually).
   - Maintenance & Utilities: Comparable to Municipal Oversight ($30,000–$35,000 annually).
   - Volunteer Engagement: 200–300 hours annually, supporting event logistics and basic operations.

   Hybrid Model 2: Unified Heritage Operator
   Annual Costs: $135,000-$195,000
   This model centralizes operations under a unified management framework supported by part-time staff and strategic volunteer engagement.

   - Staffing: 1.5–2.5 FTE supported by part-time staff and strategic volunteer engagement ($90,000–$140,000 annually), plus contractor fees.
   - Programming Expansion: Scalable programming costs ($15,000–$20,000 annually).
   - Maintenance & Utilities: Comparable to Municipal Oversight ($30,000–$35,000 annually).
   - Volunteer Engagement: 300–500 hours annually, supporting event logistics and basic operations.

C.2.2 Capital Investments

1. **Minimal retrofitting costs for Municipal Oversight and Third-Party NFP models**
   Estimated Costs: $5,000-$10,000 annually for essential maintenance and compliance updates.
   These models emphasize preservation of the building's historical integrity while ensuring operational functionality. Maintenance costs align with historical records from LDHS showing annual expenditures of $530–$1,500, adjusted for inflation.

2. **Hybrid and For-Profit Models**
   Estimated Costs: $15,000-$35,000 for upfront investments in adaptive reuse or space optimization[3].

   Hybrid Models: Investments may include converting basement spaces for improved storage and access, upgrading public-facing areas for flexibility in programming,

[3] Estimates for improvements are based on historical expenditures from LDHS financial records (2017–2019), adjusted for inflation. Adaptive reuse benchmarks for small heritage sites indicate costs of $10–$25 per square foot, depending on the complexity of retrofitting (Aigwi et al. 2020; Canada 2023).

enhancements to outdoor spaces for rentals, and enhancing accessibility (e.g., ramps or an accessible bathroom). Expanded use cases increase costs compared to maintenance-only models.

For-Profit Models: Investments prioritize revenue-driven infrastructure upgrades, such as multi-use retail or event spaces. Initial costs are higher but reflect potential revenue benefits from diverse audiences.

C.2.3 Programming Costs

1. **Baseline Programming Costs (Municipal Oversight and Third-Party NFP Models)**
   Estimated Costs: $5,000-$7,000 annually
   Historical LDHS records suggest negligible direct programming expenditures. Costs for these models will primarily reflect minimal expenses for supplies, incidental fees for basic event programming, and incremental expansion efforts. These assumptions align with limited growth potential based on volunteer-led efforts and constrained municipal or external funding.
2. **Enhanced Programming Costs (Hybrid and For-Profit Models)**
   Estimated Costs: $10,000-$20,000 annually.
   Hybrid and For-Profit models emphasize scalable programming to enhance visitor engagement and revenue. These costs reflect:
   - Investment in professional expertise for program design and delivery.
   - Marketing and public engagement for event promotion.
   - Development of diversified programming (e.g., workshops, rentals, collaborations with local businesses).

   The higher investment mirrors expanded program offerings and potential revenue growth opportunities.

C.3 Revenue Assumptions

C.3.1 Revenue Streams

1. **Municipal Oversight**
   Estimated Revenue: $5,000-$7,000 annually from events and limited self-generated income.
   Historical LDHS records (2017–2021) indicate limited self-generated revenue from events such as teas, cookbook sales, and memory kits, typically between $2,000 and $3,500 annually. Adjusted for inflation and modest growth potential under municipal oversight, revenue from events is estimated at $5,000–$7,000 annually. Reliance on municipal funding remains high at 70–80%, consistent with sector norms for small municipal museums in Alberta (Deliverable A).

