

The Dao of Digital Visibility: Information Technology, Wuwei, and Indigenous Cultural Tourism in Global Perspective

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Abstract

Digital technologies increasingly mediate how travelers encounter Indigenous peoples, heritage landscapes, community enterprises, and cultural protocols. Yet greater online visibility does not necessarily produce stronger Indigenous participation, community benefit, or culturally responsible tourism. This interdisciplinary article brings a global secondary-data study of twelve Indigenous cultural tourism cases into dialogue with Daoist concepts of wuwei (non-coercive action), ziran (self-so becoming), water-like responsiveness, and relational balance. Information technology is treated not merely as a marketing instrument but as a socio-technical environment composed of search engines, official portals, platform rankings, data systems, digital interpretation, booking pathways, and visitor-guidance interfaces. The empirical analysis uses a Digital Visibility Index, a Tourism Growth Evidence Score, and a Sustainability Support Index. Heritage-brand cases such as Chichen Itza/Maya tourism and Cordillera Indigenous tourism recorded the highest digital visibility, while Native American tourism, Indigenous tourism Canada, Maori tourism, and Aboriginal tourism Australia showed the strongest combined evidence and institutional support. Digital visibility was only weakly associated with tourism-growth evidence ($r = 0.022$), whereas tourism-growth evidence and sustainability support were more strongly related ($r = 0.661$). A Daoist reading suggests that information systems should not maximize exposure at any cost. Wuwei

supports enabling rather than coercive digital mediation; ziran supports community authority over representation and data; and the image of water suggests adaptive infrastructure that serves cultural life without dominating it. The article proposes a model of Daoist-informed digital stewardship centered on proportional visibility, Indigenous data governance, contextual interpretation, transparent platform practices, and community-defined measures of benefit. Daoist and Indigenous traditions are not equated; the comparison is used to question technologically determinist assumptions within contemporary tourism practice.

Keywords: Daoism; information technology; wuwei; ziran; Indigenous tourism; digital visibility; platform governance; Indigenous data sovereignty

Digital Mediation and the Problem of Too Much Visibility

Cultural tourism now begins long before physical arrival. Search engines, social media feeds, destination portals, mapping applications, digital booking systems, online reviews, and recommendation algorithms shape what potential visitors notice, how they imagine a place, and which experiences appear credible or desirable. For Indigenous cultural tourism, these information technologies can widen access to community enterprises, language, heritage interpretation, and ethical visitor education. They can also detach cultural signs from living communities, reward the most searchable destination brands, encourage standardized performances of authenticity, and channel economic value toward platforms or intermediaries rather than Indigenous hosts. Information technology is therefore neither a neutral channel nor an automatic remedy for geographic marginalization. It participates in the ordering of visibility, authority, and value.

The original comparative dataset examined twelve Indigenous cultural tourism cases across Oceania, North America, Europe, East Asia, Latin America, Southeast Asia, and the Philippines. It found a notable disjunction: destinations with strong online search visibility did not necessarily possess the strongest Indigenous-specific tourism evidence or the most developed institutional data systems. This is not a minor technical issue. A destination may be highly visible because its archaeological site, mountain landscape, or national brand performs well in search environments, while the Indigenous enterprises, protocols, and community authorities connected to that place remain digitally peripheral. Conversely, an Indigenous tourism sector may have strong associations, official statistics, ethical guidelines, and community enterprises without achieving comparable global search prominence.

Most tourism research interprets this gap through marketing, consumer behavior, platform economics, or destination management. Those approaches are indispensable, but they often retain a shared assumption: that the central challenge is to improve optimization, reach, conversion, or measurable engagement. Daoist thought provides a different entry point. Early Daoist texts repeatedly ask whether forceful intervention, excessive naming, rigid standards, and self-advertising can undermine the very order they seek to produce. Wuwei is not simple inactivity; it is action that does not coerce the tendencies of a situation. Ziran concerns what becomes so of itself, suggesting forms of flourishing that cannot be manufactured from outside. Water serves without competing, adapts to terrain, and reaches places overlooked by dominant hierarchies. These ideas do not supply a ready-made tourism policy, but they can expose the limitations of technologically determinist thinking.

This article asks how Daoist concepts can illuminate the role of information technology in Indigenous cultural tourism. It develops three arguments. First, digital visibility should be treated as a relational condition rather than a simple quantity: visibility is beneficial only when it remains connected to community authority, context, and material benefit. Second, information technology should enable Indigenous self-definition rather than impose standardized platform logics. Third, a responsible digital tourism system requires restraint as well as innovation. Some cultural knowledge should be contextualized,

restricted, seasonally available, or withheld; not every site, ritual, narrative, or community space should be optimized for permanent discoverability.

The article makes a comparative and hermeneutic intervention. It does not claim that Daoism and the diverse traditions of Indigenous peoples share a single worldview, nor does it treat Daoist ideas as empirical variables explaining tourism outcomes. Daoist concepts are used as a disciplined interpretive lens for evaluating contemporary information systems. The empirical findings retain their original exploratory status, while the philosophical discussion asks what kinds of digital action may support rather than displace culturally grounded forms of life.

