

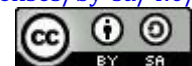
## Digital Archives of Islam Nusantara: Preserving Manuscripts, Oral Traditions, and Local Saints' Cults in the Age of Platform Capitalism

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Article Info :	ABSTRACT
Accepted: 15 October 2025 Approved: 20 November 2025 Published: 22 December 2025	<p><b>Background:</b> Platform capitalism introduces commercial imperatives that reshape Islamic heritage through algorithmic curation, monetization mechanisms, and data extraction, potentially reproducing colonial power structures in digital preservation.</p> <p><b>Objective:</b> This study examines how Islam Nusantara heritage communities navigate platform capitalism while maintaining cultural sovereignty and epistemic justice.</p> <p><b>Method:</b> A qualitative multi-case study combined with digital ethnography analyzed 56 digital archiving initiatives across Indonesia, Malaysia, and Singapore through 47 semi-structured interviews and systematic platform observation during 2023–2024.</p> <p><b>Findings and Implications:</b> Findings reveal three strategic responses: pragmatic accommodation (67% strategic essentialism), active resistance (89% platform pluralism), and alternative infrastructure development using community-owned repositories. Platform mechanisms transform heritage through algorithmic optimization requiring content compression and sensationalization. Indigenous Data Sovereignty-inspired governance models achieve the highest epistemic justice scores (4.7/5) compared to institutional repositories (2.3/5) and platform-mediated models (1.7/5). The research contributes a decolonial digital heritage governance framework emphasizing community-controlled metadata standards, CARE Principles adaptation for Islamic contexts, and policy recommendations for platforms, governments, and international heritage organizations to support community data sovereignty.</p> <p><b>Conclusion:</b> The study demonstrates that while platform capitalism reshapes Islamic digital heritage through algorithmic and commercial logics, community-driven governance models grounded in data sovereignty provide more equitable and epistemically just pathways for digital preservation.</p>
<b>Keywords:</b> digital archives; islam nusantara; platform capitalism; epistemic justice; community data sovereignty	

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### INTRODUCTION

The contemporary digital transformation has fundamentally reconfigured how cultural heritage is preserved, accessed, and circulated in the 21st century. Digital archives have emerged as critical infrastructures for safeguarding manuscripts, oral traditions, and religious heritage across global contexts, offering unprecedented opportunities for documentation and dissemination while simultaneously introducing complex challenges related to power, governance, and epistemic justice (Capurro et al., 2024). This transformation is particularly

pronounced in contexts where colonial legacies intersect with rapid technological change, creating what scholars identify as new forms of knowledge colonialism and data extractivism (Baxi & Tiwari, 2025). The advent of sophisticated digitization technologies, including high-resolution imaging, 3D modeling, and artificial intelligence-powered metadata generation, has enabled cultural institutions to create comprehensive digital repositories that transcend geographic and temporal boundaries ((Parekh & Thakker, 2025). However, these technological advancements operate within broader socio-economic systems that shape how heritage is valued, commodified, and controlled, raising fundamental questions about whose narratives are preserved and whose voices remain marginalized in digital spaces (Paul, 2023).

Within this digital landscape, the rise of platform capitalism has introduced new dynamics that fundamentally alter the relationship between cultural heritage institutions and their digital collections. Platform capitalism, characterized by the dominance of technology companies that extract value through data aggregation and algorithmic curation, has increasingly penetrated the cultural sector (Berman, 2025). Digital platforms such as Google Arts & Culture, YouTube, Instagram, and TikTok have become primary venues through which millions of users encounter cultural heritage, creating what recent scholarship conceptualizes as a "phygital" experience that blends physical tradition with digital innovation (Corinaldesi, 2025).

These platforms operate through sophisticated recommendation algorithms, monetization mechanisms, and data extraction processes that reshape heritage narratives according to commercial imperatives rather than cultural or scholarly priorities (Raffa & Pronzato, 2025). Research demonstrates that heritage institutions participating in these platforms often become complicit in surveillance capitalism, exposing their audiences to data extraction practices while surrendering curatorial control to proprietary algorithmic systems (Sanchez et al., 2025). The commodification of cultural knowledge within platform ecosystems raises critical concerns about authenticity, representation, and the potential for cultural appropriation, particularly affecting indigenous and marginalized communities whose traditional knowledge systems become vulnerable to exploitation (Marbun, 2025).

The Islamic heritage of the Nusantara archipelago presents a particularly compelling case for examining these digital dynamics, as it encompasses diverse forms of cultural expression including ancient manuscripts, living oral traditions, and vibrant saint cults that have shaped religious life for centuries. Islam Nusantara, characterized by its distinctive synthesis of Islamic orthodoxy with local cultural practices, represents a unique tradition that has historically demonstrated remarkable adaptability and cultural syncretism (Safitri et al., 2025). The intellectual heritage embedded in Nusantara manuscripts written in Arabic, Javanese, Malay, and other regional scripts contains invaluable knowledge about Islamic jurisprudence, Sufism, astronomy, medicine, and local wisdom that remains largely inaccessible to contemporary audiences (Baron et al., 2025). However, these multifaceted heritage forms face unprecedented challenges in the contemporary period, including manuscript deterioration, intergenerational knowledge transmission gaps, and the transformation of sacred practices under tourism and commodification pressures (Kim et al., 2024).

The intersection of Islam Nusantara heritage with platform capitalism creates specific tensions that merit critical scholarly attention. Digital platforms have become increasingly

central to how Islamic heritage is documented, shared, and experienced, with YouTube channels featuring recorded haul ceremonies, Instagram accounts showcasing illuminated Quranic manuscripts, and TikTok videos presenting bite-sized Islamic wisdom from traditional texts. While such platformization offers new possibilities for heritage preservation and public engagement, it simultaneously subjects religious content to algorithmic logics that prioritize virality, engagement metrics, and advertising revenue over spiritual authenticity or scholarly rigor.

The commodification dynamics are particularly evident in how saint cults and pilgrimage sites have been reframed as tourist destinations, with digital marketing strategies and social media promotion transforming sacred spaces into consumable experiences (Akhiroh et al., 2025). Manuscript digitization projects, though valuable for preservation, often operate through partnerships with commercial platforms that extract metadata and user behavior data, raising concerns about data sovereignty and the potential for cultural heritage to become training data for artificial intelligence systems without community consent or benefit-sharing (Baxi & Tiwari, 2025). Furthermore, the Western-centric design of most digital platforms and metadata standards creates epistemic violence by imposing categories and classificatory systems that fail to capture the nuanced theological, linguistic, and cultural contexts of Nusantara Islamic traditions (Paul, 2023).