2. **Third-Party Not-for-Profit**
   Estimated Revenue: $10,000-$12,000 annually from grants, fundraising, and event rentals.
   LDHS financial records reflect reliance on grants (e.g., Alberta Museums Association) and fundraising efforts, with self-generated revenue contributing between $4,000 and $6,000 annually. Adjusted for potential grant availability and increased fundraising efforts, the total

revenue estimate is $10,000–$12,000 annually. This assumes variability in grant success and fundraising, as noted in past LDHS operations.

3. **Third-Party For-Profit**
   Estimated Revenue: $25,000-$35,000 annually.
   For-profit models emphasize revenue generation through retail, tourism, and event rentals, leveraging the commercial adaptability of heritage spaces. Leduc's proximity to Edmonton International Airport and major attractions, such as the Leduc Recreation Centre, positions it well within regional tourism strategies, creating opportunities for heritage and cultural tourism (City of Leduc 2021; Explore Edmonton 2021). Adaptive reuse models, such as Toronto's Distillery District, demonstrate the potential of multi-use spaces to generate significant revenue through events like weddings, corporate functions, and cultural festivals (City of Toronto 2016). Explore Edmonton's Tourism Master Plan (2021) underscores the value of experiential and cultural tourism, projecting increases in visitor spending that can be mirrored through partnerships and enhanced programming at the Dr. Woods' House Museum. Retail and event rentals are projected to contribute $15,000–$25,000 annually, while additional income from experiential programming, local business collaborations, and targeted marketing could generate an additional $10,000. Revenue estimates of $25,000–$35,000 annually align with regional trends and adaptive reuse benchmarks, offering a reliable foundation for the model's feasibility, though success depends on strategic partnerships and effective visitor engagement.

4. **Hybrid Models**
   Estimated Revenue: $20,000-$30,000 annually from balanced revenue streams, including self-generated income.
   Hybrid models combine municipal funding (40–50%) with self-generated revenue, emphasizing a balanced financial sustainability and community engagement approach. Expanded programming, event rentals, and community partnerships can significantly enhance revenue potential (City of Leduc 2021; Explore Edmonton 2021). Adaptive reuse strategies, such as outdoor spaces for seasonal events or collaborations with local businesses for cultural programming, could generate $15,000–$25,000 annually from events, rentals, and retail opportunities. At the same time, partnerships with tourism operators and schools may contribute an additional $5,000. The estimate reflects a comprehensive understanding of hybrid model capabilities, balancing municipal support with scalable income sources while retaining flexibility for diverse operational goals.

C.3.2 Admission Fees

- **Estimated Range:** $5-$10 per visitor, consistent with practices at regional heritage sites and small museums.
  Admission fees are benchmarked against comparable small museums in Alberta, including data from the CARMN survey (EM Museum Consulting 2024). Findings indicate that many small museums within the CARMN network adopt flexible approaches to admission, with a mix of free entry, donation-based models, and modest fees ranging from $5 to $10 per visitor

C.4 Scalability and Growth Assumptions

C.4.1 Programming Expansion

- **Hybrid Models**
  Assumption: Hybrid operational models can introduce 2-3 new programs annually, focusing on diverse programming to enhance community engagement and generate additional revenue.

  Deliverable B highlighted the community's preference for dynamic and inclusive programming tailored to Leduc's cultural landscape. Insights from hybrid models discussed in Deliverable A show that expanded programming typically increases visitor numbers and revenue. For example, hybrid models like Rutherford House successfully diversified programming with seasonal events and educational tours, leading to increased engagement.

- **For-Profit Model**
  Assumption: For-profit operators will likely maximize available space for retail, tourism, and events, aligning with revenue-driven goals.

  Adaptive reuse literature (Aigwi et al. 2020) highlights how commercial operators prioritize multi-use spaces to attract a broad audience. Case studies of the Distillery District (City of Toronto 2016) and similar sites demonstrate the economic viability of using heritage spaces for events and retail. For-profit models emphasize cost efficiency and revenue generation, leveraging spaces for weddings, corporate events, and tourism-related activities.

