

Session 5

Integrating Risk Management Framework in Collections Care: A Strategic Approach

Andor Vince | Collections Care Adviser, Heritage Collections Care Consortium, New Zealand

1. Introduction

This article explores the importance of a risk management framework in shaping collections care strategies and planning. It highlights the need to integrate hazard management and risk management into a cohesive framework to effectively address collection risks and the organizational risks triggered by them. Additionally, the article outlines actionable steps and strategies for implementing this integrated approach in practice.

2. Hazard, Risk Management, and Risk Assessment

In collections care, both hazard management and risk management are essential for preserving collections. However, confusion often arises regarding the distinctions between these concepts and the importance of integrating both into a comprehensive collections care strategy. Therefore, it is important to clearly define the terms: hazard management, risk management, and risk assessment.

Hazard management focuses on identifying, assessing, and controlling hazards that could harm or damage collections. It addresses potential sources of harm that threaten the preservation of heritage assets. The ten agents of deterioration, such as fire, water, theft, and incorrect relative humidity, are all considered hazards—direct sources of harm to collections.

Risk management involves identifying, analyzing, evaluating, and mitigating risks to minimize their impact on collections. This process addresses specific risks, such as faulty wiring and fading objects caused by light exposure.

The difference between the two is that hazard management focuses on identifying and controlling potential sources of harm (hazards), while risk management involves assessing and addressing the potential consequences (risks) associated with those hazards.

Furthermore, it is essential to distinguish between risk management and risk assessment. These terms are often mistakenly used interchangeably, yet they refer to distinct processes. Risk assessment is a key component of risk management, focusing solely on identifying, analyzing, and evaluating potential risks (Picture 1).



Picture 1. Visual representation of the risk management process, highlighting the critical steps involved in risk assessment.

3. Why a Narrow Focus on Hazards is Insufficient for Collection Care

Many heritage organizations prioritize managing hazards over managing risks in collections care. One reason is that regulatory frameworks they must adhere to, such as health and safety regulations, fire safety codes, and building standards, often emphasize hazard identification. This emphasis naturally shifts the focus toward managing hazards as part of a whole organizational approach.

The other reason is that hazards prompt immediate action. For example, fire, water damage, and theft present clear concerns that give rise to a sense of urgency and the need for an immediate response. As a result, heritage organizations frequently allocate resources toward direct hazard mitigation strategies, viewing these efforts as essential for preventive care. For example, a museum may invest in advanced fire suppression systems and climate control technologies to safeguard objects from potential damage caused by fire or environmental fluctuations. While such investments can help reduce potential damage from specific hazards, focusing primarily on hazard mitigation can lead to a false sense of security and overspending.

For example, introducing a sprinkler system is not always the most cost-effective approach to managing fire hazards. It is essential to assess the risks associated with fire hazards first to determine the necessity of installing sprinkler systems. This assessment should focus on specific risks, evaluating factors such as the layout of the space, the presence of flammable materials, potential ignition sources, and the proximity of the nearest fire station, along with the response time of the fire brigade. These factors can help identify areas that may be at greater risk of fire and determine whether there is a need for sprinkler systems.

Furthermore, by investing in hazard mitigation, organizations may divert funds away from necessary risk assessment and addressing hidden or less visible risks to collections. For instance, faulty wiring in the building may pose a significant risk of electrical fires, which might not be immediately noticeable but can lead to catastrophic consequences if not identified and addressed. While having a fire suppression system may minimize the impact of a fire caused by electrical means, it does not prevent the risks from occurring. Therefore, decisions regarding hazard management should always be informed by a thorough risk assessment. Together, hazard management and risk assessment establish a comprehensive framework for ensuring the effective preservation of collections.

4. Establishing a Comprehensive Risk Management Framework

Within heritage, the risk management framework can be defined as a structured approach to identifying, assessing, and minimizing collection risks, in line with the ISO 31000:2018 standard: Risk Management – Guidelines.

To effectively implement this framework, it is essential to recognize that managing risks to heritage assets should be an integral part of the organization's overall risk management strategy. Therefore, it is important to establish a risk management framework that extends beyond merely assessing and managing risks to collections. This framework should also encompass organizational risks that may arise from collection risks, including potential reputational damage, health and safety issues, and financial and legal implications (Table 1).