Daoist Concepts for Information Technology and Cultural Tourism

Wuwei as Non-Coercive Digital Mediation

Wuwei is often translated as non-action, but modern scholarship emphasizes that it refers more precisely to action that is unforced, responsive, and free from self-conscious strain (Slingerland 2003; Ames and Hall 2003). In the Daodejing, the most effective ordering frequently occurs when rulers do not overmanage the people, display their achievements, or multiply prohibitions. Applied to digital tourism, this perspective questions systems that assume every cultural destination must intensify content production, purchase platform visibility, collect more user data, and convert every interaction into a transaction. Such interventions may increase traffic while narrowing the forms through which a community can represent itself.

A wuwei-oriented information system does not abandon design or governance. It designs conditions in which Indigenous tourism organizations and communities can act with less friction and greater authority. Appropriate actions may include providing reliable connectivity, community-controlled content-management tools, interoperable but voluntary data standards, multilingual interfaces, accessible digital payments, and ethical booking pathways. The intervention is enabling rather than directive. It removes obstacles without prescribing a single image of authenticity or a uniform business model.

Ziran, Cultural Self-Definition, and the Right Not to Be Standardized

Ziran literally evokes what is self-so: the patterned becoming of things through their own relational conditions rather than through an externally imposed blueprint (Moeller 2006; Kohn 2009). In a tourism context, ziran highlights the difference between community-defined cultural expression and content engineered to satisfy platform categories. Algorithms tend to privilege standardized metadata, frequent posting, recognizably visual experiences, high review volumes, and continuous availability. Indigenous cultural life may instead be seasonal, place-bound, collectively authorized, linguistically specific, or governed by distinctions between public and restricted knowledge.

The ethical implication is not that all digital mediation is artificial. Communities may actively use video, virtual interpretation, geographic information systems, online shops, digital archives, or social media to sustain cultural and economic goals. Ziran directs attention to who determines the form, pace, and limits of that use. A culturally accountable system allows communities to define what can be represented, who may speak, how revenue is distributed, when content should be removed, and which metrics count as success. It also recognizes the legitimacy of digital silence, partial visibility, and non-participation.

Water, Data Flows, and Relational Infrastructure

Water imagery in the Daodejing is often associated with humility, adaptability, and the capacity to nourish without contention. As an information-technology metaphor, water shifts attention from spectacular applications to underlying infrastructure. Search visibility depends on connectivity, device access, platform literacy, secure payments, data storage, content moderation, analytics, and institutional

capacity. These less visible layers determine whether digital tourism benefits can circulate toward communities or pool around dominant intermediaries.

Water also adapts to terrain rather than forcing terrain into one shape. A relational digital infrastructure should therefore accommodate different community scales, languages, governance structures, cultural protocols, and degrees of commercialization. It should be modular, reversible, and capable of low-bandwidth operation. It should not require every community to become a high-frequency content producer merely to remain visible. The water metaphor further suggests that infrastructure should flow toward neglected places, not only toward already prominent destinations.

Comparative Discipline and Non-Equivalence

Comparative work involving Daoism and Indigenous cultural tourism requires explicit limits. Indigenous peoples are not a single analytical category, and their relationships to land, governance, spirituality, tourism, and technology differ substantially. Daoism emerged within particular Chinese historical, textual, ritual, and institutional contexts (Robinet 1997; Komjathy 2013). The present comparison does not claim shared origins or interchangeable concepts. It uses Daoist ideas to criticize a contemporary managerial tendency toward overexposure, overmeasurement, and externally imposed order. Indigenous data-governance principles remain authoritative for decisions concerning Indigenous data, collective benefit, responsibility, and control (Carroll, Rodriguez-Lonebear, and Martinez 2019; Carroll et al. 2020).

Table 1. Daoist-informed interpretive framework for information technology in Indigenous cultural tourism

Daoist concept	Interpretive meaning	Information-technology implication	Evaluative question
Wuwei	Enabling action without coercive optimization	Provide tools, connectivity, and optional standards while avoiding compulsory platform dependence	Does the system reduce barriers without prescribing how culture must be displayed?
Ziran	Community-defined and self-so cultural becoming	Community control over content, timing, access, language, metrics, and withdrawal	Can the community determine the form and limits of its digital presence?
Water	Adaptive, humble, and distributive infrastructure	Low-bandwidth design, modular services, interoperable payments, and support for peripheral locations	Does technology flow toward underserved places and adapt to local conditions?
Pu / simplicity	Restraint toward unnecessary complexity and extraction	Minimal data collection, understandable interfaces, and non-extractive analytics	Is each collected datum or feature genuinely necessary for community benefit?
Relational balance	Value arises through relationships rather than isolated metrics	Link visibility to cultural authority, visitor conduct, revenue distribution, and long-term stewardship	What relationships are strengthened or weakened by digital visibility?

Note: These concepts are used as a comparative ethical framework. They are not scored as empirical variables and are not presented as equivalents of Indigenous philosophies.