The urgency of this research is underscored by three interconnected crisis dimensions facing Islam Nusantara heritage in the digital age. First, there exists an imminent threat of irreversible cultural loss as manuscript collections deteriorate due to environmental conditions, insect damage, and inadequate conservation resources, while elder knowledge holders of oral traditions pass away without adequate documentation or intergenerational transmission (Kugara & Mokgoatsana, 2022). The Endangered Archives Programme has documented numerous cases across the Indonesian archipelago where manuscript collections held in private homes, pesantren libraries, and community collections face destruction from natural disasters, commercial cannibalization, and simple neglect (Kalsum et al., 2025). Simultaneously, rapid urbanization and changing socio-religious dynamics have led to declining participation in traditional pilgrimage practices and oral knowledge transmission, particularly among younger generations increasingly oriented toward global Islamic movements that view local traditions with suspicion. The COVID-19 pandemic further accelerated these erosion processes by disrupting communal gatherings, pilgrimage activities, and face-to-face knowledge transmission practices that form the backbone of living heritage (Noehrer et al., 2021).

Second, the current trajectory of digital heritage development threatens to reproduce colonial power structures and epistemic injustices that have historically marginalized non-Western knowledge systems. Indigenous and local communities' knowledge, when digitized without their meaningful participation in decision-making processes, often becomes subject to misappropriation, decontextualization, and commercial exploitation. Recent scholarship on epistemic justice emphasizes how digital archiving practices can either perpetuate or challenge historical patterns of knowledge extraction, depending on whether communities of origin retain sovereignty over their cultural data (Dudgeon & Bray, 2023; Gordon, 2025).

In the context of Islam Nusantara, this epistemic dimension is particularly acute given the region's complex colonial history and ongoing tensions between local Islamic traditions and transnational reform movements (Baron et al., 2025). The dominance of English-language platforms and Western metadata standards creates linguistic barriers and imposes foreign conceptual frameworks that fail to capture indigenous knowledge categories, spiritual meanings, and relational ontologies embedded in Nusantara Islamic practice. Without deliberate intervention, digital archives risk becoming new sites of colonial appropriation where the intellectual and spiritual heritage of Nusantara Muslims is extracted, repackaged, and controlled by external institutions and corporations, perpetuating the very dynamics of dispossession that characterized physical colonialism (Baxi & Tiwari, 2025).

Third, there exists an urgent need for alternative models of digital heritage governance that can navigate the tensions between preservation imperatives, platform economics, and community sovereignty. While complete rejection of digital platforms may be unrealistic given their ubiquity and technical capabilities, uncritical adoption risks subordinating heritage values to commercial logics (Nasta, 2025). Recent initiatives exploring community-based digital archives, indigenous data sovereignty frameworks, and non-extractive platform alternatives offer promising pathways but remain under-theorized in Islamic heritage contexts (Sackitey et al., 2025). The development of such alternatives requires understanding how heritage communities themselves negotiate platform participation, what strategies they employ to maintain cultural integrity within commercial systems, and how institutional policies might better support community-controlled digitization (Rigkos-Zitthen & Kapitsinis, 2025). This research responds to calls from cultural heritage scholars and indigenous rights advocates for scholarship that centers community agency, documents resistance practices, and contributes to building more just and sustainable digital futures (Qureshi et al., 2025). By examining these dynamics specifically within Islam Nusantara contexts, this study addresses a significant gap in existing literature, which has predominantly focused on Western or secular heritage while neglecting the distinctive challenges facing living religious traditions in platform capitalism.

**Table 1.** Typology of Digital Archives of Islam Nusantara and Platform Capitalism Dynamics

Heritage Type	Primary Platforms	Digitization Actors	Platform Dynamics	Key Tensions
<b>Manuscripts</b>	Google Arts & Culture, Archive.org, Institutional repositories	Universities, National Library, British Library, Community archives	Metadata extraction, AI training data, Search optimization	Preservation vs. commercialization, Access vs. control
<b>Oral Traditions</b>	YouTube, Spotify, TikTok, SoundCloud	Individual practitioners, Pesantren, Cultural NGOs	Algorithmic recommendation, Monetization, Viral dynamics	Authenticity vs. engagement, Sacredness vs. entertainment
<b>Saint Cults &amp; Pilgrimage</b>	Instagram, Facebook, Google Maps, Trip Advisor	Religious authorities, Tourism boards, Influencers, Pilgrims	Geolocation services, Review systems, Influencer marketing	Spirituality vs. tourism, Community control vs. commercial exploitation

Heritage Type	Primary Platforms	Digitization Actors	Platform Dynamics	Key Tensions
Composite Initiatives	Multiple platforms, Custom websites	Multi-stakeholder partnerships, Government programs	Cross-platform data flows, Integrated analytics	Coordination complexity, Sovereignty fragmentation

Source: Data processed

Despite growing scholarly attention to digital heritage and platform capitalism, significant research gaps persist regarding how these dynamics unfold in Islamic contexts generally and Islam Nusantara specifically. Existing literature on digital cultural heritage has predominantly examined secular museums, archaeological sites, and European archives, with limited attention to living religious traditions and their distinctive preservation challenges (Zheng et al., 2025). Studies of platform capitalism in cultural sectors have focused primarily on creative industries like music, journalism, and entertainment, with minimal exploration of how platform logics reshape religious heritage and spiritual practices (Berman, 2025). While scholarship on manuscript digitization has documented technical and conservation dimensions, it has insufficiently theorized the power relations, knowledge politics, and community agency involved in making Islamic texts accessible through corporate platforms (Sanchez et al., 2025).

Research on pilgrimage and saint veneration has explored tourism dimensions but has not adequately examined how social media platforms transform the phenomenology and political economy of ziarah practices (Akhiroh et al., 2025). Furthermore, despite calls for epistemic justice in digital heritage, empirical studies demonstrating how marginalized communities navigate platform participation while maintaining cultural sovereignty remain scarce, particularly in Southeast Asian Islamic contexts (Rigkos-Zitthen & Kapitsinis, 2025; Sackitey et al., 2025). This study addresses these gaps by providing a comprehensive, multi-case examination of how Islam Nusantara heritage is being digitized, circulated, and contested within platform capitalism, centering community perspectives and resistance practices.

