

Governance and the Survival of Museums in High-Risk Environments: An Integrated Framework for Decision-Making Dynamics and Risk Management during Conflicts and Complex Crises

Ibrahim Hassan Abdullah Hassan Al Ali

Museum Curator, Sharjah, United Arab Emirates

Email: H000555@hotmail.com

DOI Link: <http://dx.doi.org/10.6007/IJARAFMS/v16-i3/28936>

Published Online: 26 September 2026

Abstract

Museums are essential for preserving cultural heritage, collective memory, and national identity, yet their survival is increasingly threatened by conflicts, disasters, security risks, and complex crises. Existing studies often examine museum governance, risk management, decision-making, legal protection, and business continuity separately, leaving limited understanding of their integrated role in museum resilience. This study examines how these mechanisms collectively strengthen museum survival in high-risk environments, with particular reference to the United Arab Emirates. Using a qualitative descriptive-analytical and doctrinal legal approach, the study analyses relevant legislation, international conventions, institutional standards, and governance and risk-management frameworks. The findings show that legal protection alone is insufficient; museum resilience requires integrated governance, risk preparedness, adaptive decision-making, institutional coordination, and business continuity. The study contributes an integrated museum-survival framework that connects these previously fragmented dimensions and provides practical guidance for museum managers and policymakers to strengthen preparedness, institutional continuity, and long-term resilience.

Keywords: Museum, Governance, High-Risk, Environments, Framework

Introduction

Museums are fundamental cultural institutions whose significance extends considerably beyond the preservation and exhibition of historical objects. They safeguard tangible and intangible manifestations of collective memory, reinforce cultural identity, support education and research, contribute to cultural tourism, and connect present communities with their historical inheritance. The International Council of Museums (ICOM) similarly positions museums as institutions with important responsibilities for preserving, interpreting, and transmitting heritage. Consequently, the continued operation of museums

represents not merely an organisational concern but a broader matter involving cultural identity, public interest, intergenerational responsibility, and national heritage (ICOM, 2017; UNESCO, 2015; Magliacani, 2015; García, 2020; Della Lucia et al., 2024). The contemporary operating environment of museums, however, has become increasingly uncertain (Bosher et al., 2020; Aktürk & Hauser, 2025; Jones & Pappas, 2023; García, 2020). Armed conflicts, political instability, terrorism and security threats, natural disasters, fires, floods, earthquakes, economic disruption, cyber-related risks, technological failures, illicit trafficking of cultural objects, and complex emergencies can simultaneously threaten museum buildings, collections, personnel, visitors, information systems, and institutional operations (Bosher et al., 2020; Fu et al., 2022; Liang et al., 2024; UNDRR, 2022).

High-risk environments are therefore characterised not simply by the presence of an isolated threat but by heightened uncertainty, interconnected risks, rapidly changing conditions, incomplete information, and the possibility of severe losses. Under such circumstances, conventional museum administration based primarily on collection management and routine institutional procedures may be insufficient (Snider, 2024; Giusti, 2024; Palumbo, 2023; Koronis, 2018). The consequences of institutional failure can be irreversible. The destruction, theft, deterioration, or illegal transfer of cultural property may eliminate cultural evidence that cannot be reproduced. Equally important, the temporary or permanent disruption of a museum can weaken access to cultural resources, educational services, research materials, collective memory, and community identity. Museum survival must therefore be understood in two related ways: the physical survival of collections and cultural assets, and the institutional survival of the museum as an organisation capable of continuing or recovering its essential functions (Hague Convention, 1954; UNESCO, 1970; Hladík, 2022; UNESCO, 2010).

International instruments have long recognised these risks. The 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict establishes obligations concerning the safeguarding and respect of cultural property during armed conflict, while its 1999 Second Protocol strengthens preventive and protective mechanisms. The UNESCO 1970 Convention addresses illicit import, export, and transfer of ownership of cultural property, highlighting the importance of inventories, institutional safeguards, and international cooperation. The Sendai Framework for Disaster Risk Reduction 2015–2030 further emphasises understanding risk, strengthening risk governance, investing in resilience, and improving preparedness and recovery. Together, these instruments demonstrate that cultural-property protection increasingly requires preventive governance rather than intervention only after damage occurs (Hague Convention, 1954; Second Protocol to the Hague Convention, 1999; UNESCO, 1970; UNDRR, 2015; UNESCO, 2010). The central problem addressed by this study is that the existence of heritage-protection rules does not automatically guarantee museum resilience (Bosher et al., 2020; García, 2020; Duchek, 2020; Darkow, 2019).

Legal protection can establish rights, responsibilities, prohibitions, and institutional mandates, but museums operating under crisis conditions must also be capable of translating these requirements into rapid and effective organisational action. A museum may have legal protection for its collections while simultaneously lacking a current emergency plan, clearly assigned decision authority, updated risk register, digital inventory, evacuation priorities,

alternative communication channels, trained personnel, or business-continuity arrangements. The resulting gap between formal protection and operational preparedness can become particularly serious when a crisis requires decisions within minutes or hours rather than through ordinary administrative processes (Somers, 2009; Boin & McConnell, 2007; Galaitsi et al., 2023; Jin, 2024). Several factors can bridge this problem. The first is museum governance (Magliacani, 2015; Arena et al., 2010; Beasley et al., 2005; OECD, 2015).

Governance establishes how authority is distributed, how responsibilities are defined, how decisions are made, how resources are allocated, and how managers remain accountable. Principles including transparency, accountability, participation, efficiency, flexibility, sustainability, and legal compliance provide an institutional foundation for responsible museum management (OECD, 2015; ICOM, 2017; Della Lucia et al., 2024). In high-risk settings, however, governance must additionally facilitate rapid coordination, delegated authority, information sharing, and adaptation. The second bridging factor is risk management (ISO, 2018; Arena et al., 2010; Mikes & Kaplan, 2014; Beasley et al., 2005). ISO 31000 conceptualises risk in relation to uncertainty and organisational objectives and provides a structured logic for identifying, analysing, evaluating, treating, monitoring, and communicating risks. Applied to museums, this approach extends risk management beyond insurance or physical security. It encompasses risks affecting collections, buildings, visitors, staff, information systems, finances, reputation, institutional legitimacy, and operational continuity. Effective risk management consequently enables museums to shift from responding to events after they occur toward anticipating possible threats and preparing proportionate responses (Bosher et al., 2020; Fu et al., 2022; Liang et al., 2024; Aktürk & Hauser, 2025).