Materials and Methods

Research Design and Unit of Analysis

The empirical component used an exploratory global comparative secondary-data design. The unit of analysis was an Indigenous cultural tourism destination, sector, or culturally defined tourism case. Twelve cases were selected purposively according to four criteria: an identifiable Indigenous cultural tourism context; at least one accessible public secondary source; contribution to geographic diversity; and availability of a digital visibility, tourism, economic, policy, or sustainability indicator. The sample included Maori tourism in Aotearoa New Zealand; Aboriginal or First Nations tourism in Australia; Indigenous tourism in Canada; Native American, Alaska Native, and Native Hawaiian tourism in the United States; Sami tourism in Sapmi; Ainu tourism in Japan; Indigenous tourism in Taiwan; Quechua or Andean tourism in Peru; Maya tourism in Mexico and Yucatan; Aymara or Quechua community tourism in Bolivia; Cordillera Indigenous cultural and mountain tourism in the Philippines; and Orang Asli or Orang Asal tourism in Malaysia.

The Role of Information Technology in the Analytical Model

Information technology was incorporated at two analytical levels. The measured level concerned public digital discoverability: official Indigenous tourism portals, national tourism pages or campaigns, defined Google Trends terms, and normalized search interest. These elements formed the Digital Visibility Index. The interpretive level concerned the broader socio-technical system through which tourism information is produced and acted upon. This included search and recommendation algorithms, content-management systems, digital storytelling, online booking, payments, maps, visitor guidance, public statistics, data storage, cybersecurity, and platform governance.

Only the first level was consistently measurable across all cases. The dataset did not contain comparable cross-national indicators for platform ownership, online conversion, digital payments, booking commissions, cybersecurity capability, community control of content, or the distribution of data-derived benefits. These dimensions are therefore discussed as mechanisms and ethical considerations rather than tested causal variables. This boundary is important: the article does not infer that information technology caused the observed tourism outcomes.

Data Sources, Variables, and Index Construction

The study used publicly available materials from national tourism agencies, Indigenous tourism organizations, official destination websites, statistical portals, heritage and cultural agencies, policy documents, and public reports. Google Trends was used as a standardized indicator of relative search interest. Searches applied Worldwide coverage, Web Search, all categories, and the period from 1 January 2021 through 31 December 2025. Google Trends values are normalized within the requested comparison and do not represent absolute visitor numbers, bookings, or attitudes.

Three principal measures were used. The Digital Visibility Index captured the public online presence of each case. The Tourism Growth Evidence Score assessed the availability and specificity of visitor, trip, revenue, employment, economic contribution, or policy evidence. The Sustainability Support Index coded visible ethical guidelines, heritage-management mechanisms, protected status, cultural policies, certification, authenticity systems, or related safeguards. A combined diagnostic score summarized the three dimensions for comparative profiling. The scores describe public tourism-system visibility and evidence; they do not rank the cultural worth, authenticity, or vitality of Indigenous peoples.

Analysis

The analysis proceeded through descriptive profiling, index comparison, correlation, and typology construction. Because the sample contained only twelve heterogeneous cases and the underlying tourism indicators used different units, no regression or causal model was estimated. Pearson correlations were

used only as exploratory summaries of how the coded dimensions moved together within the sample. The typology used the sample means of digital visibility and sustainability support as diagnostic cutoffs.

Ethical and Interpretive Boundary

The study used no interviews, private community records, personally identifiable information, or restricted cultural knowledge. Public availability, however, does not erase collective rights or responsibilities. The analysis follows the CARE orientation toward collective benefit, authority to control, responsibility, and ethics. It avoids extracting cultural conclusions from search data and does not interpret low search visibility as cultural weakness. Proxy tourism statistics are identified as such, especially where national or destination-level visitor counts do not isolate Indigenous-led activity.

Table 2. Profile of the twelve Indigenous cultural tourism cases

Case	Country or region	Primary public evidence	Reported value and year	Confidence
Maori tourism	Aotearoa New Zealand	Contribution of Maori tourism to GDP / Te Ohanga Maori	1.2 NZD billion (2023)	High
Aboriginal tourism Australia	Australia	Trips incorporating a First Nations activity	3 million trips (2023-2024)	High
Indigenous tourism Canada	Canada	Indigenous tourism sector revenues	3.7 CAD billion revenues (2023)	High
Native American tourism	United States	Overseas visitors engaging with American Indigenous communities	1.6 million overseas visitors (2023)	High
Sami tourism	Sapmi / Finland-Norway-Sweden	Ethical Sami tourism guidelines / Indigenous policy indicator	1 official policy exists (2018; active 2026)	Medium
Ainu/Upopoy tourism	Japan	Upopoy annual attendance	316,398 visitors (FY2024)	Medium
Taiwan Indigenous tourism	Taiwan	Inbound visitor arrivals to Taiwan	7,857,686 inbound visitors (2024)	Medium
Machu Picchu/Quechua tourism	Peru	Visitors to Machu Picchu in first bimestre / official tourism report	191,351 visitors (Jan-Feb 2025)	Medium
Chichen Itza/Maya tourism	Mexico / Yucatan	Chichen Itza visitors before New Year	2,200,000 visitors by 26 Dec (2024)	Medium-High
Bolivia Indigenous tourism	Bolivia	Foreign visitor arrivals to Bolivia	991,184 foreign visitors (2024)	Medium
Cordillera Indigenous tourism	Philippines / Cordillera	Cordillera total tourist arrivals	1,983,511 tourist arrivals (2024)	Medium-High
Orang Asli tourism	Malaysia	International visitor arrivals to Malaysia	25.02 million international visitors (2024)	Medium

Note: Some indicators are Indigenous-sector measures, while others are national, regional, destination, or heritage-site proxies. Values are not directly comparable as tourism volumes.