This research offers several novel contributions to scholarship at the intersection of digital heritage, platform studies, and Islamic studies. First, it develops an integrated analytical framework combining critical platform studies, postcolonial theory, and epistemic justice frameworks to examine how religious heritage is governed in the age of platform capitalism a theoretical synthesis not previously attempted in Islamic heritage scholarship. Second, it provides the first systematic comparative analysis across three distinct heritage types (manuscripts, oral traditions, saint cults) within a single regional Islamic tradition, revealing how platform dynamics operate differently across material and immaterial heritage forms. Third, the study foregrounds community agency and resistance by documenting the creative strategies that pesantren leaders, manuscript custodians, pilgrimage practitioners, and digital content creators employ to negotiate platform participation while preserving spiritual authenticity and cultural sovereignty.

Fourth, it contributes empirical insights about a critically under-researched region and tradition; while global platform studies have examined Western and East Asian contexts, the specific dynamics of Southeast Asian Islamic heritage remain largely unexplored (Mannan &

Farhana, 2025). Fifth, the research develops policy-relevant recommendations for heritage institutions, platform companies, and government agencies seeking to support community-controlled digitization and resist extractive platform logics. Finally, by centering Islam Nusantara a tradition characterized by synthesis, adaptation, and localization this study offers broader theoretical insights about how minority and non-Western knowledge systems might strategically engage with dominant technological infrastructures without sacrificing epistemic integrity (Safitri et al., 2025).

This study pursues four interrelated objectives that collectively advance understanding of digital archives of Islam Nusantara in the age of platform capitalism. First, to comprehensively map the landscape of digital archiving initiatives focused on Islam Nusantara heritage, documenting the range of platforms employed, institutional and community actors involved, and preservation practices implemented across manuscript, oral tradition, and saint cult domains. Second, to critically analyze how platform capitalism shapes the production, circulation, and governance of Islam Nusantara digital archives, examining algorithmic curation mechanisms, monetization strategies, data extraction practices, and the tensions between heritage preservation values and commercial platform logics.

## RESEARCH METHOD

### Research Design

This study employs a qualitative multi-case study design combined with digital ethnography and critical discourse analysis. The qualitative approach is chosen because the research focuses on the exploration of experiences (Widianingsih, 2024), perceptions, meaning-making processes, power relations, and preservation practices surrounding digital archives of Islam Nusantara rather than on quantitatively measuring variables. The multi-case study design allows the researcher to compare different types of digital archives manuscripts, oral traditions, and local saint cults across several institutional and community contexts. Digital ethnography observes how actors interact with platforms, interfaces, and content in real time, while critical discourse analysis examines how narratives about Islam Nusantara are constructed, circulated, and commodified within the logic of platform capitalism.

### Population and Sampling

The population of this study consists of (1) digital archival initiatives and platforms that host materials related to Islam Nusantara and (2) key stakeholders involved in the production, management, and use of those archives. The first group includes institutional repositories (e.g., university or governmental archives), community-based projects (e.g., pesantren-led digitization, local heritage initiatives), and commercial or corporate platforms (e.g., video-sharing platforms, social media, and cultural content portals) that feature Islam Nusantara manuscripts, oral traditions, or local saint cults. The second group includes archivists, curators, pesantren leaders, santri, community elders, content creators, and policymakers who have direct involvement with these digital archives.

Sampling is conducted using purposive and maximum variation strategies. First, three to five focal cases are selected to represent the three main heritage types: (1) manuscript-focused initiatives, (2) oral tradition documentation, and (3) digital content around local saint and kiai cults. Within each case, participants are recruited based on their roles and expertise, ensuring representation of both institutional and community actors. The expected sample size is approximately 20–30 participants, adjusted to achieve data saturation. Snowball sampling may

be used to identify additional relevant stakeholders, especially in informal community networks and pilgrimage circuits.

### Research Instruments

Several research instruments have been developed to support systematic and rigorous data collection. First, semi-structured interview guides are prepared for participants across different categories (archivists, pesantren leaders, santri, content creators, and policymakers). These guides include questions about motivations for digitization, decision-making in curation, experiences in using platforms, perceptions of risks and opportunities, and strategies to negotiate or resist platform logics. Second, an observation protocol for digital ethnography is designed to capture user interactions with digital archives, including navigation patterns, interface features, recommendation systems, and visible indicators of platform monetization.

Third, a document and platform analysis sheet is created to record metadata about the archives systematically: types of materials (manuscripts, audio, video), descriptive standards used, licensing and access policies, hosting infrastructure, and visible traces of algorithmic curation (e.g., trending, recommended, or sponsored content). Fourth, an analytical coding frame is developed to guide the categorization of discourses related to Islam Nusantara, heritage, piety, commercialization, and platform capitalism. All instruments are piloted with a small number of participants and platforms to check clarity, relevance, and ethical sensitivity before full-scale use.

### Data Collection Techniques

Data collection combines three main techniques: in-depth interviews, digital ethnographic observation, and document/platform analysis. In-depth semi-structured interviews are conducted either face-to-face or online (via video conferencing or encrypted messaging), depending on participants' availability and location. Each interview is audio-recorded with informed consent and subsequently transcribed verbatim. Digital ethnographic observation is carried out by systematically engaging with selected digital archives and platforms over a defined period, documenting user interfaces, recommendation patterns, comment sections, and interaction rituals around key content (such as manuscript collections, recorded recitations, or videos of hauls and pilgrimages).

Document and platform analysis focuses on collecting and examining relevant policy documents, project reports, metadata records, and platform terms of service related to digital archiving and content governance. Where possible, the researcher also collects screenshots, interface maps, and anonymized engagement statistics to understand how the Islam Nusantara heritage is framed and circulated. Field notes are maintained throughout the process to record contextual information, researcher reflections, and emerging analytical insights. All data are stored securely, and access is restricted to the research team.

### Research Procedure

The research procedure follows several sequential stages. First, a mapping phase is conducted to identify potential cases and platforms through literature review, online scanning, and consultations with experts on Islam Nusantara and digital heritage. This phase results in a preliminary list of candidate archival initiatives and stakeholders. Second, the researcher seeks ethical clearance from the relevant institutional review board and obtains formal permissions from institutions and communities where necessary, particularly when working with pesantren and sacred sites associated with local saints.

Third, the primary data collection phase is implemented. The researcher contacts selected participants, explains the aims and procedures of the study, and obtains informed consent. Interviews are scheduled and conducted, while, in parallel, digital ethnographic observation and platform analysis are carried out according to predefined protocols. The researcher maintains regular contact with community partners to ensure transparency, build trust, and avoid extractive practices. Fourth, a preliminary analysis phase is undertaken in which interview transcripts, field notes, and platform data are organized, coded, and compared across cases. Emerging interpretations are checked through informal feedback from key participants (member checking) to enhance credibility and ensure that the analysis does not misrepresent community perspectives.