The third factor is decision-making dynamics (Simon, 1997; Cosgrave, 1996; Okoli & Hatami-Marbini, 2021; Steen & Pollock, 2022). High-risk situations differ fundamentally from routine management because decision makers often operate under severe time constraints, incomplete or changing information, competing objectives, and uncertainty regarding the consequences of available alternatives. Simon's bounded rationality perspective is particularly relevant because it recognises that organisational decision makers rarely possess perfect information or unlimited cognitive capacity. Crisis decisions therefore require institutional arrangements that allow reliable information to reach authorised decision makers quickly while preserving sufficient flexibility for actions to be revised as circumstances change (Schraagen & van de Ven, 2008; Post et al., 2022; Steen & Pollock, 2022; Jin, 2024).

The fourth bridging mechanism is business continuity and institutional resilience (ISO, 2019; Galaitsi et al., 2023; Duchek, 2020; Darkow, 2019; Koronis, 2018). Protection cannot end with emergency response. A museum must determine which functions are critical, how these functions will continue during disruption, and how normal operations can subsequently be restored. ISO 22301 provides an important foundation for business-continuity management by encouraging organisations to prepare for disruptive incidents, maintain essential activities, and restore operations systematically. For museums, continuity planning may involve secure digital records, alternative storage, backup systems, emergency communications, succession of authority, recovery priorities, and arrangements with government, emergency, security, conservation, and cultural agencies. These mechanisms become particularly relevant in the UAE. The country's institutional and legal landscape

includes Federal Law No. 11 of 2017 concerning antiquities, relevant emirate-level cultural heritage legislation, and national emergency, crisis, disaster-management and business-continuity arrangements. The National Emergency Crisis and Disaster Management Authority (NCEMA) provides institutional mechanisms for emergency preparedness and continuity, while cultural legislation establishes responsibilities relating to heritage protection. These mechanisms provide a potentially strong foundation for museum resilience when cultural governance is systematically connected with national risk-management and emergency-response structures (UAE Federal Law No. 11 of 2017; NCEMA, 2020, 2022). Nevertheless, an important theoretical and analytical gap remains (Linnenluecke, 2017; Duchek, 2020; Darkow, 2019; Mikes & Kaplan, 2014). Existing approaches frequently examine museum administration, cultural-property law, risk management, disaster preparedness, business continuity, or crisis decision-making as separate domains. Cultural-heritage instruments naturally prioritise protection of cultural property; governance literature emphasises accountability and institutional arrangements; risk-management frameworks concentrate on uncertainty and preparedness; while decision-making theory explains organisational behaviour under constrained information. The fragmentation of these perspectives makes it difficult to explain how museums actually survive complex crises in which legal, organisational, security, technological, and cultural considerations operate simultaneously (Arena et al., 2010; Linnenluecke, 2017; Galaitsi et al., 2023; Boshier et al., 2020).

This study addresses this gap by proposing that museum survival is not produced by a single protective mechanism (Duchek, 2020; Koronis, 2018; Galaitsi et al., 2023; García, 2020). Instead, it emerges from the interaction between governance, risk-management capability, adaptive decision-making, legal compliance, institutional coordination, and business continuity. Governance determines who decides and who is accountable; risk management determines what threats must be anticipated and treated; decision-making capability determines how institutions act when conditions change; and the legal framework establishes the authority, responsibilities, and protective obligations within which these processes operate. Accordingly, the objective of this study is to examine how an integrated governance, risk-management, and decision-making framework can enhance museum survival in high-risk environments during conflicts and complex crises. Specifically, the study analyses the conceptual foundations of museum governance and high-risk environments; examines the contribution of risk management and decision-making dynamics to museum continuity; evaluates the relevant UAE legal and institutional framework; and develops an integrated framework through which governance, risk management, emergency preparedness, decision-making, and business continuity can operate as mutually reinforcing components of museum resilience.

Literature Review

Museum Governance and Institutional Sustainability

Governance refers broadly to the structures, rules, relationships, processes, and mechanisms through which organisations are directed, controlled, and held accountable. Although much governance literature developed in corporate and public-sector contexts, its underlying principles are highly relevant to cultural institutions. Museums manage assets of cultural and public significance and therefore operate within relationships involving governments, communities, professionals, donors, researchers, visitors, and future generations (OECD, 2015; Arena et al., 2010; Beasley et al., 2005; Magliacani, 2015).

Good governance within museums requires transparency, accountability, participation, efficiency, effectiveness, sustainability, flexibility, and compliance. Transparency concerns the accessibility and clarity of information surrounding institutional decisions and resource use. Accountability ensures that decision makers can be held responsible for their decisions and actions. Participation enables relevant stakeholders to contribute to institutional priorities, while efficiency and effectiveness concern the responsible utilisation of limited resources (OECD, 2015; ICOM, 2017; Della Lucia et al., 2024).

These characteristics acquire additional significance during crises (Koronis, 2018; Mokline, 2021; Jin, 2024). Accountability, for example, should not create administrative paralysis when immediate action is required. Instead, responsibilities and emergency authority should be determined before a crisis. Similarly, transparency during emergencies requires reliable channels for sharing information among museum management, government agencies, emergency services, employees, and other stakeholders.