Results

Uneven Digital Visibility

The Digital Visibility Index ranged from 33.59 to 80.28, with a sample mean of 63.88. Chichen Itza/Maya tourism (80.28) and Cordillera Indigenous tourism (80.20) occupied the highest positions. Their visibility was driven in part by destination-level search terms with broad global recognition. Native American tourism and Indigenous tourism Canada formed the next tier, followed by Taiwan Indigenous tourism, Maori tourism, Sami tourism, Aboriginal tourism Australia, Machu Picchu/Quechua tourism, and Ainu/Upopoy tourism. Orang Asli tourism and Bolivia Indigenous tourism had the lowest index values because Indigenous-specific official portal visibility and global search interest were weaker under the selected settings.

Table 3. Digital visibility ranking

Rank	Case	Google Trends average	Digital Visibility Index
1	Chichen Itza/Maya tourism	40.84	80.28
2	Cordillera Indigenous tourism	40.61	80.20
3	Native American tourism	5.85	68.62
4	Indigenous tourism Canada	5.37	68.46
5	Taiwan Indigenous tourism	1.52	67.17
6	Maori tourism	1.38	67.13
7	Sami tourism	1.07	67.02
8	Aboriginal tourism Australia	0.64	66.88
9	Machu Picchu/Quechua tourism	0.38	66.79
10	Ainu/Upopoy tourism	0.38	66.79
11	Orang Asli tourism	0.96	33.65
12	Bolivia Indigenous tourism	0.76	33.59

Note: Google Trends scores represent normalized relative search interest, not absolute search volume, tourist arrivals, or booking conversion.

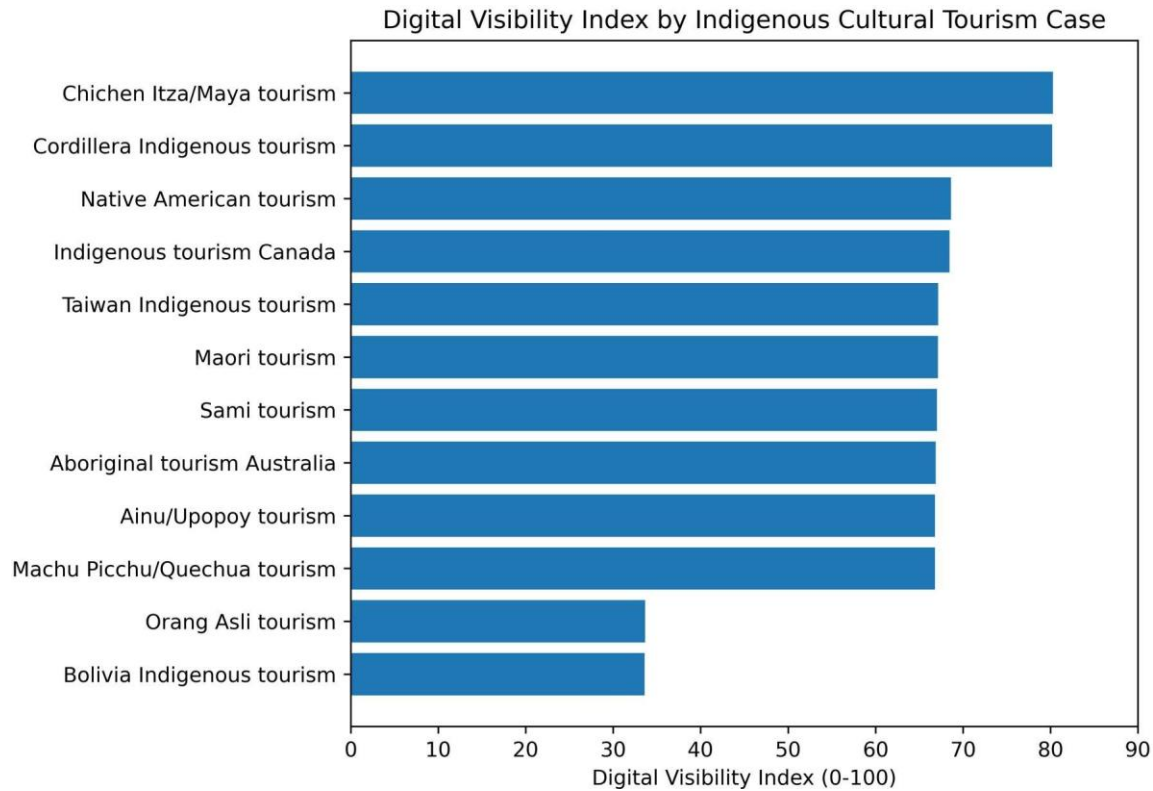


Figure 1. Digital Visibility Index by Indigenous cultural tourism case.