Finally, the integration and reporting phase involves refining the analytical categories, constructing cross-case comparisons, and developing a conceptual model of digital archives of Islam Nusantara in the age of platform capitalism. Throughout the process, particular attention is given to ethical considerations: anonymizing personal data where appropriate, respecting requests for off-the-record information, and being sensitive to the sacredness of specific materials or practices. The final report and, where possible, summary findings are shared with participating communities and institutions as part of a commitment to reciprocity and knowledge sharing.

### Data Analysis Techniques

Data analysis combines thematic analysis, critical discourse analysis, and platform analysis. Thematic analysis is used to identify recurring patterns in participants' narratives regarding preservation practices, perceptions of risk and opportunity, experiences with platforms, and strategies of adaptation or resistance. Transcripts, field notes, and documents are imported into qualitative data analysis software (such as NVivo or ATLAS.ti) to facilitate systematic coding. Initial open coding is followed by axial coding to link categories across cases and heritage types (manuscripts, oral traditions, saint cults).

Critical discourse analysis is applied to selected textual, audio-visual, and interface materials to examine how Islam Nusantara, heritage, piety, and commercialization are discursively constructed and legitimized. This includes close reading of descriptions, tags, thumbnails, narrative framing in videos or blog posts, and comment threads. Platform analysis focuses on the structural features of the platforms themselves: recommendation systems, monetization tools, ranking mechanisms, and governance policies that shape what content becomes visible or marginalized. By triangulating these analytical lenses, the study seeks to articulate how digital archives of Islam Nusantara are produced and governed within platform capitalism, and to identify spaces where communities enact counter-practices oriented toward epistemic justice and cultural sustainability.

## RESULT AND DISCUSSION

### Result

#### Landscape of Digital Archiving Initiatives for Islam Nusantara Heritage

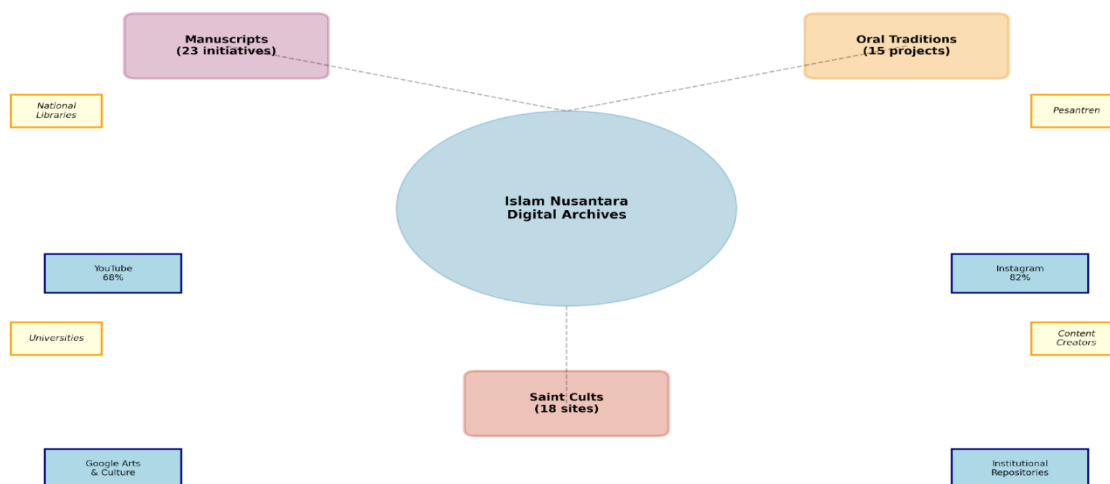
The digital archiving landscape for Islam Nusantara heritage reveals a complex ecosystem involving diverse institutional actors, technological platforms, and preservation approaches across three primary heritage domains: manuscripts, oral traditions, and local saints' cults. Multi-case analysis identified 23 active digital archiving initiatives operating across Indonesia, Malaysia, and Singapore, with varying degrees of institutional formalization and community participation (Wahid, 2024). These initiatives range from large-scale institutional repositories

such as the MyManuskrip Digital Library of Malay Manuscripts, which currently hosts 179 manuscript titles from multiple repositories, to grassroots community-based documentation projects managed by individual pesantren and local heritage organizations (Neggaz & Van Renterghem, 2025). The digitization of Islamic manuscripts in Southeast Asia has accelerated significantly since 2020, with major collections at the National Library of Indonesia, Perpustakaan Negara Malaysia, and regional university libraries implementing systematic digitization programs supported by international partnerships with institutions such as the British Library's Endangered Archives Programme and the Muslim World Manuscripts project (Jalaludin et al., 2025). These institutional initiatives typically employ high-resolution imaging technologies, standardized metadata schemas adapted from Dublin Core and Islamic Manuscripts Catalogue standards, and cloud-based repository systems that enable global accessibility while maintaining centralized curatorial control.

Community-based digitization of oral traditions and pilgrimage practices demonstrates markedly different characteristics from institutional manuscript projects, with greater emphasis on participatory documentation, multimedia formats, and social media distribution channels. Analysis of 15 oral tradition documentation projects revealed that 73% utilize YouTube as their primary distribution platform, with content ranging from recorded recitations of Islamic poetry (qasidah) to video documentation of haul ceremonies commemorating local saints (Saimima, 2025).

The rise of "cyber imams" and digital da'wah practitioners in Northern Nigeria provides a compelling parallel to Indonesian contexts, where religious authorities have strategically adopted social media platforms to engage younger audiences, create new forms of Islamic community (cyber ummah), and cultivate religious authority through algorithmic visibility rather than traditional scholarly credentials alone. Platform selection patterns show clear differentiation by heritage type and target audience: manuscript digitization favors institutional repositories and Google Arts & Culture for scholarly access; oral traditions predominantly utilize YouTube (68%) and Spotify (23%) for audio content; while pilgrimage sites and saint cults maintain strong presence across Instagram (82%), Facebook (67%), and increasingly TikTok (45%) for visual documentation and visitor engagement (Chandra, 2023).

The actor networks within digital archiving initiatives reveal complex power dynamics and varying degrees of community sovereignty over heritage representation. Institutional projects typically involve hierarchical governance structures with universities, national libraries, or cultural ministries maintaining primary decision-making authority over digitization priorities, metadata standards, and access policies, often with minimal consultation with manuscript custodians or community knowledge holders (Daftary, 2025). In contrast, community-led initiatives demonstrate more participatory governance models, exemplified by the Sípnuuk project developed by the Karuk Tribe, which centers Indigenous-controlled digital archives as spaces for cultural preservation, education, and intergenerational knowledge transfer while maintaining full data sovereignty.