C.4.2 Volunteer Availability

- **Third-Party NFP** models rely heavily on volunteers for daily operations, programming, and fundraising. However, research in nonprofit management shows that volunteer turnover in small organizations often ranges between 10% and 15% annually due to personal commitments, age-related attrition, and lack of organizational support (Hager & Brudney 2004).

- Volunteer-led heritage organizations often depend on a small, dedicated pool of individuals for operational stability. Deliverable B highlighted concerns from stakeholders regarding the sustainability of volunteer-driven operations, citing limited recruitment opportunities and burnout risks.

- Smaller museums, particularly those in rural or mid-sized communities, face higher risks of burnout due to the limited availability of skilled volunteers and the increasing complexity of heritage management tasks (EM Museum Consulting 2024).

C.4.3 Partnerships

- Hybrid operational models are projected to establish 2–3 new partnerships annually with local businesses, schools, or cultural organizations to enhance programming, expand audience reach, and share resources.

- Deliverable A identifies the value of partnerships in successful hybrid models like Rutherford House, which leveraged collaborations with local schools, tourism operators, and cultural groups to expand programming and increase attendance.
- Stakeholders in Deliverable B emphasized the need for partnerships to foster inclusivity and share operational burdens, with specific interest in collaborations with local businesses for events and sponsorships.
- Studies on hybrid models (Aigwi et al. 2020) highlight partnerships as a critical success factor, particularly for programming diversification and funding support.
- Smaller museums and heritage sites frequently engage with community organizations to enhance visibility and share operational costs. For example, the CARMN survey noted partnerships as a strategy for mitigating resource constraints in rural heritage sites.

C.5 Assumed Staffing Needs

Staffing is a critical operational consideration for the Dr. Woods' House Museum (DWHM), influencing both cost and programming capacity. This section outlines assumed staffing needs for each operational model, balancing the likely middle ground between year-round and summer-season-only operations. This approach aligns with comparable heritage sites like Rutherford House and Stephansson House, which use a hybrid staffing model to address operational demands during peak and off-peak seasons.

Staffing assumptions are informed by the following:

- Benchmarks from similar heritage sites and historical operational data for DWHM (Deliverable A); and,
- Consultation feedback emphasizing community engagement and operational stability.

C.5.1 Key Assumptions

- Seasonal Variability: Operations are assumed to include consistent activity throughout the year with increased demand during peak tourist and programming seasons (May–September).
- Volunteer Contributions: Non-profit and hybrid models will rely on community volunteers to offset staffing costs, with reliance varying significantly by model. While volunteer-driven models foster strong community engagement, they introduce trade-offs such as potential burnout, skill gaps, and operational inconsistencies (Hager & Brudney 2004). Structured volunteer management and recruitment strategies are essential for sustainability.
- Cost Considerations: Staffing costs incorporate salary ranges for Alberta's heritage sector, with estimated hourly wages for part-time staff at $20–$25 and annual FTE costs (including benefits) at $50,000–$60,000 (BC Museums Association 2023; Canadian Museums Association 2024; Government of Canada 2024b). Contracted expertise costs are assumed at $35–$50 per hour, reflecting market rates for museum professionals, including curators and educators, as reported in the Canada Job Bank (Government of Canada 2024a).

Trade-Offs

Volunteer-heavy models (e.g., Third-Party NFP) emphasize community involvement but often lack operational consistency and scalability, particularly for specialized programming. Hybrid and for-profit models reduce reliance on volunteers by incorporating professional staff and contracted expertise, balancing operational stability with community engagement. These trade-offs are considered when evaluating the feasibility and sustainability of each model.