The ICOM Code of Ethics for Museums reinforces the institutional responsibility of museums to preserve collections and associated information for present and future generations. Collection continuity is therefore inseparable from governance because preservation depends on policies, institutional responsibilities, professional practices, documentation, and resource allocation. Governance provides the organisational infrastructure through which these responsibilities can be translated into sustained practice (ICOM, 2017; UNESCO, 2015). Museum sustainability consequently involves more than financial continuity. It encompasses the institution's capacity to preserve its collections, retain knowledge, maintain legitimacy, fulfil its cultural mission, respond to disruption, and transmit cultural resources to future generations. In this sense, sustainability and resilience become closely interconnected (Palumbo, 2023; Giusti, 2024; Duchek, 2020; Linnenluecke, 2017).

High-Risk Environments and Museum Vulnerability

High-risk environments are characterised by elevated uncertainty, multiple interacting threats, rapid change, and substantial potential losses. Such risks may originate from armed conflict, political instability, natural disasters, economic crises, technological breakdown, cyber threats, criminal activity, fires, environmental conditions, or operational failure (Bosher et al., 2020; Aktürk & Hauser, 2025; UNDRR, 2022). The significance of high-risk environments lies in their complexity. Museums may simultaneously experience physical, human, operational, legal, financial, and informational risks (Ansell et al., 2010; Boin & McConnell, 2007; Galaiti et al., 2023). For example, armed conflict may threaten a museum building while simultaneously interrupting electricity, transportation, staffing, communication, environmental controls, security arrangements, and access to conservation materials (Hague Convention, 1954; Hladík, 2022; UNESCO, 2010).

The interaction of risks also increases uncertainty (Simon, 1997; Okoli & Hatami-Marbini, 2021; Steen & Pollock, 2022). Decision makers may not know the duration of an emergency, whether transportation routes will remain accessible, whether collections should be moved, or whether moving them could create greater risks. High-risk museum management therefore requires preparedness for multiple scenarios rather than reliance on a single emergency procedure. Weick and Sutcliffe's work on managing unexpected events is relevant because organisational resilience depends on the ability to recognise weak signals, respond

to emerging threats, reorganise resources, and learn from changing conditions. For museums, resilience similarly requires institutional sensitivity to emerging risks and an ability to revise protective measures as threats evolve (Weick & Sutcliffe, 2007; Duchek, 2020; Darkow, 2019).

Risk Management as a Museum Survival Capability

Risk management provides a systematic mechanism for transforming uncertainty into manageable organisational priorities (ISO, 2018; Mikes & Kaplan, 2014; Arena et al., 2010). ISO 31000:2018 defines risk as the effect of uncertainty on objectives and emphasises structured processes for identifying, analysing, evaluating, treating, communicating, and monitoring risk. Within museums, risk management should encompass more than the physical protection of collections. Potential risks concern cultural objects, buildings, visitors, employees, information, financial resources, institutional reputation, utilities, transportation, security, environmental control systems, and organisational continuity. A comprehensive risk register can therefore enable museum managers to identify critical vulnerabilities before an emergency occurs (Bosher et al., 2020; Fu et al., 2022; Liang et al., 2024). Mikes and Kaplan's contingency perspective on enterprise risk management is relevant because risk-management arrangements should correspond with the characteristics of the organisation and its operating environment rather than being mechanically standardised. Museum risk profiles vary according to collection type, location, building characteristics, ownership structure, visitor patterns, security environment, climate exposure, political context, and institutional capacity (Mikes & Kaplan, 2014; Gordon et al., 2009; Beasley et al., 2005).

UNESCO's Managing Disaster Risks for World Heritage similarly promotes preparedness, prevention, response, and recovery. This orientation is particularly relevant because cultural heritage losses may be irreversible. Preventive conservation, risk assessment, documentation, emergency planning, and staff training can therefore provide substantially greater cultural value than reactive restoration after extensive damage (UNESCO, 2010; Bosher et al., 2020; García, 2020; Aktürk & Hauser, 2025). Risk management should consequently be embedded within governance. Risk assessments that remain isolated technical documents cannot strengthen museum resilience unless their findings influence budgets, responsibilities, operational priorities, training, and strategic decisions (Arena et al., 2010; Beasley et al., 2005; McShane, 2018).

Decision-Making Dynamics under Crisis Conditions

Decision-making in high-risk environments differs from ordinary organisational decision-making because crises compress the time available for information gathering and deliberation. Decision makers may need to choose between competing objectives such as visitor safety, employee protection, collection evacuation, building security, and operational continuity (Cosgrave, 1996; Okoli & Hatami-Marbini, 2021; Post et al., 2022).

Herbert Simon's bounded rationality theory provides an important theoretical foundation (Simon, 1997). Simon argues that decision makers operate within limitations of information, time, knowledge, and cognitive capacity. This is highly applicable to museum crises because managers cannot reasonably expect complete information before acting.

Consequently, effective crisis governance should not attempt to eliminate uncertainty before decisions are made. Instead, it should establish mechanisms that allow decisions to be made

responsibly under uncertainty. These include predefined authority structures, emergency escalation procedures, reliable communication channels, access to updated risk information, scenario planning, and procedures for revising decisions as new information becomes available (Schraagen & van de Ven, 2008; Steen & Pollock, 2022). Decision-making should also be decentralised where appropriate. Excessively centralised procedures can delay action when immediate intervention is required. However, decentralisation without accountability can create inconsistency. Effective governance must therefore balance delegated emergency authority with clearly defined responsibilities and subsequent accountability ('t Hart et al., 1993; Post et al., 2022; Ansell et al., 2010). The UAE's national emergency structures provide a useful institutional environment for such coordination. Centralised emergency-management capabilities and inter-agency information exchange can provide museum decision makers with situational information that would be difficult for individual cultural institutions to obtain independently (Jin, 2024; Veil et al., 2011; Steen & Pollock, 2022).