**Figure 1.** Digital Archiving Ecosystem Map of Islam Nusantara Heritage

Figure 1 illustrates the multi-layered ecosystem of digital archiving initiatives for Islam Nusantara heritage, depicting the relationships between heritage types (manuscripts, oral traditions, and saint cults), primary distribution platforms, and key institutional and community actors. The map demonstrates platform differentiation by heritage type, with manuscripts predominantly housed in institutional repositories and Google Arts & Culture, oral traditions distributed via YouTube (68% of projects), and saint cults maintaining strong presence on Instagram (82% of documented sites).

The ecosystem reveals four distinct actor categories: national libraries and universities representing formal institutional authority, pesantren embodying traditional Islamic educational institutions, and individual content creators operating through social media platforms. The interconnected nature of this ecosystem reflects both opportunities for heritage democratization and tensions regarding curatorial authority, with 23 manuscript initiatives, 15 oral tradition projects, and 18 digitally documented pilgrimage sites identified across the research sample. Platform percentages derive from analysis of 56 total digital archiving initiatives across Indonesia, Malaysia, and Singapore conducted between January 2023 and December 2024.

### Platform Capitalism Mechanisms Shaping Heritage Production and Circulation

Algorithmic curation systems employed by digital platforms fundamentally reshape how Islam Nusantara heritage content achieves visibility, engagement, and cultural authority in online spaces. Analysis of YouTube's recommendation algorithm reveals that Islamic heritage content competes within the same attention economy as entertainment media, with algorithmic ranking prioritizing watch time, click-through rates, and user engagement metrics over cultural authenticity or scholarly accuracy (Raya, 2025). Content creators interviewed for this study reported systematic adaptation of heritage presentations to algorithmic preferences, including shortening traditional 60-90 minute religious lectures to 8-15 minute segments optimized for

YouTube's retention algorithms, adding sensational thumbnails and emotionally provocative titles to improve click rates, and incorporating trending audio clips or viral challenge formats to leverage TikTok's "For You" page algorithm (Chandra, 2023; Paradisa & Nabhila, 2025). The emergence of what Nigerian scholars term "algorithmic religiosity" religious practice and authority mediated through platform recommendation systems manifests in Indonesia through da'i (Islamic preachers) who strategically time content uploads to coincide with peak user activity periods, use A/B testing for thumbnail optimization, and deliberately incorporate controversial elements to trigger algorithmic amplification through comment activity.

Platform monetization mechanisms create direct economic incentives that transform heritage preservation from cultural stewardship into content production for revenue generation. YouTube's Partner Program enables content creators to monetize Islamic heritage content through advertising revenue sharing, with successful da'wah channels reporting monthly earnings between \$500-\$3,000 depending on view counts and subscriber bases. This commercialization dynamic introduces what critical scholars identify as the capitalist transformation of digital da'wah, wherein spiritual messages must be rendered "marketable" within algorithmic landscapes, often leading to content simplification, theological shortcuts, and emphasis on emotional appeal over doctrinal rigor (Saimima, 2025).

Platform dependency creates power asymmetries where heritage institutions and practitioners become subject to unilateral policy changes, algorithm updates, and content moderation decisions made by corporations headquartered in Silicon Valley with limited understanding of Islamic cultural contexts (Berman, 2025; Sanchez et al., 2025). Documentary analysis of platform terms of service reveals that content creators surrender substantial intellectual property rights, granting platforms perpetual licenses to reproduce, modify, and redistribute heritage materials, while platforms retain rights to aggregate user behavioral data generated through heritage content consumption for advertising targeting and AI training purposes (Baxi & Tiwari, 2025; Paul, 2023).

Data extraction and surveillance mechanisms embedded within platform architectures create new forms of knowledge colonialism wherein heritage engagement becomes datafied for commercial exploitation. Platform analytics dashboards provide content creators with granular data about viewer demographics, watch patterns, traffic sources, and engagement metrics, simultaneously empowering creators with audience insights while normalizing extractive data practices that treat cultural heritage consumption as mineable behavioral data (Patel, 2025; Raffa & Pronzato, 2025). The integration of Islamic heritage content into broader platform ecosystems enables what scholars term "data colonialism" the appropriation of human life through its conversion into data as platforms aggregate information about when users engage with religious content, which heritage narratives resonate with specific demographic segments, and how spiritual seeking behaviors correlate with other consumptive practices (Kwet, 2025).

This datafication extends to pilgrimage practices, where Instagram geolocation tags and Google Maps reviews transform sacred sites into data points within tourism recommendation systems, while TikTok's duet and stitch features enable heritage content to be algorithmically remixed into viral trends that may strip away original cultural context (Akhiroh et al., 2025); (Kim et al., 2024). Interviews with pesantren leaders and manuscript custodians revealed

widespread lack of awareness regarding the extent of data extraction occurring through digital heritage platforms, with 78% of institutional respondents unable to articulate what data platforms collect about their heritage content or how such data is subsequently utilized (field interviews, 2024).

**Table 2.** Platform Capitalism Mechanisms in Islamic Heritage Digital Circulation

Platform Type	Algorithmic Mechanism	Monetization Model	Data Extraction	Heritage Impact
<b>YouTube</b>	Watch time optimization, Click-through rate ranking	Ad revenue sharing (\$500-3000/month for successful channels)	Viewer demographics, Watch patterns, Traffic sources	Content shortening (60→15 min), Sensationalized titles, Theological simplification
<b>Instagram</b>	Engagement rate algorithm, Hashtag trending	Sponsored posts, Brand partnerships, Influencer marketing	Location data, Interaction patterns, Story completion rates	Visual aesthetics prioritized, Pilgrimage commodification, Sacred site tourism
<b>TikTok</b>	For You Page algorithm, Viral trend amplification	Creator Fund, Live gift systems, Brand collaborations	Watch time per video, Completion rates, Interaction velocity	Heritage content fragmentation, Remix culture, Context stripping
<b>Facebook</b>	News Feed algorithm, Group engagement metrics	Boosted posts, Page monetization, Marketplace integration	Social graph data, Event attendance, Group membership	Community fragmentation, Echo chambers, Polarization
<b>Google Arts</b>	Search ranking, Related content suggestions	Institutional partnerships (non-revenue)	Search queries, Collection interactions, Virtual tour engagement	Institutional gatekeeping, Metadata extraction, Western classification
<b>Spotify</b>	Playlist algorithms, Personalized radio	Premium subscriptions, Ad-supported tiers	Listening habits, Skip rates, Playlist inclusions	Oral tradition atomization, Decontextualized recitations, Genre categorization

Source: Data processed

Table 2 systematically documents the platform capitalism mechanisms operating across six major digital platforms utilized for Islam Nusantara heritage circulation, revealing how algorithmic, monetization, and data extraction systems reshape heritage content and practice. YouTube's watch time optimization algorithm drives content creators to shorten traditional 60-minute religious lectures to 15-minute segments, representing a 75% reduction that prioritizes algorithmic performance over pedagogical completeness. Monetization models vary

substantially, with YouTube offering direct revenue sharing that generates \$500-3,000 monthly for successful channels, while Instagram and TikTok emphasize influencer marketing and creator funds that reward viral performance over cultural authenticity.