Risk Description	Risk Rating	Expected Impact	Mitigation
Background Information	High	<p>Objects susceptible to fire damage are most likely to suffer substantial damage or total destruction.</p> <p>A great majority of objects on display and in storage are not made from highly flammable organic materials. However, many objects are vulnerable to smoke and water, which could cause contamination.</p>	<p>Enhance Fire Safety Procedures. Regularly review and update fire safety policies and evacuation procedures.</p> <p>Conduct Regular Fire Risk Assessments. Perform routine assessments to identify potential fire hazards and address them promptly.</p> <p>Create an Emergency Response Plan for Collections</p> <p>Improve Storage Practices. Organize collections to minimize proximity to flammable materials.</p> <p>Implement good housekeeping procedures and fire-resistant storage solutions for vulnerable items. Etc.</p>
A major fire affecting the entire museum building will result in significant damage and almost total loss of the collections' significant value.	Medium	<p>Objects susceptible to fire, such as metal, stones, and fired ceramics, will be affected primarily by heat exposure, which may lead to warping, cracking, or surface degradation.</p> <p>Significant physical damage and loss of cultural value to the museum's collections can be expected.</p> <p>Additionally, the collections are densely stored and displayed on open shelves.</p> <p>Accumulations of dust and debris in stores that can ignite and fuel the fire</p> <p>Poorly designed escape routes that can make it difficult for people to evacuate safely</p>	<p>The impact of a fire can be classified as of the museum press interest should minor to moderate, building and storage areas, along with remedial work on the reputation of the staff are in place.</p> <p>Minor injuries to some staff or visitors requiring first aid treatment can be expected, though significant injuries needing medical treatment and an extended hospital stay are less likely, but still possible.</p> <p>Additionally, there can be a significant impact on the well-being of staff, including potential psychological effects, such as anxiety, depression, stress-related disorders, and post-traumatic stress disorder (PTSD) in some individuals</p>

Table 1. This table illustrates how risks to collections can trigger organizational risks. When considering mitigation strategies, it is essential to take all these risks into account. While this is more evident in the case of a major fire, the same principle should apply to other risks, such as pest infestation, water damage, and fading.

For example, in a museum, the risk of pest infestation might initially be assessed as low to medium priority. However, this risk can trigger significant reputational consequences for the organization. For example, in a museum, the risk of pest infestation might initially be assessed as low to medium priority. However, this risk can trigger significant reputational consequences for the organization. Therefore, at the organizational level, it should be treated as a high priority. This necessitates appropriate prioritization, resource allocation, and effective management—actions most effectively carried out by a dedicated risk management team.

5. The Dedicated Risk Management Team

Building a risk management framework requires time, skills, and resources. Central to this framework is a dedicated and trained interdisciplinary team focused on ongoing risk assessment and management. This team regularly identifies, analyses, and evaluates risks while collaborating with various departments to encourage cross-disciplinary dialogue and promote a culture of proactive risk awareness regarding collections.

However, in many heritage organizations, systematic and strategic risk management for collections is not consistently achieved. This challenge also extends to conservation and collections departments, which may struggle to fully implement preservation strategies without incorporating risk management practices and providing training for their staff.

Furthermore, it is essential to strengthen the emphasis on risk management for collections at the senior management level. This underscores the need for conservation and collections care to be represented at the senior management level by someone with a strong understanding of conservation, collections care, and potential risks to heritage assets. This leadership role is crucial for articulating the importance of managing risks to collections, promoting interdepartmental collaboration, and ensuring adequate resources are in place to mitigate risks effectively.

6. The Role of Risk Management in Shaping Collections Care Strategies and Planning

In addition to preserving collections, actively managing risks to heritage assets serves two other essential functions:

- It helps to establish the strategy for long-term goals for collections care.
- It forms a fundamental part of collections care planning, driving specific actions and resources needed to achieve the strategic goals set for collections¹⁾.

Strategic thinking should address two key questions: what priorities should be established for action, and how should limited resources be allocated to minimize collection risks?

To effectively navigate these strategic questions and ensure informed decision-making, various risk management methodologies have been developed for the heritage sector over the past 30 years to facilitate systematic risk assessment and management. These include the ABC methodology, created by the Canadian Conservation Institute and ICCROM in collaboration with other partners²⁾; the Cultural Property Risk Analysis Model (C-Pram), developed by Robert Waller³⁾; and QuiskScan, established by Agnes Brokerhof and Anna Bülow⁴⁾.