Tourism Evidence, Sustainability Support, and Public-System Readiness

The strongest Tourism Growth Evidence Scores were recorded for Maori tourism, Aboriginal tourism Australia, Indigenous tourism Canada, and Native American tourism. These cases had Indigenous-specific economic, visitor, or sector statistics. Other cases relied on national, regional, or destination proxies and therefore received lower evidence scores. The Sustainability Support Index was high across most cases, reflecting the availability of public policies, heritage protection, ethical guidance, or related support structures. High support scores should be interpreted as evidence of visible enabling frameworks, not proof that benefits are equitably distributed or that cultural protocols are fully implemented.

Table 4. Tourism evidence, sustainability support, and combined diagnostic score

Rank	Case	Tourism Evidence	Sustainability Support	Combined Score
1	Native American tourism	100	100.0	89.54
2	Indigenous tourism Canada	100	100.0	89.49
3	Maori tourism	100	100.0	89.04
4	Aboriginal tourism Australia	100	100.0	88.96
5	Chichen Itza/Maya tourism	75	100.0	85.09
6	Cordillera Indigenous tourism	75	100.0	85.07
7	Taiwan Indigenous tourism	75	100.0	80.72
8	Machu Picchu/Quechua tourism	50	100.0	72.26
9	Ainu/Upopoy tourism	50	100.0	72.26
10	Orang Asli tourism	75	100.0	69.55
11	Bolivia Indigenous tourism	75	100.0	69.53

Rank	Case	Tourism Evidence	Sustainability Support	Combined Score
12	Sami tourism	25	75.0	55.67

Note: The combined score describes the visibility and evidence environment surrounding each case. It is not a ranking of Indigenous cultures or authenticity.

Exploratory Relationships

Digital visibility and tourism-growth evidence were almost unrelated within the sample ($r = 0.022$). Digital visibility and sustainability support were also weakly related ($r = -0.066$), partly because sustainability support showed little variation. Tourism-growth evidence and sustainability support had a stronger positive association ($r = 0.661$). The combined diagnostic score was associated most strongly with tourism-growth evidence ($r = 0.883$), followed by sustainability support ($r = 0.671$) and digital visibility ($r = 0.459$). Given the small, purposive, and heterogeneous sample, these correlations are descriptive rather than inferential.

Table 5. Exploratory correlation matrix

Variable	Digital Visibility	Tourism Evidence	Sustainability Support	Combined Score
Digital Visibility Index	1.000	0.022	-0.066	0.459
Tourism Growth Evidence Score	0.022	1.000	0.661	0.883
Sustainability Support Index	-0.066	0.661	1.000	0.671
Overall Development Score	0.459	0.883	0.671	1.000

Note: $n = 12$ cases. Correlations are exploratory and should not be interpreted as causal estimates.

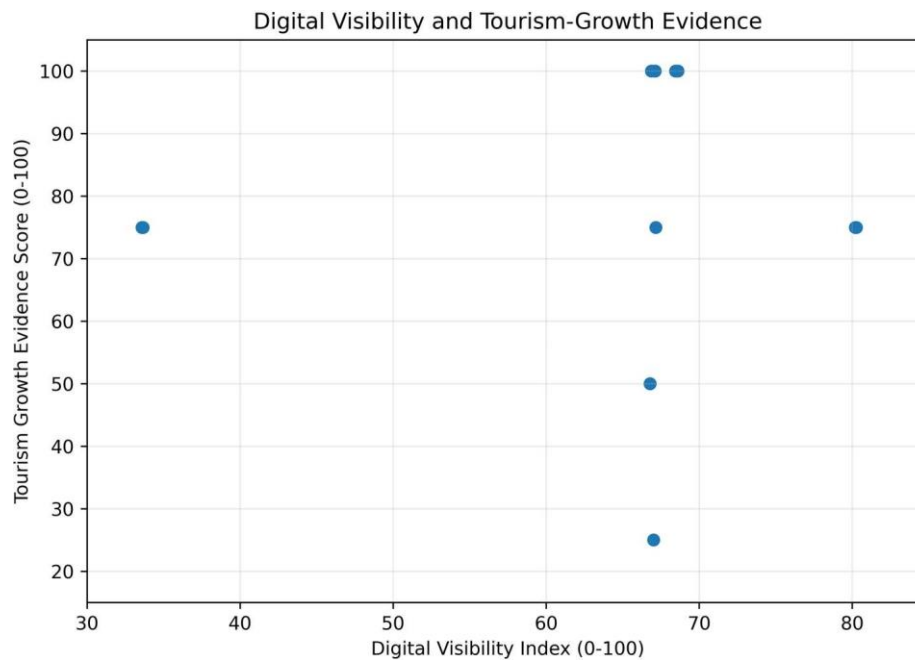


Figure 2. Digital visibility and tourism-growth evidence.

Digital Visibility-Sustainability Typology

Most cases fell into the high-digital-visibility and high-sustainability-support category under the sample-mean cutoffs. Orang Asli tourism and Bolivia Indigenous tourism were classified as low visibility but high support, suggesting that public ethical or policy frameworks may exist without comparable Indigenous-specific discoverability. The Sami tourism case was classified as high visibility and lower support under the coding scheme because its certification and authenticity component was still developing, although its ethical tourism guidelines remain a significant form of governance. No case occupied the low-visibility and low-support category.