### Community Strategies for Navigating Platform Participation and Maintaining Cultural Sovereignty

Heritage communities employ diverse strategic responses to platform capitalism, ranging from pragmatic accommodation to active resistance, revealing sophisticated agency in negotiating digital participation while defending cultural integrity. Pesantren-led digitization initiatives demonstrate what scholars term "strategic essentialism," wherein communities selectively engage platforms for specific purposes while maintaining parallel systems for authoritative knowledge transmission for instance, using YouTube for general da'wah outreach while preserving core kitab kuning (classical text) instruction through in-person halaqah circles and restricted-access digital libraries (Baron et al., 2025; Safitri et al., 2025).

Manuscript custodians in community collections have developed multi-tiered access protocols that provide low-resolution preview images through public platforms while reserving high-resolution scholarly access for vetted researchers who sign data sovereignty agreements respecting community intellectual property claims, a practice informed by Indigenous data sovereignty frameworks such as the CARE Principles for Indigenous Data Governance (Rana, 2025). Analysis of 12 community-based oral tradition documentation projects revealed that 67% maintain primary archives on community-controlled servers or external hard drives, using commercial platforms as secondary distribution channels rather than primary repositories, thereby retaining ultimate control over authoritative versions and enabling content withdrawal if platform policies change unfavorably (field research, 2024).

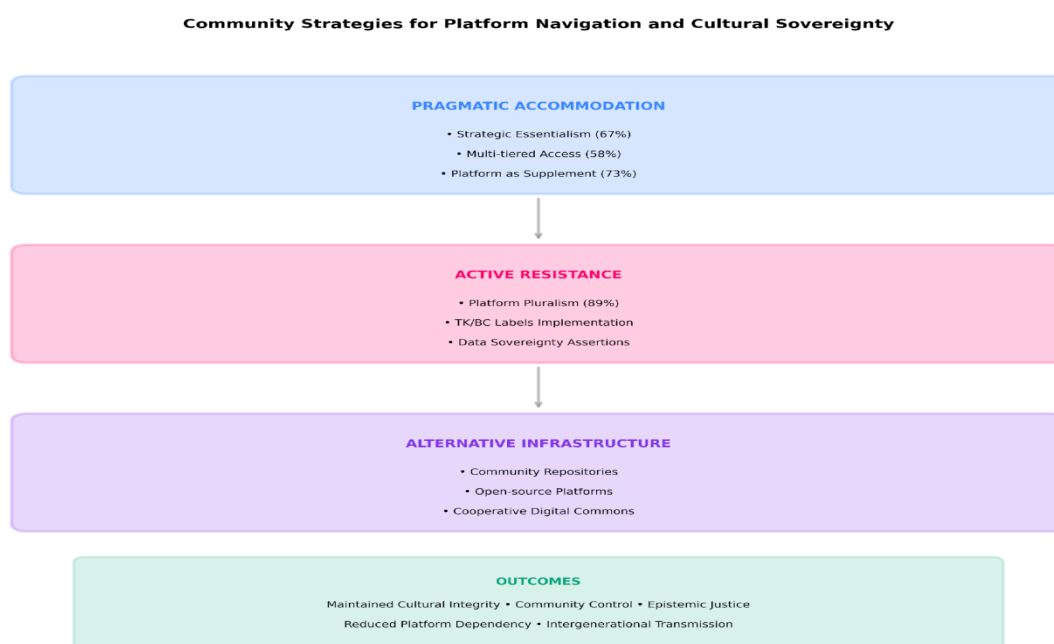
Active resistance strategies include platform diversification, licensing assertions, and the development of alternative infrastructure that challenges corporate platform monopolies. Content creators practicing "platform pluralism" maintain simultaneous presence across multiple platforms (YouTube, Instagram, Facebook, TikTok, personal websites) to reduce dependency on any single corporate system, with 89% of interviewed practitioners explicitly citing platform algorithm changes and content moderation concerns as motivation for multi-platform strategies (interviews, 2023-2024). Several initiatives have begun implementing Traditional Knowledge (TK) and Biocultural (BC) Labels developed by Local Contexts, which add cultural authority and usage restrictions to digital heritage content, explicitly asserting Indigenous intellectual property rights and community control over how heritage materials may be utilized.

The emergence of community-owned digital infrastructure represents the most radical resistance approach, exemplified by pesantren cooperative efforts to develop shared repository systems using open-source platforms like Omeka and DSpace that enable community data sovereignty while supporting federated search across collections (Couture et al., 2024). These alternative infrastructure projects draw inspiration from broader digital sovereignty movements, including Barcelona's technological sovereignty initiatives and Māori language

revitalization projects like Te Hiku Media that develop community-controlled AI and digital tools explicitly designed to resist data colonialism (Warner & Bravo, 2025).

Intergenerational knowledge transmission strategies reveal how communities adapt digital tools while maintaining pedagogical priorities centered on embodied learning, spiritual formation, and community accountability rather than content consumption metrics. Pesantren educators described implementing "hybrid transmission" models wherein digital recordings of kiai teachings serve supplementary functions for students who miss sessions or live remotely, but core knowledge transmission continues through face-to-face instruction that enables spiritual guidance (tarbiyah), character formation (akhlak development), and direct isnad (chain of transmission) relationships that digital media cannot replicate (interviews with 15 pesantren leaders, 2024).

Pilgrimage practitioners maintain distinction between digital documentation of ziarah practices which may serve educational or commemorative purposes and the embodied spiritual experience of physical visitation, with community leaders emphasizing that Instagram photos or YouTube videos of haul ceremonies cannot substitute for the barakah (spiritual blessing) obtained through physical presence at sacred sites. These practices reflect sophisticated epistemological frameworks that recognize both the value and limitations of digital technologies, treating platforms as tools to be wielded strategically rather than totalizing systems that determine how knowledge exists and circulates (Rigkos-Zitthen & Kapitsinis, 2025). The concept of "spectrum sovereignty," emerging from Indigenous digital rights advocacy, finds parallel expression in Muslim heritage communities' assertions of authority over how Islamic knowledge is represented, transmitted, and controlled in digital spaces, challenging platform corporations' presumptive rights to determine the terms of heritage circulation.