Additionally, several other tools are available as part of the risk management framework to further identify and analyse risks and their 'root' causes, such as the Risk Register, SWOT analysis, the Fishbone diagram (Ishikawa), the Root Cause Analysis (RCA), the 5 Whys method, Scenario Analysis, and the Tornado chart. These tools can provide insights that will shape the collections care strategy and planning and drive effective resource prioritization.

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- 1) In collections care, the concepts of strategy and planning are often misunderstood, yet both are crucial for effective preservation. Strategy includes a long-term preservation of collections, setting the vision and overarching goals for the care of collections. In contrast, planning involves the specific actions and resources needed to achieve these strategic objectives. Therefore, it is important to recognise that strategy and planning represent different activities and should not be put under the same banner of strategic collection care plan.
 - 2) Risk management for heritage collections - Canada.ca
 - 3) Robert Waller, Risk Management Applied To Preventive Conservation. pp 21-28 In: Rose, C.L., Hawks, C.A. and Genoways, H.H. (eds.). Storage of Natural History Collections: A Preventive Conservation Approach. Society for the Preservation of Natural History Collections Iowa City, x+448pp., 1995. <http://www.museum-sos.org/docs/WallerSPNHC1995.pdf>
 - 4) Brokerhof, A. W., & Bülow, A. E. (2016). The QuiskScan—a quick risk scan to identify value and hazards in a collection. Journal of the Institute of Conservation, 39(1), 18-28.

For example, the magnitude of risks can be presented using a Half-Tornado Chart (Chart 1). The chart illustrates risks, ranked from low priority at the bottom to high priority at the top, enabling organizations to determine where resources should be allocated for effective collections care. It also provides a clear visual representation of risks, facilitating effective communication of priorities to stakeholders.