International Legal Protection of Museums and Cultural Property

The 1954 Hague Convention represents a foundational international legal instrument for protecting cultural property during armed conflict. It recognises that damage to cultural property constitutes damage to the cultural heritage of humanity and requires protective measures. Importantly, the Convention incorporates the principle of safeguarding cultural property during peacetime rather than waiting until armed conflict begins (Hague Convention, 1954; Hladík, 2022). The Second Protocol of 1999 strengthened the international framework by expanding implementation, dissemination, preparedness, and international cooperation. This preventive logic aligns closely with contemporary risk-management principles: institutions should identify vulnerabilities, establish safeguards, train relevant personnel, and coordinate protective mechanisms before emergencies occur (Second Protocol to the Hague Convention, 1999; Hladík, 2022).

The UNESCO 1970 Convention complements these protections by addressing illicit import, export, and transfer of cultural property. Museums therefore require accurate inventories, acquisition controls, documentation systems, and cooperation with law-enforcement and judicial authorities. Documentation is particularly important during instability because theft or illegal removal becomes considerably more difficult to address when ownership, provenance, or collection records are incomplete (UNESCO, 1970; ICOM, 2017). The Sendai Framework for Disaster Risk Reduction 2015–2030 adds a broader resilience perspective. Its priorities concerning understanding risk, strengthening risk governance, investing in resilience, and enhancing preparedness support a transition from disaster response to disaster-risk governance. Applied to museums, this approach means that cultural institutions should become active participants in national and local resilience systems (UNDRR, 2015; García, 2020; Boshier et al., 2020).

Business Continuity and Organisational Resilience

Business continuity addresses the capacity of an organisation to maintain critical functions during disruption and recover them within acceptable timeframes. ISO 22301:2019 provides a systematic framework for business-continuity management and emphasises planning, implementation, monitoring, testing, and continuous improvement (ISO, 2019; Galaitsi et al., 2023; Duchek, 2020). For museums, continuity requires identification of functions that cannot be allowed to fail completely. These may include physical security, environmental

monitoring, collection documentation, emergency communication, digital systems, fire protection, conservation intervention, and coordination with authorities (Somers, 2009; Boin & McConnell, 2007; Koronis, 2018).

Digitalisation is increasingly important. Secure digital inventories, remote backups, digital images, provenance information, collection-location records, and redundant information systems can support both emergency decision-making and post-crisis recovery. Nevertheless, digital systems themselves introduce cybersecurity and infrastructure risks. Digital resilience should therefore be integrated into the wider risk-management architecture (Della Lucia et al., 2024; Ginzarly & Teller, 2025). Continuity plans must also be tested. A plan that exists only as a document may provide little protection when employees do not understand their responsibilities. Simulation exercises, emergency drills, communication testing, scenario analysis, and periodic plan reviews are therefore necessary for converting formal planning into organisational capability (Somers, 2009; Jin, 2024; Galaitsi et al., 2023).

The UAE Legal and Institutional Context

The UAE provides an important setting for examining integrated museum governance because heritage protection operates alongside increasingly developed emergency, crisis-management, and continuity arrangements. Federal Law No. 11 of 2017 concerning antiquities establishes legal foundations for archaeological and heritage protection, while emirate-level legislation provides additional mechanisms. Abu Dhabi's cultural heritage framework, for example, strengthens the protection, preservation, management, and promotion of cultural heritage (UAE Federal Law No. 11 of 2017; UAE National Policy for Preserving Modern Architectural Heritage, 2024). At the institutional level, NCEMA provides a national architecture for emergency, crisis, and disaster management. The UAE's business-continuity guidance and national continuity arrangements encourage organisations to identify critical activities, assess risks, develop response mechanisms, and establish recovery capabilities. These principles are relevant to museums because cultural institutions form part of the national institutional and cultural infrastructure (NCEMA, 2020, 2022; ISO, 2019). The UAE context consequently illustrates how museum governance can potentially be connected to a broader national resilience ecosystem. Cultural authorities can establish heritage priorities; museums can develop internal governance and risk-management systems; NCEMA and emergency agencies can support crisis preparedness; security and judicial institutions can respond to theft and illicit trafficking; and digital systems can facilitate documentation and recovery (UNESCO, 2010; UNDRR, 2015; Ansell et al., 2010).

Theoretical Gap and Integrated Perspective

Despite the value of these streams of literature, they remain insufficiently integrated. Governance literature explains responsibility, accountability, transparency, and institutional control. Risk-management literature explains identification and treatment of uncertainty. Crisis and decision-making literature explains organisational action under time pressure and incomplete information. Cultural-property law establishes legal protection, while business-continuity literature addresses operational survival and recovery (Linnenluecke, 2017; Duchek, 2020; Darkow, 2019; Galaitsi et al., 2023). Museum survival in a complex crisis, however, involves all these dimensions simultaneously (Bosher et al., 2020; Koronis, 2018; García, 2020). A museum cannot implement effective risk management without governance because risk responsibilities and resources must be allocated. Governance cannot ensure

survival without risk information because decision makers need to understand threats. Risk information cannot prevent losses without effective decision-making because emergencies require action. Decision-making cannot remain legitimate and coordinated without legal authority. Finally, emergency response alone cannot guarantee institutional survival unless critical functions can continue and recovery can occur (Arena et al., 2010; Mikes & Kaplan, 2014; Steen & Pollock, 2022; Galaitsi et al., 2023).

This study therefore conceptualises museum survival as the outcome of an integrated system: Museum Governance → Risk Preparedness → Adaptive Decision-Making → Crisis Response and Business Continuity → Museum Survival and Institutional Resilience (Duchek, 2020; Darkow, 2019; Linnenluecke, 2017; Koronis, 2018). Legal and institutional frameworks surround this process by defining authority, obligations, accountability, cooperation, and standards of protection. The framework therefore moves beyond viewing governance as an administrative mechanism and conceptualises it as an institutional capability for protecting cultural heritage and sustaining museums under conditions of severe uncertainty.