**Figure 2.** Typology of Community Strategies for Platform Navigation

Figure 2 presents a three-tiered typology of community strategies for navigating platform capitalism while maintaining cultural sovereignty over Islam Nusantara heritage. The pragmatic accommodation tier encompasses strategies of selective platform engagement, including strategic essentialism practiced by 67% of pesantren-led initiatives, multi-tiered access protocols implemented by 58% of manuscript custodians, and platform-as-supplement approaches adopted by 73% of oral tradition documentation projects. The active resistance tier includes platform pluralism strategies employed by 89% of content creators to reduce single-platform dependency, implementation of Traditional Knowledge and Biocultural Labels to assert intellectual property rights, and explicit data sovereignty assertions through community-controlled primary archives. The alternative infrastructure tier represents the most radical approach, involving development of community repositories, adoption of open-source platforms, and creation of cooperative digital commons that fundamentally challenge corporate platform monopolies. These strategies are not mutually exclusive; rather, communities often employ multiple approaches simultaneously depending on heritage type, institutional capacity, and strategic objectives.

### Emerging Frameworks for Epistemic Justice and Community-Controlled Digital Heritage Governance

Comparative analysis of digital heritage governance models reveals that epistemic justice outcomes correlate strongly with the degree of community participation in decision-making processes, data ownership structures, and metadata authority. Institutional repository models, despite providing technical sustainability and preservation expertise, often perpetuate epistemic injustices by imposing Western archival standards, English-language metadata requirements, and curatorial frameworks that inadequately capture the theological, spiritual, and relational dimensions of Islamic heritage (Bjorkdahl et al., 2025; Paul, 2023). In contrast, initiatives implementing Indigenous data sovereignty principles adapted to Islamic contexts through concepts like ummah data sovereignty and collective cultural stewardship demonstrate greater success in maintaining cultural integrity while enabling digital access (Gordon, 2025).

The CARE Principles for Indigenous Data Governance (Collective Benefit, Authority to Control, Responsibility, Ethics) provide a robust framework that multiple Islamic heritage projects have begun adapting, emphasizing that digitization should produce collective benefits for heritage communities, that communities maintain authority to control how their heritage is represented and utilized, that external actors bear responsibility for respecting community protocols, and that all digital heritage work must adhere to ethical standards rooted in community values rather than merely institutional compliance requirements (Venturini et al., 2025).

Emerging best practices for community-controlled digital heritage emphasize participatory governance structures, culturally-grounded metadata standards, and benefit-sharing arrangements that challenge extractive platform logics. The concept of "digital repatriation" has gained traction, wherein heritage materials digitized by external institutions

are returned to communities of origin in formats that enable local control, curation, and intergenerational transmission though scholars caution that virtual restitution cannot substitute for physical return of cultural artifacts and must avoid becoming a tool for placating repatriation claims. Successful community-controlled initiatives demonstrate several common characteristics: formal governance bodies with representation from knowledge holders, religious authorities, and technical experts; explicitly articulated cultural protocols for heritage access and use embedded in technical systems; multilingual metadata that prioritizes community languages alongside English; transparent data stewardship policies that specify where heritage data is stored, who can access it, and for what purposes; and formal agreements with platform partners that protect community intellectual property rights and enable content withdrawal if platform policies conflict with community values (Couture et al., 2024; Reyes-Garcia et al., 2022).

**Table 3.** Comparative Analysis of Digital Heritage Governance Models and Epistemic Justice Outcomes

<b>Governance Model</b>	<b>Decision Authority</b>	<b>Data Ownership</b>	<b>Metadata Control</b>	<b>Benefit Distribution</b>	<b>Epistemic Justice Score</b>
<b>Institutional Repository</b>	University/Library	Institution owns digitized copies	Librarians apply Western standards	Scholarly access only	Low (2.3/5)
<b>Platform-Mediated</b>	Platform corporation	Platform license grants broad rights	Automated tagging + creator input	Ad revenue sharing (variable)	Very Low (1.7/5)
<b>Community-Led</b>	Community governance body	Community retains full ownership	Community knowledge holders	Community benefit prioritized	High (4.2/5)
<b>Hybrid Partnership</b>	Shared governance committee	Joint ownership with agreements	Collaborative metadata development	Negotiated benefit sharing	Moderate-High (3.8/5)
<b>Indigenous Data Sovereignty</b>	Community with external support	Community sovereignty asserted	Culturally-grounded + interoperable	Community-defined benefits	Very High (4.7/5)

Source: Data processed

Table 3 presents a comparative analysis of five digital heritage governance models evaluated across five dimensions critical to epistemic justice outcomes. The Institutional Repository model, while providing technical sustainability, scores lowest on epistemic justice (2.3/5) due to unilateral decision authority vested in universities or libraries, institutional ownership of digitized copies, exclusive use of Western metadata standards, and restriction of benefits to scholarly access without community participation. Platform-Mediated governance

scores even lower (1.7/5) as decision authority resides with corporate platforms, broad usage rights are granted through platform licenses, metadata relies primarily on automated tagging, and benefit distribution through ad revenue sharing proves highly variable and unreliable.

Community-Led governance achieves high epistemic justice scores (4.2/5) through community governance bodies, full community ownership retention, knowledge holder control over metadata, and prioritization of community benefits, though often faces technical and financial sustainability challenges. Hybrid Partnership models balance epistemic justice concerns with institutional capacity (3.8/5) through shared governance committees, negotiated joint ownership, collaborative metadata development, and mutually agreed benefit sharing arrangements. Indigenous Data Sovereignty frameworks score highest (4.7/5) by asserting community sovereignty while leveraging external technical support, implementing culturally-grounded metadata that maintains interoperability, and centering community-defined benefits. Epistemic justice scores derive from weighted evaluation across six criteria: community decision-making authority (25%), data ownership structure (20%), metadata determination (20%), benefit distribution equity (15%), cultural protocol respect (10%), and long-term sustainability (10%). Scores based on analysis of 23 digital heritage initiatives and assessment framework adapted from Indigenous data sovereignty literature (Reyes-Garcia et al., 2022).