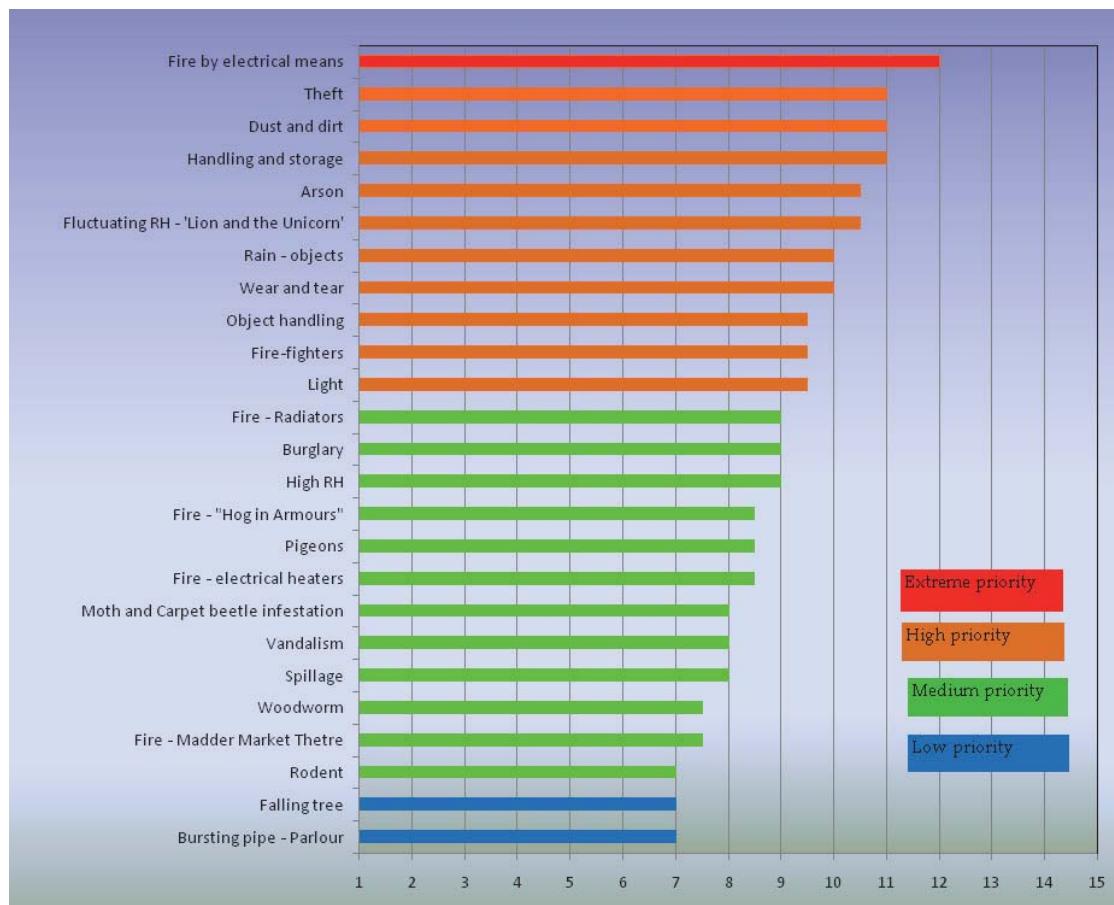


Chart 1. A half-tornado chart illustrating levels of risk, clearly presenting priorities for action.

The strength of the Half-Tornado Chart lies not only in its visual representation of priority risks but also in its ability to facilitate deeper analysis and identify underlying issues. For instance, it can be employed to analyze related risks that may share common origins or consequences. By examining the ten highest-priority risks presented in Chart 1, one may discern that several risks stem from underlying issues, such as inadequate housekeeping

and building maintenance (e.g., dust accumulation, building leaks, and wear and tear of items). Identifying these ‘root’ causes allows heritage organizations to pose essential questions: why are there so many high-priority risks related to housekeeping and maintenance? Are they due to restricted resources, insufficient understanding of the importance of housekeeping, or perhaps a need for better training among staff?

By addressing these strategic questions and employing risk management techniques and analytical tools, organizations can prioritize risks, allocate resources efficiently, and improve decision-making. This process is vital for developing effective strategies and long-term planning in collections care. Heritage organizations that integrate this framework into their core operations will strengthen the resilience of their collections and make significant contributions to their long-term, cost-effective, and sustainable preservation.

7. Conclusion

This article summarizes actionable steps as a practical roadmap for heritage organizations aiming to strengthen their collections care practices, adopt proactive decision-making, ensure efficient resource allocation, and cultivate a culture of risk awareness.

- **Establish a Comprehensive Risk Management Framework.** Create and maintain a risk management framework encompassing both collection and organizational risks. Secure the necessary resources for establishing the framework and organizing staff training programs. Additionally, establish communication protocols for reporting and updates and secure support from senior leadership to ensure commitment to the framework’s implementation.
- **Establish a Dedicated Risk Management Team.** Form a small group of trained professionals in risk assessment and management. This team will regularly identify, analyze, and review risks and engage with various departments to develop a culture of proactive risk awareness.
- **Identify and Evaluate Risks.** Implement a systematic risk assessment and risk management approach to assess potential impacts of various risks beyond immediate threats (hazards). Use the available tools and techniques as part of your risk

management framework, such as the ABC methodology, C-Pram, and QuiskScan. Employ tools like the Risk Register, Root Cause Analysis (RCA), the 5 Whys method, Scenario Analysis, and Tornado charts to analyze risks and make strategic decisions for their mitigation accordingly.

- **Develop a Holistic Collections Care Strategy and Plan.** The results of risk assessment and the tools you employ in analyzing risks will shape and drive your collections care strategy. In this process, it is important to connect risks to collections with the organizational risks they can trigger. This approach allows for tailoring the collections care strategy at the organizational level rather than just at the departmental level. Once the strategy is outlined, a long-term collections care plan should be developed.
- **Allocate Resources.** In collections care planning, ensure that resources available for collections care are allocated based on a thorough understanding of both immediate hazards and broader organizational risks triggered by risks to collections. It may be necessary to request additional resources to manage these risks effectively. Use visual tools, such as the Tornado chart, to strengthen the case for additional resources, demonstrating the potential impact of risks on collections and the organization.
- **Regularly Identify and Review Risks.** Risk assessment and management for collections are continuous activities. Establish a schedule for ongoing risk assessments and updates to the risk management framework based on new information and changing circumstances. Communicate with stakeholders about any new risks identified, as this might trigger necessary changes in your collections care strategy and plan. Keeping stakeholders informed promotes transparency, encourages collaboration, and ensures appropriate measures are taken to preserve the collections effectively.
- **Document.** Document decisions made, risks identified, and mitigation strategies employed throughout the process to ensure accountability and transparency. The documentation process is also a valuable learning tool for developing best practices and refining risk assessment methods.