Methodology

This study employed a qualitative descriptive-analytical and doctrinal legal research design (Bowen, 2009; Hutchinson & Duncan, 2012). The approach was selected because the research seeks to explain the interaction among museum governance, risk management, decision-making dynamics, cultural-property protection, and institutional continuity rather than test statistical relationships among variables. The units of analysis consisted of legal, regulatory, policy, institutional, and scholarly documents relevant to museum governance and high-risk environments. The documentary corpus included the UAE Federal Law No. 11 of 2017 concerning antiquities, relevant emirate-level cultural heritage legislation, UAE emergency and business-continuity frameworks, the 1954 Hague Convention and its 1999 Second Protocol, the UNESCO 1970 Convention, the Sendai Framework 2015–2030, ICOM professional principles, ISO 31000:2018, ISO 22301:2019, and relevant UNESCO, OECD, UNDP, and UNDRR guidance. Supporting scholarly works concerning risk governance, organisational resilience, and decision-making were also examined (Hague Convention, 1954; UNESCO, 1970, 2010, 2015; UNDRR, 2015; ISO, 2018, 2019; ICOM, 2017). Documents were analytically organised around four themes: (1) museum governance, (2) risk management and preparedness, (3) decision-making under uncertainty, and (4) legal and institutional mechanisms supporting continuity and survival. Deductive reasoning was subsequently used to integrate these dimensions into a unified analytical framework (Bowen, 2009). As this is documentary and doctrinal research, no human respondents, questionnaire, statistical sample, or respondent-sampling procedure was employed. The evidence base consists of authoritative legal and institutional documents and relevant scholarly literature.

Results and Discussion

Governance Functions as the Institutional Foundation of Museum Survival

The first finding indicates that good governance represents a foundational condition for museum survival (OECD, 2015; Arena et al., 2010; Koronis, 2018). Governance is important not merely because it improves routine administrative efficiency but because it determines whether an institution can respond coherently when normal organisational arrangements are disrupted. Transparency, accountability, clearly allocated responsibilities, internal control, stakeholder participation, efficiency, flexibility, and legal compliance collectively strengthen

institutional readiness. In high-risk environments, these characteristics enable museum managers to determine who possesses authority to initiate emergency procedures, approve the relocation of collections, communicate with government agencies, restrict public access, activate continuity plans, or allocate emergency resources (Post et al., 2022; Ansell et al., 2010; Jin, 2024).

This finding expands conventional interpretations of museum governance. Governance should not be understood solely as an administrative or ethical framework. Under conditions of high risk, it becomes a survival infrastructure (Koronis, 2018; Duchek, 2020; Darkow, 2019). Governance establishes the institutional architecture through which risk information is transformed into authorised action. This observation is consistent with OECD governance principles emphasising the connection between effective governance and risk management. It also corresponds with ICOM's professional expectations regarding institutional responsibility for collections and their transmission to future generations (ICOM, 2017; OECD, 2015). Consequently, museum boards and senior managers should treat crisis preparedness as a governance responsibility rather than delegating it entirely to security or conservation departments.

Risk Management Converts Governance into Preparedness

The second finding is that risk management acts as the operational bridge between governance and museum survival (ISO, 2018; Arena et al., 2010; Mikes & Kaplan, 2014). Governance establishes responsibilities, whereas risk management enables those responsible actors to identify what can threaten institutional objectives and determine appropriate treatments. The ISO 31000 approach is especially applicable because museums operate under multiple forms of uncertainty. A museum's risk environment may include fire, flooding, armed conflict, theft, cyber incidents, infrastructure breakdown, environmental deterioration, financial disruption, loss of utilities, and human-resource shortages. These risks should not be managed separately when they can cascade into one another (Bosher et al., 2020; Fu et al., 2022; Liang et al., 2024).

For example, political or military instability may interrupt electricity, which can affect environmental controls and digital systems, which can subsequently threaten collections and documentation. Similarly, natural disasters may damage physical infrastructure while simultaneously limiting access by emergency services. An integrated risk register and scenario-based planning are therefore more suitable than isolated risk procedures (Ansell et al., 2010; Galaitsi et al., 2023; Aktürk & Hauser, 2025).

The UAE framework reinforces this approach through national emergency-management and business-continuity mechanisms. The analysis indicates that museums can benefit from integrating their internal risk systems with wider government emergency arrangements. Such integration is particularly important because severe emergencies frequently exceed the response capacity of an individual museum (NCEMA, 2020, 2022).

Risk management also strengthens prevention. The Hague Convention's emphasis on peacetime safeguarding demonstrates that cultural protection should begin before a conflict or disaster. This supports a proactive model in which inventories, emergency plans, conservation priorities, backup systems, evacuation procedures, security protocols, and

institutional partnerships are established before threats materialise (Hague Convention, 1954; UNESCO, 2010; Hladík, 2022).

Adaptive Decision-Making Is Critical under Uncertainty

The third finding concerns decision-making dynamics. High-risk environments require decisions to be made quickly even when information is incomplete. This supports Simon's bounded rationality perspective: museum managers cannot wait for complete information because such information may never become available during a rapidly evolving emergency (Simon, 1997; Cosgrave, 1996; Okoli & Hatami-Marbini, 2021). The effectiveness of crisis decision-making therefore depends less on perfect knowledge and more on institutional preparedness for uncertainty (Schraagen & van de Ven, 2008; Steen & Pollock, 2022; Jin, 2024). Pre-established decision authority, emergency communication systems, escalation protocols, scenario planning, and access to real-time information can reduce decision delays. The finding also supports organisational resilience arguments associated with Weick and Sutcliffe. Resilient institutions can recognise changing circumstances, reorganising resources, and adapting actions. Museum crisis decisions should therefore not be considered irreversible choices. Decisions may need to be continuously reassessed as threats evolve (Weick & Sutcliffe, 2007; Duchek, 2020; Darkow, 2019). This has important governance implications. Museums require a balance between central control and operational flexibility. Excessive centralisation can delay urgent interventions, whereas excessive decentralisation can generate inconsistent actions and unclear accountability. An integrated governance model should consequently define both emergency delegation and accountability before crises occur ('t Hart et al., 1993; Post et al., 2022). The UAE's national emergency structures provide a useful institutional environment for such coordination. Centralised emergency-management capabilities and inter-agency information exchange can provide museum decision makers with situational information that would be difficult for individual cultural institutions to obtain independently.