Table C.5: Staffing Needs by Operational Model

Model	Full-Time Staff (FTEs)	Part-Time Staff (Hrs/Week)	Volunteer Hours (Annual)	Contracted Expertise	Estimated Staffing Costs	Comments
Municipal Oversight	1–2	10–15	Limited	None	$65,000–$85,000/year for FTEs + $10,000 for part-time staff	Stable municipal funding supports consistent staffing and operational reliability. Minimal volunteer reliance.
Third-Party NFP	0.5–1	5–10	1,000+	None	$30,000–$55,000/year for FTEs and $7,500/year in volunteer coordination	Heavy reliance on volunteers for programming and operations introduces variability in operational consistency.
Third-Party For-Profit	1–2	15–20	Minimal	Specialized (e.g., marketing)	$80,000–$120,000/year for FTEs	Professional expertise prioritizes revenue generation and efficiency with minimal volunteer involvement.
Hybrid Model 1: Contractor	0.5–1	10–15	200–300	Event-specific	$50,000–$85,000/year for FTEs	Balances municipal stability with contractor innovation; moderate volunteer engagement enhances community connection.
Hybrid Model 2: Unified Operator	1.5–2.5	15–20	300–500	Site-wide	$90,000–$140,000/year for FTEs	Centralized management supports scalability; strategic volunteer engagement strengthens community ties.

Source: Developed for this report from (BC Museums Association 2023; Canadian Museums Association 2016, 2024; Government of Canada 2024a, 2024b)

C.6 Governance and Administrative Assumptions

C.6.1 Administrative Overhead

1. **Municipal Oversight:** Centralized administration leverages existing municipal staff and resources, minimizing additional overhead costs. The City of Leduc's Cultural Development Plan (2021–2025) emphasizes streamlined administration for cultural initiatives (City of Leduc 2021). Municipal oversight models often integrate heritage site management into existing administrative structures, reducing standalone overhead costs (EM Museum Consulting 2024). Deliverable A highlights similar practices in municipal heritage models across central Alberta, where administrative costs are absorbed within larger departmental budgets.

2. **For-Profit Models:** Self-managed administration prioritizes efficiency and cost control, aligning with profit-driven objectives. For-profit models typically streamline administrative processes to reduce overhead, using standardized operations and economies of scale (Aigwi et al. 2020), while case studies like the (City of Toronto 2016) illustrate how commercial operators minimize governance costs through efficiency-focused management structures.

3. **Hybrid Models:** Contractor coordination introduces moderate governance costs, estimated at $3,000–$5,000 annually. Literature on public-private partnerships (Aigwi et al. 2020) identifies contractor oversight as a recurring cost in hybrid governance models. Estimated moderate costs for coordination effort and administrative oversight to manage contracts, partnerships, and programming expansion. The CARMN survey (Deliverable A) highlighted the need for dedicated governance structures to balance stakeholder roles, validating this cost estimate.
4.

C.6.2 Risk Tolerance

Risk tolerance in the operational models for Dr. Woods' House Museum reflects varied approaches to balancing stability, innovation, and sustainability, as emphasized during the engagement process documented in Deliverable B.

- Municipal oversight models prioritize stability and minimize risk, focusing on predictable funding and adherence to regulatory requirements (Shipley, Utz & Parsons 2006). Stakeholders from the community and City staff highlighted this approach as the most stable but least flexible, with minimal appetite for financial or programming risks (Elevate the Path 2024). This aligns with feedback advocating for centralized oversight to mitigate risks tied to volunteer turnover and external funding instability.
- Hybrid models combine municipal oversight with private or nonprofit involvement. They balance moderate risk-taking with innovative programming and revenue strategies (Aigwi et al. 2020). Stakeholders in the heritage groups and City Council engagements underscored the importance of leveraging partnerships to expand programming while managing risks associated with governance complexity and resource allocation challenges (Elevate the

Path 2024). This model was favoured for its ability to adapt while ensuring alignment with long-term strategic goals.