Table 6. Digital visibility-sustainability typology

Case	Digital Visibility	Tourism Evidence	Sustainability Support	Typology
Native American tourism	68.62	100	100.0	High DVI / high SSI
Indigenous tourism Canada	68.46	100	100.0	High DVI / high SSI
Maori tourism	67.13	100	100.0	High DVI / high SSI
Aboriginal tourism Australia	66.88	100	100.0	High DVI / high SSI
Chichen Itza/Maya tourism	80.28	75	100.0	High DVI / high SSI
Cordillera Indigenous tourism	80.20	75	100.0	High DVI / high SSI
Taiwan Indigenous tourism	67.17	75	100.0	High DVI / high SSI
Machu Picchu/Quechua tourism	66.79	50	100.0	High DVI / high SSI
Ainu/Upopoy tourism	66.79	50	100.0	High DVI / high SSI
Orang Asli tourism	33.65	75	100.0	Low DVI / high SSI
Bolivia Indigenous tourism	33.59	75	100.0	Low DVI / high SSI
Sami tourism	67.02	25	75.0	High DVI / low SSI

Note: High and low categories use sample-mean cutoffs. The typology diagnoses public digital and institutional environments rather than cultural quality.

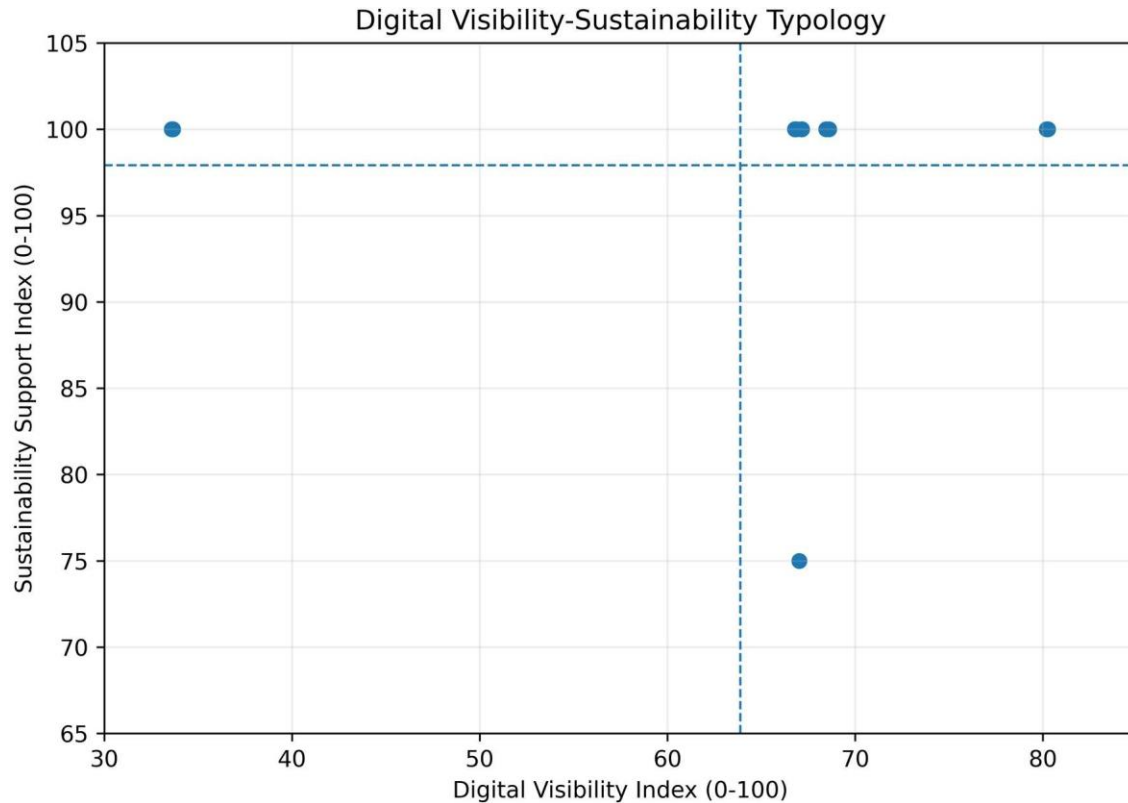


Figure 3. Digital visibility-sustainability typology.

Discussion: A Daoist Reading of Information Technology in Indigenous Tourism

Visibility Is Not the Same as Flourishing

The near-zero relationship between digital visibility and tourism-growth evidence challenges a common technological assumption: that becoming more searchable naturally produces stronger tourism development. Search interest is an attention signal. It can reflect curiosity, educational interest, controversy, destination fame, or itinerary planning. It does not show whether visitors purchase Indigenous-led experiences, respect cultural protocols, remain longer, return value to host communities, or support language and heritage continuity. Treating visibility as a self-evident good turns a partial indicator into a governing objective.