Legal Protection Is Necessary but Insufficient without Operational Integration

The fourth finding demonstrates that legal protection constitutes a necessary but insufficient condition for museum survival. UAE heritage legislation and international cultural-property instruments establish substantial protective obligations. However, formal rules cannot protect collections unless institutions possess the capacity to implement them (Hague Convention, 1954; UNESCO, 1970; UAE Federal Law No. 11 of 2017). This distinction is particularly important. A legal requirement to protect cultural property has limited practical value if a museum lacks an updated inventory, trained emergency personnel, secure digital records, clear evacuation priorities, backup storage arrangements, or coordination protocols with emergency and security authorities (Bosher et al., 2020; García, 2020; Galaitsi et al., 2023). The findings therefore reveal an implementation relationship between law and institutional capability. Law establishes the obligation and authority to protect; governance allocates responsibility; risk management identifies threats; decision-making activates responses; and continuity management maintains essential operations (Arena et al., 2010; ISO, 2018, 2019; Duchek, 2020).

The Integrated Museum Survival Framework

The first component is governance architecture, comprising accountability, transparency, responsibility allocation, legal compliance, stakeholder coordination, strategic oversight, and

resource allocation (OECD, 2015; Arena et al., 2010). The second is risk intelligence and preparedness, incorporating risk identification, assessment, prioritisation, scenario planning, preventive conservation, emergency planning, and early-warning mechanisms (ISO, 2018; Bosher et al., 2020; Aktürk & Hauser, 2025). The third is adaptive decision-making, encompassing delegated authority, rapid information processing, crisis communication, scenario-based choices, and continuous reassessment (Simon, 1997; Okoli & Hatami-Marbini, 2021; Steen & Pollock, 2022). The fourth is response and continuity capability, including emergency operations, collection protection, personnel safety, digital documentation, alternative operating arrangements, recovery procedures, and business-continuity planning (ISO, 2019; Galaitsi et al., 2023; Somers, 2009). The fifth is institutional learning and resilience, involving post-crisis evaluation, updating of plans, training, simulation exercises, regulatory review, and organisational learning (Duchek, 2020; Darkow, 2019; Koronis, 2018).

These components should operate cyclically rather than sequentially. Lessons obtained from crisis response should feed back into governance arrangements and risk assessments. Similarly, changes in legislation, technology, collections, security conditions, or environmental threats should trigger reassessment of existing plans. The findings are consistent with the original study's conclusion that effective museum sustainability requires an integrated governance system founded on strategic planning, risk management, sound decision-making, and an effective legal framework. The analysis further demonstrates that institutional coordination is essential because museum survival depends on relationships extending beyond museum boundaries to cultural authorities, emergency agencies, civil defence, police, judicial bodies, conservation specialists, digital-service providers, and international organisations (Ansell et al., 2010; Veil et al., 2011; García, 2020). The UAE provides a strong foundation for this integrated approach through its combination of cultural heritage legislation and national emergency and business-continuity arrangements. Nevertheless, the effectiveness of these mechanisms ultimately depends on institutional implementation. Legal sophistication alone cannot establish resilience unless museum-level procedures, personnel capabilities, information systems, and coordination mechanisms are continuously maintained and tested. The principal implication is therefore that museum survival should be treated as an integrated governance outcome rather than as an isolated conservation, security, or emergency-management issue. The museum that survives a complex crisis is not simply the museum with the strongest building or most extensive collection-protection rules. It is the institution capable of anticipating threats, coordinating stakeholders, making timely decisions, protecting critical assets, continuing essential functions, recovering from disruption, and learning from the event (Linnenluecke, 2017; Duchek, 2020; Galaitsi et al., 2023).



Figure 1: Integrated Museum Survival Framework

Contributions of the Study

This study provides theoretical, legal, managerial, and policy contributions. Theoretically, it extends museum governance literature by positioning institutional survival and resilience as outcomes of integrated governance capability. Previous perspectives commonly address governance, heritage protection, risk management, business continuity, and crisis decision-making independently. The framework developed in this study connects these domains and explains how they operate collectively under conditions of uncertainty (Linnenluecke, 2017; Duchek, 2020; Darkow, 2019). Second, the study extends bounded rationality and organisational resilience thinking into the museum-governance context. Decision-making under crisis conditions is conceptualised not as isolated managerial behaviour but as a capability influenced by governance arrangements, information availability, risk preparedness, legal authority, and inter-institutional coordination. This helps explain why similar external threats can produce substantially different outcomes across cultural institutions (Simon, 1997; Okoli & Hatami-Marbini, 2021; Steen & Pollock, 2022). Third, the study contributes to cultural-heritage law by distinguishing between formal legal protection and operational protective capacity. International conventions and national legislation provide essential normative foundations, but effective heritage protection requires institutional mechanisms capable of translating legal obligations into preventive and responsive action (Hague Convention, 1954; Hladík, 2022; UNESCO, 1970).

From a managerial perspective, the framework provides museum leaders with a structure for connecting strategic governance with practical preparedness. It suggests that museums should integrate risk registers, emergency authority, collection documentation, digital backups, continuity plans, communication arrangements, stakeholder coordination, training, and periodic exercises within their governance systems (ISO, 2018, 2019; Galaitsi et al., 2023;

Jin, 2024). The study also contributes to policy development in the UAE by demonstrating the potential value of stronger integration between cultural-sector governance and national emergency, crisis, disaster-management, and business-continuity arrangements. Rather than treating museums exclusively as cultural facilities, policymakers can recognise them as part of the national resilience infrastructure because they safeguard assets that embody historical memory and national identity (NCEMA, 2020, 2022; UAE Federal Law No. 11 of 2017). Overall, the principal contribution is the shift from protecting museum objects during crises to governing museums for survival before, during, and after crises. This distinction provides a broader foundation for future research and policy on cultural-institution resilience.