- For-profit models accept higher levels of risk to pursue significant revenue potential and operational innovation (Vafaie, Remøy & Gruis 2023). Engagement findings revealed concerns about market dependency and potential misalignment with community values. However, for-profit models were recognized for their ability to attract new audiences and diversify revenue streams through adaptive reuse strategies, as exemplified by innovative local and regional tourism examples (Elevate the Path 2024).

The diverse risk profiles reflect stakeholders' nuanced priorities, balancing fiscal responsibility with the need for creative, sustainable heritage management solutions. Emphasizing partnerships, long-term planning, and community involvement can mitigate risks across all models while aligning them with the City of Leduc's broader strategic objectives.

Appendix D: Feasibility Factor Scoring Methodology and Analysis

D.1 Overview

The feasibility factor assesses the practicality and sustainability of each operational model for the Dr. Woods's House Museum (DWHM). This methodology is rooted in Multi-Criteria Decision Analysis (MCDA), a decision-making framework that integrates multiple qualitative and quantitative dimensions to evaluate alternatives comprehensively. The Weighted Sum Model (WSM), a widely used MCDA approach, allows decision-makers to assign relative importance to evaluation criteria, reflecting strategic priorities and contextual realities (Greco, Figueira & Ehrgott 2016; Hester & Velasquez 2013).

For DWHM, the feasibility factor combines four key indicators—financial risk, governance complexity, scalability, and community alignment—tailored to its operational needs and long-term goals. Weighted scores emphasize the relative significance of each criterion, ensuring a robust evaluation process that balances practical constraints and community values.

D.2 Indicators and Weighting

The feasibility factor considers four weighted indicators:

Indicator	Definition	Weight (%)
Financial Risk	Measures stability of funding, long-term cost predictability, and reliance on external revenue.	40%
Governance Complexity	Assesses the administrative burden and alignment of stakeholder priorities.	30%
Scalability	Evaluates potential for growth in programming, partnerships, and revenue.	20%
Community Alignment	Considers the model's compatibility with community goals, inclusivity, and heritage preservation.	10%

The weighting reflects the importance of financial stability and governance in sustaining long-term operations, with a lesser emphasis on scalability and community alignment. This prioritization ensures the model's feasibility aligns with operational capacity and financial resilience.

D.3 Rubric for Scoring

Each indicator is scored on a 1-5 scale, reflecting how effectively the model aligns with operational, financial, and community priorities.

1	2	3	4	5
Does not meet expectations	Minimally meets expectations	Adequately meets expectations	Exceeds expectations	Significantly exceeds expectations
High risks or operational challenges.	Moderate risks with some potential for improvement.	Risks are manageable, and the model shows moderate alignment with goals.	Risks are minimal, and the model demonstrates strong alignment with goals.	Risks are negligible, and the model excels in all aspects of the indicator.

The raw scores are multiplied by the corresponding weights to calculate weighted feasibility scores.

D.4 Scoring Table

The raw scores for each indicator are multiplied by the respective weight to calculate the total weighted feasibility score.

Model	Financial Risk (40%)	Governance Complexity (30%)	Scalability (20%)	Community Alignment (10%)	Total Feasibility Score
Municipal Oversight	4 (1.60)	5 (1.50)	2 (0.40)	4 (0.40)	**3.90**
Third-Party NFP	2 (0.80)	3 (0.90)	3 (0.60)	5 (0.50)	**2.80**
Third-Party For-Profit	4 (1.60)	4 (1.20)	4 (0.80)	2 (0.20)	**3.80**
Hybrid Model 1: Municipal-Contractor	5 (2.00)	4 (1.20)	4 (0.80)	4 (0.40)	**4.40**
Hybrid Model 2: Unified Operator	5 (2.00)	5 (1.50)	5 (1.00)	4 (0.40)	**4.90**

Note: The raw score for each indicator is followed by its weighted score in parentheses.