Daoist texts repeatedly warn against mistaking conspicuous action for effective order. From a wuwei perspective, digital marketing becomes counterproductive when it forces communities to continuously perform recognizability for external audiences. A tourism system may generate high traffic while weakening cultural authority through decontextualized images, generic heritage labels, or platform-driven expectations. The empirical contrast between highly searchable heritage brands and Indigenous sectors with stronger statistical systems illustrates this point. What appears most prominently in the digital field is not necessarily what is most institutionally rooted.

Information Technology as a Mediator of Cultural Authority

Information technology participates in at least five stages of the tourism relationship. It shapes discovery through search and recommendation; interpretation through websites, video, maps, and virtual experiences; transaction through booking and payments; conduct through digital visitor guidance; and evaluation through reviews, analytics, and official statistics. At each stage, design choices allocate

authority. A search result may privilege a commercial reseller over a community enterprise. A booking platform may require fixed availability where cultural activities are seasonal. A review system may allow visitors to penalize a community for enforcing protocols. An analytics dashboard may count clicks and arrivals while ignoring local control, cultural labor, or revenue leakage.

The role of information technology is therefore constitutive rather than merely promotional. Platforms help define what counts as a tourism product, which narratives are legible, and whose evidence becomes visible to policymakers. This explains why Indigenous-specific data systems matter. Canada, Australia, Aotearoa New Zealand, and the United States performed strongly not simply because of search interest but because Indigenous tourism organizations and official reporting structures made sector-level activity more visible. Statistical visibility can strengthen advocacy and resource allocation, but it must remain governed by Indigenous authority rather than by the extractive demand for ever more data.

Wuwei and the Design of Enabling Platforms

A wuwei-oriented platform would begin from the question of what obstacles should be removed, not how communities should be optimized. The appropriate intervention might be technical assistance for a community-owned website, translation support, low-cost payment integration, secure backups, or a shared regional booking service. It might also be a policy requiring commercial platforms to display cultural protocols, identify Indigenous ownership, or provide transparent commission information. These actions can be substantial while remaining non-coercive because they widen community capacity without dictating content or growth targets.

Wuwei also supports graduated participation. A community may want a fully transactional platform, a simple informational page, seasonal visibility, invitation-only access, or no online promotion at all. Digital systems should permit these different modes without treating limited visibility as failure. The design principle is not passivity but proportionality: intervention should match community purposes and the cultural sensitivity of the experience.

Ziran, Data Sovereignty, and Digital Self-Determination

Ziran sharpens the distinction between technological empowerment and technological assimilation. Communities may use the same tools—social media, maps, booking systems, augmented reality, or digital archives—while pursuing very different ends. A self-determined system allows local institutions to define categories, metadata, permissions, and success measures. It resists the assumption that a platform's standard fields are culturally neutral.

This argument converges with Indigenous data sovereignty without collapsing the two traditions. The CARE Principles emphasize collective benefit, authority to control, responsibility, and ethics. Daoist reflection contributes a critique of overmanagement and a preference for conditions that allow situated forms of order to emerge. Together, they support information practices in which data collection is purposeful, minimal, collectively authorized, and linked to tangible benefit. Data should not be gathered merely because digital tools make gathering easy.

Water-Like Infrastructure and the Digital Periphery

The water metaphor is especially useful for understanding uneven digital capacity. Prominent destinations attract investment because their visibility promises quick returns, while smaller communities face weak connectivity, limited content-production resources, expensive payment services, and dependence on external intermediaries. A water-like policy would direct infrastructure toward low-visibility and underserved locations. It would emphasize shared services, interoperability, open standards, and low-bandwidth access rather than duplicating high-cost systems in every community.

Such infrastructure should remain humble in the Daoist sense: technically reliable but not culturally dominant. A booking engine should not determine the meaning of an experience; a map should not disclose restricted locations; a recommendation algorithm should not override community limits; and a digital

archive should not convert custodial knowledge into public property. Technology serves best when it supports relationships among hosts, visitors, institutions, and landscapes while remaining aware of its own limits.

Daoist-Informed Digital Stewardship

The findings support a model of digital stewardship rather than unrestricted digital promotion. Stewardship treats visibility as something to be governed, not maximized. It asks whether online attention is connected to community-defined benefits, whether visitors receive sufficient ethical guidance, whether Indigenous ownership is legible, and whether platform data can be accessed and interpreted by the communities represented. It also requires the capacity to reduce exposure when cultural or ecological limits are approached.

Table 7. Practical principles for Daoist-informed digital stewardship

Principle	Information-technology practice	Daoist rationale
Community authorization before optimization	Establish who may publish, approve, revise, and withdraw content before search-engine or social-media optimization begins.	Ziran: representation follows community-defined order.
Proportional visibility	Match promotion intensity to carrying capacity, cultural sensitivity, seasonality, and desired visitor volume.	Wuwei: effective action avoids forcing growth.
Context-bearing interfaces	Embed cultural protocols, language, ownership, visitor responsibilities, and benefit pathways in websites and booking flows.	Relational balance: information remains connected to obligations.
Minimal and purposeful data	Collect only data needed for community goals, define retention periods, and provide local access to analytics.	Simplicity and restraint: avoid unnecessary extraction.
Transparent platform relations	Disclose commissions, ranking practices, sponsored placement, data uses, and dispute mechanisms.	Non-contention: reduce hidden forms of domination.
Reversible participation	Permit seasonal pages, restricted access, content withdrawal, and migration between platforms.	Water-like adaptability: systems change with circumstances.
Community-defined success	Complement clicks and arrivals with local revenue, ownership, cultural continuity, visitor conduct, and ecological indicators.	Ziran and de: value is not reducible to external visibility.