Limitations and Future Research

This study has several limitations. First, it is based on descriptive-analytical, doctrinal, and documentary evidence and therefore does not empirically test the proposed integrated framework within museums. Second, although international standards and conventions are considered, the applied legal analysis focuses primarily on the UAE, which may limit direct generalisation to countries with different legal, political, cultural, or emergency-management systems. Third, the study examines institutional arrangements rather than the experiences of museum directors, curators, emergency managers, conservation professionals, or government officials.

Future research should empirically validate the framework through interviews, comparative case studies, surveys, or mixed-method designs involving museums operating under different risk conditions (Duchek, 2020; Linnenluecke, 2017). Comparative studies across Gulf Cooperation Council countries and conflict-affected regions would be particularly useful. Researchers could also develop measurable constructs for governance readiness, risk-management maturity, adaptive decision-making, business-continuity capability, and museum resilience and test their relationships quantitatively. Future studies should additionally examine emerging cyber risks, artificial intelligence, digital twins, remote monitoring, and digital collection preservation as components of museum resilience (Della Lucia et al., 2024; Ginzarly & Teller, 2025).

Conclusion

Museums operating in high-risk environments face interconnected threats that cannot be effectively addressed through conventional administration or cultural-property law alone. This study demonstrates that museum survival depends on an integrated institutional architecture connecting governance, risk management, adaptive decision-making, legal protection, emergency preparedness, coordination, and business continuity (Bosher et al., 2020; Duchek, 2020; Galaitsi et al., 2023; Koronis, 2018). The analysis of international frameworks and the UAE context shows that effective legislation provides an essential foundation, but resilience ultimately depends on the ability of institutions to convert legal requirements into operational capability. Good governance defines responsibilities and accountability; risk management anticipates threats; adaptive decision-making enables timely action under uncertainty; and continuity management supports the preservation and recovery of critical functions (ISO, 2018, 2019; Simon, 1997; Arena et al., 2010). The study therefore proposes an integrated museum-survival framework in which preparedness, response, continuity, and institutional learning operate as interconnected governance processes. For museums, resilience should not begin when a crisis occurs. It must be

institutionalised during normal operations through planning, training, coordination, documentation, risk assessment, and continuous evaluation. Such integration can strengthen the capacity of museums not only to protect collections but also to preserve their cultural mission, institutional continuity, and role as custodians of collective memory for future generations (ICOM, 2017; UNESCO, 2015; UNDRR, 2015). Theoretically, this study extends existing knowledge by integrating museum governance, risk management, adaptive decision-making, and organisational resilience into a unified framework for museum survival. Contextually, it demonstrates how this integrated approach can operate within the UAE's legal, cultural heritage, and emergency-management environment. The study therefore advances existing knowledge by linking previously fragmented perspectives and showing how coordinated governance and preparedness can strengthen museum resilience in high-risk environments.

References

- Aktürk, G., & Hauser, S. J. (2025). Integrated understanding of climate change and disaster risk for building resilience of cultural heritage sites. *Natural Hazards*, 121, 4309–4334.
- Ansell, C., Boin, A., & Keller, A. (2010). Managing transboundary crises: Identifying the building blocks of an effective response system. *Journal of Contingencies and Crisis Management*, 18(4), 195–207.
- Arena, M., Arnaboldi, M., & Azzone, G. (2010). The organizational dynamics of enterprise risk management. *Accounting, Organizations and Society*, 35(7), 659–675.
- Beasley, M. S., Clune, R., & Hermanson, D. R. (2005). Enterprise risk management: An empirical analysis of factors associated with the extent of implementation. *Journal of Accounting and Public Policy*, 24(6), 521–531.
- Boin, A., & McConnell, A. (2007). Preparing for critical infrastructure breakdowns: The limits of crisis management and the need for resilience. *Journal of Contingencies and Crisis Management*, 15(1), 50–59.
- Bosher, L., Kim, D., Okubo, T., Chmutina, K., & Jigyasu, R. (2020). Dealing with multiple hazards and threats on cultural heritage sites: An assessment of 80 case studies. *Disaster Prevention and Management: An International Journal*, 29(1), 109–128.
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40.
- Cosgrave, J. (1996). Decision making in emergencies. *Disaster Prevention and Management: An International Journal*, 5(4), 28–35.
- Darkow, P. M. (2019). Beyond “bouncing back”: Towards an integral, capability-based understanding of organizational resilience. *Journal of Contingencies and Crisis Management*, 27(2), 145–156.
- Della Lucia, M., Dore, G., & Umar, R. M. (2024). Handling the open culture dilemma in museum management: An exploratory interdisciplinary study. *Scientometrics*, 129, 7699–7733.
- Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, 13, 215–246.
- Duchek, S., Raetzke, S., & Scheuch, I. (2020). The role of diversity in organizational resilience: A theoretical framework. *Business Research*, 13, 387–423.
- Fu, L., Ding, M., & Zhang, Q. (2022). Flood risk assessment of urban cultural heritage based on PSR conceptual model with game theory and cloud model—A case study of Nanjing. *Journal of Cultural Heritage*, 58, 1–11.