D.5 Summary of Results

The final scores reveal the following insights:

- **Hybrid Model 2: Unified Heritage Operator** achieves the highest feasibility score (4.90), excelling in governance simplicity, scalability, and alignment with community goals.
- **Hybrid Model 1: Municipal-Contractor Partnership** ranks second (4.40), balancing scalability and financial risk effectively, with moderate governance complexity.
- **Municipal Oversight** demonstrates strong feasibility (3.90) due to minimal governance complexity and financial stability but struggles with scalability.
- **Third-Party For-Profit** scores competitively (3.80), excelling in financial sustainability but showing weaknesses in community alignment.
- **Third-Party NFP** scores lowest (2.80), reflecting challenges with financial risks and operational variability despite strong community engagement.

D.6 Interpretation

The Weighted Sum Model (WSM) highlights the nuanced trade-offs between financial, operational, and community-focused priorities. Hybrid Model 2 emerges as the most sustainable option, offering a balanced approach to scalability, economic stability, and community alignment. By emphasizing weighted dimensions, this methodology ensures that the evaluation aligns with the strategic goals of DWHM and the City of Leduc.

Appendix E: Overall Risk Levels, Identified Risks, and Mitigation Strategies

E.1 Overview

This appendix provides a detailed assessment of the risks associated with each operational model for the Dr. Woods' House Museum (DWHM) and outlines corresponding mitigation strategies. Drawing from stakeholder consultations, sector benchmarks, and feasibility scoring (Appendix D), the analysis highlights each model's key operational, financial, and governance risks. This framework ensures that decision-makers can proactively address challenges while aligning operational strategies with long-term sustainability goals.

E.2 Risk Categories

The risk assessment for the proposed operational models of the Dr. Woods' House Museum (DWHM) evaluates potential challenges across six overarching risk categories. These categories consolidate key themes identified during stakeholder consultations, sector analysis, and feasibility studies, providing a streamlined and actionable framework for mitigation strategies.

E.2.1 Operational Risks

Operational risks encompass challenges in the museum's day-to-day management, scalability, and service delivery. This includes potential resource dilution, where centralized efforts may reduce focus on site-specific needs or programming flexibility. Mitigation strategies emphasize developing scalable operational plans and leveraging partnerships to enhance programming adaptability.

E.2.2 Financial Risks

Financial risks reflect vulnerabilities in funding stability, cost-efficiency, and profitability. Models relying heavily on external grants or self-generated revenue face heightened exposure during economic downturns or shifts in funding priorities. Proactive strategies, such as diversifying revenue streams, negotiating multi-year funding agreements, and incorporating contingency budgets, are critical to mitigating these risks.

E.2.3 Governance Risks

Governance risks arise from unclear roles, complex oversight structures, or dependencies on contractors and volunteers for management. Inefficient governance can lead to resource misallocation and operational conflicts. Clear role delineation in contracts, structured oversight mechanisms, and governance training for non-profit boards or municipal leadership are key strategies for risk reduction.

E.2.4 Community Risks

Community risks involve potential misalignment with public expectations, reduced cultural relevance, or the dilution of heritage focus. These risks are particularly acute in profit-driven models or centralized operational approaches that may deprioritize local identity. Mitigation strategies include fostering community input through advisory committees, aligning programming with local cultural values, and integrating public feedback into strategic decisions.

E.2.5 Regulatory Risks

Regulatory risks stem from non-compliance with legal, safety, or accessibility standards. Cost-driven models may prioritize short-term savings at the expense of regulatory adherence. Ensuring

compliance through regular audits, incorporating regulatory requirements into operational plans, and establishing partnerships with local authorities for guidance are effective strategies.

E.2.6 Human Resources Risks

Human resources risks encompass challenges in staffing recruitment, retention, and reliance on volunteers or specialized expertise. Volunteer dependency introduces risks of burnout, recruitment difficulties, and operational inconsistencies. Structured volunteer management programs, competitive salary packages, and cross-training for staff are pivotal to addressing these challenges and ensuring operational stability.