Note: Implementation must be led or authorized by the relevant Indigenous community or tourism organization. The Daoist rationale is interpretive, not a substitute for Indigenous law or protocol.

Policy and Management Implications

Tourism agencies should distinguish destination-brand visibility from Indigenous-enterprise visibility. Official portals can identify Indigenous ownership, link directly to community-controlled booking channels, and avoid using cultural imagery without clear attribution and benefit. Search optimization should be paired with ethical visitor information, including permissions, photography rules, appropriate conduct, and the seasonal or sacred limits of access.

Public institutions should invest in Indigenous-controlled data capacity. This includes training, secure data storage, community dashboards, interoperable reporting tools, and agreements governing the reuse

of tourism statistics. Digital payments and booking technologies should be assessed not only for convenience but also for transaction costs, data ownership, accessibility, and the ability of small community enterprises to receive funds directly.

Platform companies and tourism intermediaries should provide mechanisms for culturally sensitive moderation, rapid correction of misleading content, and community requests to restrict or remove information. Recommendation and review systems should recognize that enforcement of cultural protocols is not poor service. A visitor's preference for unrestricted access cannot override the host community's authority.

For lower-visibility but high-support cases, the priority may be community-led discoverability: multilingual websites, structured metadata, verified map listings, digital storytelling, and official links from national tourism platforms. For high-visibility cases, the priority may be moderation, benefit capture, carrying-capacity management, and preventing a globally known destination brand from erasing the communities that sustain it.

Limitations and Future Research

The study has several limitations. The twelve cases were purposively selected and cannot represent the full diversity of Indigenous tourism. Public reporting systems differ across countries, and several cases required national, regional, or heritage-site proxies. Google Trends is sensitive to keyword selection and may underrepresent Indigenous-language terms, low-volume searches, or platform activity occurring outside Google. The index measures discoverability rather than actual booking, revenue distribution, trust, satisfaction, or cultural impact.

The information-technology discussion also extends beyond the variables directly measured. Search visibility and official online presence were observable, but platform commissions, algorithms, cybersecurity, digital payments, data ownership, content moderation, and community decision-making were not coded consistently. Future research should combine public data with Indigenous-led interviews, platform audits, online review analysis, transaction data, and community validation. Comparative work should examine whether digital visibility leads visitors toward Indigenous-owned enterprises, how platform rankings distribute attention, and which information-technology arrangements produce durable community benefit.

Further Daoist research could investigate the relationship between wuwei and digital governance, the ethics of restraint in algorithmic systems, and the relevance of Daoist ritual and ecological traditions to contemporary cultural-heritage technologies. Such work should avoid reducing Daoism to a general slogan of harmony. Historically grounded scholarship is needed to distinguish early philosophical concepts, organized religious traditions, ecological interpretations, and modern technological appropriations.

Conclusion

This article has reinterpreted a global secondary-data study of Indigenous cultural tourism through Daoist concepts and an explicit account of information technology. The empirical results show that digital visibility is uneven and only weakly connected to the strength of tourism-growth evidence. Highly searchable destinations may owe their prominence to broad heritage or landscape brands, while the Indigenous enterprises and governance structures associated with those places remain less visible. Cases with stronger Indigenous-sector evidence also tended to possess stronger institutional and sustainability support.

Information technology matters because it structures discovery, interpretation, transactions, visitor conduct, and public evidence. It can make community enterprises reachable, support direct payments, preserve language, improve visitor education, and strengthen policy advocacy. It can also intensify commodification, impose platform categories, extract data, and reward visibility detached from

community authority. The relevant question is therefore not whether Indigenous tourism should become digital, but what kind of digital order is being created, by whom, and for whose benefit.

A Daoist reading does not provide a universal solution. It offers a critical vocabulary for restraint and responsive action. Wuwei directs technology toward enabling conditions rather than coercive optimization. Ziran supports the right of communities to define their own forms and limits of digital presence. Water suggests infrastructure that is adaptive, distributive, and supportive without becoming culturally dominant. These principles converge with, but do not replace, Indigenous data sovereignty and community governance.

Responsible digital Indigenous tourism should be searchable where communities seek visibility, protected where cultural limits require restraint, and measurable through outcomes that communities themselves consider meaningful. The most advanced information system is not necessarily the one that produces the greatest exposure. It is the one that allows technology to serve living cultural relationships without claiming authority over them.

Data Availability and Ethical Statement

The analysis uses aggregate, publicly available secondary data. The compiled case dataset, source log, Google Trends extraction notes, and figure files may be submitted as supplementary materials. No human participants, identifiable private information, or restricted community knowledge were used. Author information, funding details, acknowledgments, and contributor statements should be supplied on a separate title page for double-blind review.

Declaration of Generative-AI Assistance

Generative AI was used for language refinement, structural reorganization, and formatting assistance. The authors are responsible for verifying the data, references, interpretations, and final text.

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