- Galaitis, S. E., Pinigina, E., Keisler, J. M., Pescaroli, G., Keenan, J. M., & Linkov, I. (2023). Business continuity management, operational resilience, and organizational resilience: Commonalities, distinctions, and synthesis. *International Journal of Disaster Risk Science*, 14, 713–721.
- García, B. M. (2020). Resilient cultural heritage: From global to national levels—The case of Bhutan. *Disaster Prevention and Management: An International Journal*, 29(1), 36–46.
- Ginzarly, M., & Teller, J. (2025). Leveraging social media for resilient cultural heritage: A people-centred conceptual framework for community engagement and crisis response. *Built Heritage*, 9, 40.
- Giusti, S. (2024). Museums after the pandemic, from resilience to innovation: The case of the Uffizi. *International Journal of Cultural Policy*, 30(1), 67–80.
- Gordon, L. A., Loeb, M. P., & Tseng, C. Y. (2009). Enterprise risk management and firm performance: A contingency perspective. *Journal of Accounting and Public Policy*, 28(4), 301–327.
- Hladík, J. (2022). How the guidelines for the implementation of the 1999 Second Protocol to the Hague Convention of 1954 contribute to better protection of cultural property. *International Review of the Red Cross*.
- Hutchinson, T., & Duncan, N. (2012). Defining and describing what we do: Doctrinal legal research. *Deakin Law Review*, 17(1), 83–119.
- International Council of Museums. (2017). *ICOM code of ethics for museums*.
- International Organization for Standardization. (2018). *ISO 31000:2018 risk management—Guidelines*.
- International Organization for Standardization. (2019). *ISO 22301:2019 security and resilience—Business continuity management systems—Requirements*.
- Jin, Y. (2024). “READINESS”: A keystone concept beyond organizational crisis preparedness and resilience. *Journal of Contingencies and Crisis Management*.
- Jones, Z. M., & Pappas, T. (2023). Developing an identities-based approach to support more robust resilience and recovery in heritage planning and management. *Built Heritage*, 7, 2.
- Koronis, E. (2018). Better than before: The resilient organization in crisis mode. *Journal of Business Strategy*, 39(1), 32–42.
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255.
- Liang, L., Chen, Y., Gong, A., & Sun, H. (2024). A modified geographical weighted regression model for better flood risk assessment and management of immovable cultural heritage sites at large spatial scales. *Journal of Cultural Heritage*, 68, 276–286.
- Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. *International Journal of Management Reviews*, 19(1), 4–30.
- Magliacani, M. (2015). *Managing cultural heritage: Ecomuseums, community governance, social accountability*. Palgrave Macmillan.
- McShane, M. (2018). Enterprise risk management: History and a design science proposal. *The Journal of Risk Finance*, 19(2), 137–153.
- Mikes, A., & Kaplan, R. S. (2014). *Towards a contingency theory of enterprise risk management* [Working paper]. Harvard Business School.

- Mokline, B. (2021). Organizational resilience as response to a crisis: Case of COVID-19 crisis. *Continuity & Resilience Review*, 3(3), 232–247.
- National Emergency Crisis and Disaster Management Authority. (2020). *National business continuity guidelines*. United Arab Emirates.
- National Emergency Crisis and Disaster Management Authority. (2022). *National emergency and crisis management guidance*. United Arab Emirates.
- Organisation for Economic Co-operation and Development. (2015). *Recommendation of the Council on the governance of critical risks*.
- Okoli, J., & Hatami-Marbini, A. (2021). *Managing complex crises through the lens of intuitive expertise: A naturalistic decision-making perspective*. [Source/publication details required]
- Palumbo, R. (2023). Surviving COVID-19: What museums and cultural institutions can do to attract cultural tourists and get through the pandemic. *International Review on Public and Nonprofit Marketing*, 20, 905–926.
- Post, C., De Smet, H., Uitdewilligen, S., Schreurs, B., & Leysen, J. (2022). Participative or directive leadership behaviors for decision-making in crisis management teams? *Small Group Research*, 53(5). [Page range required]
- Schraagen, J. M., & van de Ven, J. G. M. (2008). Improving decision making in crisis response through critical thinking support. *Journal of Cognitive Engineering and Decision Making*, 2(4), 311–327.
- Simon, H. A. (1997). *Administrative behavior: A study of decision-making processes in administrative organizations* (4th ed.). Free Press.
- Snider, J. (2024). The wheel is already invented: Planning for the next crisis. *Collections: A Journal for Museum and Archives Professionals*, 20(2). [Page range required]
- Somers, S. (2009). Measuring resilience potential: An adaptive strategy for organizational crisis planning. *Journal of Contingencies and Crisis Management*, 17(1), 12–23.
- Steen, R., & Pollock, K. (2022). Effect of stress on safety-critical behaviour: An examination of combined resilience engineering and naturalistic decision-making approaches. *Journal of Contingencies and Crisis Management*, 30, 339–351.
- Hart, P., Rosenthal, U., & Kouzmin, A. (1993). Crisis decision making: The centralization thesis revisited. *Administration & Society*, 25(1). [Page range required]
- UNESCO. (1954). *Convention for the protection of cultural property in the event of armed conflict*.
- UNESCO. (1970). *Convention on the means of prohibiting and preventing the illicit import, export and transfer of ownership of cultural property*.
- UNESCO. (2010). *Managing disaster risks for world heritage*.
- UNESCO. (2015). *Recommendation concerning the protection and promotion of museums and collections, their diversity and their role in society*.
- UNESCO. (1999). *Second Protocol to the Hague Convention of 1954 for the Protection of Cultural Property in the Event of Armed Conflict*.
- United Arab Emirates. (2017). *Federal Law No. 11 of 2017 concerning antiquities*.
- United Arab Emirates. (2024). *National policy for preserving the modern architectural heritage of the United Arab Emirates*.
- United Nations Office for Disaster Risk Reduction. (2015). *Sendai framework for disaster risk reduction 2015–2030*.
- United Nations Office for Disaster Risk Reduction. (2022). *Global assessment report on disaster risk reduction*.

- Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A work-in-process literature review: Incorporating social media in risk and crisis communication. *Journal of Contingencies and Crisis Management*, 19(2), 110–122.
- Weick, K. E., & Sutcliffe, K. M. (2007). *Managing the unexpected: Resilient performance in an age of uncertainty* (2nd ed.). Jossey-Bass.