Table E.1 consolidates these categories with insights, risks, and tailored mitigation strategies for each operational model.

Table E.1: Overall Risk Levels, Specific Risks and Mitigation Strategies by Operational Model

Operational Model	Overall Risk Level	Key Insights	Risk Category	Key Risks	Mitigation Strategies
Municipal Oversight	Low	High feasibility, but limited scalability and community engagement.	Operational	Limited scalability; inflexible programming reduce adaptability.	Develop partnerships to expand programming options and incorporate community-driven initiatives.
			Financial	High reliance on municipal funding, creating vulnerability during economic downturns.	Introduce revenue diversification, such as seasonal rentals, workshops, and special events to offset reliance.
			Community	Limited community-driven programming reduces local participation and innovation.	Establish a community advisory committee to increase input and guide programming development.
			Human Resources	Stable funding limits flexibility in expanding staff roles or responsibilities.	Include provisions for staff cross-training and succession planning in municipal budgets to ensure adaptability.
Third-Party NFP	Moderate	Strong community alignment but vulnerable to financial and operational instability.	Operational	Dependence on volunteers; potential service inconsistencies.	Develop a structured volunteer program with robust training and retention initiatives to ensure reliability.
			Financial	Unpredictable grant funding; reliance on fundraising cause financial instability.	Secure multi-year funding agreements, when possible, to stabilize financial planning.
			Governance	Volunteer-led leadership may lack professional expertise for effective decision-making.	Provide governance training for volunteer leaders to enhance decision-making capacity and strategic planning.
			Human Resources	High risk of volunteer burnout and recruitment challenges.	Recruit volunteers cross-generationally and implement recognition programs to improve retention.
Third-Party For-Profit	Moderate	Financially robust but misaligned with community and heritage goals.	Community	Focus on revenue generation risks misalignment with heritage preservation goals.	Require vendors to meet heritage preservation standards through contractual obligations.
			Operational	Over-commercialization could diminish the site's authenticity and cultural integrity.	Mandate alignment with municipal bylaws for compliance and accessibility standards.
			Regulatory	Cost-cutting measures could result in non-compliance with safety or accessibility standards.	Partner with local organizations to co-host affordable and inclusive events to meet regulatory expectations.
			Human Resources	Reliance on specialized expertise increases risk of turnover.	Offer competitive salary packages and establish contingency plans for retaining or replacing key staff.

Operational Model	Overall Risk Level	Key Insights	Risk Category	Key Risks	Mitigation Strategies
Hybrid Model 1: Municipal-Contractor	Moderate to Low	Balanced flexibility and financial stability; governance complexity requires careful oversight.	Governance	Role conflicts between municipal oversight and contractors can hinder decision-making.	Clearly define roles and responsibilities in contracts to minimize confusion and conflict.
			Financial	Contractor fees increase financial pressures.	Implement regular financial reviews to ensure cost-efficiency and budget alignment.
			Community	Contractors may lack connection to local heritage and community values.	Include heritage integration in contractor performance reviews to align programming with community expectations.
			Human Resources	Availability of contractors during high-demand seasons could limit programming.	Negotiate long-term flexible contracts with scalability options to address seasonal demand fluctuations.
Hybrid Model 2: Unified Heritage Operator	Low	Excels in financial and operational alignment; requires strong governance to preserve site-specific focus.	Governance	Centralized management may overlook unique site-specific needs.	Develop and implement identity plans for each site to preserve their distinct character and appeal.
			Financial	Upfront investments may strain resources.	Pool resources across sites to optimize costs while maintaining individual site budgets.
			Community	Risk of diluting DWHM's identity within a broader network.	Host regular community engagement forums to align programming with local cultural priorities.
			Operational	Centralized staffing may reduce site-specific attention and operational effectiveness.	Appoint site-specific coordinators supported by centralized administration to maintain focus and accountability.

Source: Developed for this report