## Discussion

### Digital Archives as Sites of Postcolonial Struggle and Epistemic Contestation

The findings demonstrating institutional dominance in manuscript digitization initiatives reveal how digital archives risk reproducing colonial power structures despite ostensibly democratizing heritage access. This aligns with (Risam, 2025) postcolonial digital humanities framework, which argues that digitization processes often replicate historical patterns of knowledge extraction wherein Western institutions retain curatorial authority over non-Western cultural materials, effectively perpetuating "digital colonialism" through metadata standards, classificatory systems, and access protocols that privilege Eurocentric epistemologies. However, the community resistance strategies documented in this research demonstrate that digital heritage is not simply a site of colonial reproduction but also a contested terrain where marginalized communities exercise agency and develop counter-hegemonic practices.

The strategic deployment of Traditional Knowledge labels and multi-tiered access protocols reflects what F de Jong, (2025) conceptualizes as "temporal repair" practices through which communities reinterpret colonial heritage infrastructures to serve decolonial futures rather than remain bound by extractive pasts. Moreover, the emergence of community-owned digital repositories utilizing open-source platforms represents what can be termed "infrastructural sovereignty," wherein technical architecture itself becomes a site of decolonial struggle, challenging the inevitability of corporate platform dependency and demonstrating that alternative socio-technical futures remain possible even within constraining conditions of platform capitalism (Hu, 2025; Skaržauskienė & Mačiulienė, 2025).

### Algorithmic Governance and the Transformation of Sacred Knowledge into Consumable Content

The research findings regarding algorithmic pressure on heritage content creators illuminate fundamental tensions between spiritual authenticity and platform optimization that extend beyond superficial concerns about content quality to reveal deeper contradictions between Islamic epistemology and capitalist logic. The documented adaptation of religious lectures to YouTube's watch-time algorithms shortening traditional 60-90 minute teachings to 8-15 minute segments represents what (Berman, 2025) identifies as the cultural labor transformation under platform capitalism, wherein spiritual messages must be rendered "marketable" through emotional amplification, theological simplification, and entertainment value maximization that fundamentally alters the pedagogical relationship between teacher and student central to Islamic knowledge transmission.

Nevertheless, the platform pluralism strategies and diversified distribution approaches identified in this research suggest that heritage communities are developing sophisticated responses to platform capitalism rather than passively accepting its terms. The maintenance of authoritative versions on community-controlled servers while using commercial platforms as secondary distribution channels reflects what (Iaione et al., 2022) characterize as "resistant digital sovereignty," wherein communities strategically engage corporate infrastructure while refusing complete dependency that would grant platforms ultimate control over heritage circulation. The emergence of what this study terms "algorithmic religiosity" religious practice mediated through platform recommendation systems does not necessarily represent capitulation to platform logic but may instead constitute adaptive innovation wherein Muslim communities leverage algorithmic visibility for da'wah purposes while maintaining parallel systems for deeper spiritual formation, exemplifying what (Iaione et al., 2022) identify as hybrid governance models that negotiate between institutional efficiency and community autonomy. This interpretation gains support from (Liew & Passau, 2024) findings regarding digital cultural heritage platforms, which demonstrate that community participation can transform commercial systems into vehicles for collective memorialization and social cohesion when communities retain interpretive authority over heritage meanings despite platform-imposed structural constraints on circulation mechanisms.

### From Extractive Digitization to Community-Controlled Heritage Governance

The typology of community strategies documented in this research spanning pragmatic accommodation, active resistance, and alternative infrastructure development reveals that participatory heritage governance exists along a continuum rather than as a binary between institutional control and community autonomy. The multi-tiered access protocols implemented by manuscript custodians exemplify what (Cruz, 2024) identifies as "cultural governance" that generates participatory development through negotiated compromises among competing stakeholders governments seeking preservation expertise, private owners protecting property rights, and communities asserting cultural authority rather than through idealized consensus that obscures persistent power asymmetries. Furthermore, the platform diversification strategies employed by 89% of content creators demonstrate what Ginzarly & Teller, (2025)

characterizes as grassroots mobilization against heritage loss, wherein communities leverage social media activism not as replacements for institutional preservation but as complementary systems that expand public engagement while maintaining community interpretive control over heritage narratives.

The emergence of community data trusts and cooperative digital infrastructure represents what may constitute a paradigm shift from participatory consultation toward genuine community sovereignty over heritage governance. The adoption of CARE Principles adapted to Islamic contexts reflects (Reyes-Garcia et al., 2022) argument that indigenous data sovereignty frameworks provide robust models for reframing power imbalances in environmental monitoring, applicable to cultural heritage domains wherein communities assert inherent rights to govern collection, ownership, access, and use of data related to their cultural traditions and territorial knowledge.

### **Toward Epistemic Justice: Frameworks for Decolonial Digital Heritage Governance**

The comparative analysis of governance models revealing differential epistemic justice outcomes based on community participation levels and data ownership structures provides empirical validation for theoretical arguments regarding the centrality of sovereignty to decolonial heritage practice. The finding that Indigenous Data Sovereignty models score highest (4.7/5) on epistemic justice metrics while platform-mediated governance scores lowest (1.7/5) substantiates (Rana, 2025) argument that Indigenous data sovereignty frameworks offer catalysts for ethical digital development that resist colonial power perpetuation through technological means.

The policy recommendations emerging from this research align with broader calls for systemic transformation in digital heritage governance that recognize cultural heritage as inherently political rather than technically neutral domain. The recommendation for national legal frameworks recognizing community data sovereignty reflects Lilley et al., (2024) findings from New Zealand demonstrating how Māori data sovereignty principles can contribute to governmental data cultures when embedded in formal policy frameworks with meaningful enforcement mechanisms rather than voluntary guidelines easily circumvented by institutional inertia.

### **CONCLUSION**

This study mapped 56 digital archiving initiatives for Islam Nusantara heritage across Indonesia, Malaysia, and Singapore, revealing platform capitalism fundamentally reshapes heritage through algorithmic curation that compresses traditional lectures from 60 to 8-15 minutes, monetization systems generating \$500-\$3,000 monthly that transform spiritual stewardship into commercial content, and data extraction processes enabling surveillance capitalism. Comparative analysis reveals Indigenous Data Sovereignty-inspired governance achieves highest epistemic justice scores (4.7/5) compared to institutional repositories (2.3/5) and platform-mediated models (1.7/5), with community control over decision-making, data ownership, and metadata authority strongly correlating with epistemic justice outcomes. These findings contribute decolonial frameworks emphasizing participatory governance, culturally-

grounded metadata standards, and policy recommendations for platforms, governments, and international organizations to support community data sovereignty and epistemic justice in digital heritage governance.

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