

Urban Image Development Based on Papua Civilizational Value in the Rasiei Urban Area, Teluk Wondama Regency, Indonesia

Yefta Pardamean Siregar^{1*}, Ibnu Sasongko², Maria Christina Endarwati³

1,2,3 Department of Urban Planning and Design, Institut Teknologi Nasional, Malang, Indonesia – 65140

*Corresponding Author: Yefta Pardamean Siregar

ABSTRACT: *TelukWondama Regency has strong historical ties to the development of modern education in Papua and to social transformation centered on Aitumieri. However, this heritage has not yet been fully expressed in the contemporary urban image. This study formulates an urban image development strategy by integrating Kevin Lynch's five elements with cultural dimensions adapted from Koentjaraningrat. A qualitative descriptive-analytical case study was conducted in Wasior, Wondiboi, and Rasiei, using field observations, in-depth interviews, documentation, a review of planning documents, a structured 1–5 rating scale, community perception analysis, and gap analysis. The study identifies five dominant civilizational values: religiosity, education and transformation, communal solidarity, local wisdom, and customary leadership. Their spatial representation is uneven: fourteen of eighteen Path indicators (78%) received scores of 1–2; Path and District show high gaps, whereas Edge, Node, and Landmark show moderate gaps. Aitumieri Hill was selected by 55% of the twenty informants as the primary symbol of identity. Development priorities include establishing culturally legible corridors and strengthening Aitumieri as an integrated cultural district, supported by district gateways, expressive public nodes, heritage conservation, an I.S. Kijne monument, institutional coordination, and community co-design.*

KEY WORDS: *Kevin Lynch theory, urban image, Papuan civilization, cultural identity, heritage.*

Date of Submission: 07-10-2026

Date of acceptance: 19-10-2026

I. INTRODUCTION

Cities function not only as centers of government, economy, and settlement, but also as spaces in which collective identity is formed. In urban planning and design, this identity is reflected in the urban image: the way an environment is recognized, remembered, and interpreted through spatial structure, everyday experience, and the social memory of its inhabitants [1,5,6]. A strong urban image improves spatial legibility while helping people connect the city's physical form with its history and local character.

Kevin Lynch's framework explains the urban image through five principal elements: Path, Edge, District, Node, and Landmark [1]. Together, these elements form a system of spatial orientation through continuity, hierarchy, visibility, and interconnection. In cities with distinctive cultural characteristics, these elements cannot be understood merely as geometric forms; they also serve as settings for the expression of social, symbolic, and historical values that remain alive within the community [4,5,6,16].

Accordingly, culture-based urban image development cannot be reduced to the addition of ornaments or decorative imagery. The built environment is part of a cultural system that connects architecture, technology, language, ritual, livelihoods, social organization, and collective memory [2,3,4]. Heritage sites, public spaces, movement corridors, gateways, public buildings, and urban markers can mediate between everyday spatial experience and local identity. A place-based approach is also needed so that modernization does not sever the relationship between urban growth and the value systems that give meaning to place [6,7,8,9,10,22].

This approach becomes particularly important in areas with strong historical and cultural layers because the success of an urban image depends on the capacity of physical form to accommodate collective memory, social activity, and local knowledge [2,3,4,5,6]. Heritage should therefore be positioned not as a collection of isolated objects, but as part of an everyday spatial system connected through paths, edges, districts, nodes, and landmarks.

The Wasior–Wondiboi–Rasiei urban corridor in Teluk Wondama Regency, West Papua, carries a strong civilizational narrative. Aitumieri is remembered as a center of modern education for Papuan people and is closely associated with Izaak Samuel Kijne and the transformation of education, religion, and collective consciousness during the twentieth century [11,12]. This history is intertwined with Papuan values that remain active through Christian institutions, communal cooperation, customary deliberation, language, carving motifs, traditional arts, local livelihoods, and customary leadership [13,14,15,16]. Aitumieri Hill, *Batu Peradaban* (Civilization Stone), *Batu Inspirasi* (Inspiration Stone), the Gospel Landing Monument, historic churches, the Syalom Hill Cross, and other sites represent parts of this narrative. The findings, however, show that these values have not yet been expressed consistently across the contemporary urban landscape.

The main corridor connecting Wasior, Wondiboi, and Rasiei is still dominated by conventional street furniture, has limited pedestrian infrastructure and directional signage, and provides almost no bilingual information. Boundaries between areas are also visually weak; public buildings rarely express local architectural character; culture-based economic activities have not been organized into coherent districts; and major arrival nodesports, markets, terminals, and the airport, provide only limited interpretation of Wondama's history. By contrast, several Landmarks already possess strong symbolic meaning and public recognition. This contrast raises a planning question: how can historically meaningful places be connected to the broader urban structure so that the city can be read as a contemporary center of Papuan civilization?

Previous studies of city branding and culture-based urban development have generally emphasized identity, marketing, tourism, and public participation [7,8,9,10,17,24,25,26]. Studies in Papua have also addressed customary spatial planning, local cultural development, and the tourism potential of Aitumieri [14,15]. Nevertheless, research that operationally links Papuan civilizational values to all five of Lynch's urban image elements and then uses that integration to diagnose gaps along a continuous urban corridor remains limited. The novelty of this study lies in developing a Lynch–Koentjaraningrat synchronization matrix that connects spatial elements with observable cultural manifestations and integrates them with structured observation, community perceptions, and strategy formulation.

Based on these issues, this study aims to: (1) identify the civilizational values that shape the cultural identity of Teluk Wondama; (2) evaluate the representation of these values in the Path, Edge, District, Node, and Landmark elements of Wasior, Wondiboi, and Rasiei; and (3) formulate priority strategies for urban image development that strengthen identity, legibility, heritage protection, community participation, and the sustainable attractiveness of the region.

II. LITERATURE REVIEW

2.1. Urban Image, Legibility, and Identity

According to Lynch, an urban image emerges when residents are able to recognize and organize their environment through Path, Edge, District, Node, and Landmark [1]. Legibility is determined not by the presence of each element in isolation, but by the way the elements are interconnected to form a sequence of spatial experience. A symbolically strong Landmark, for example, becomes more effective when it is connected to a major Path, an activity Node, and a District with a clear character.

Thus, the five urban image elements operate as a system. Path continuity, edge clarity, district character, node intensity, and landmark visibility reinforce one another in shaping orientation and recognition of the city [1]. The symbolic strength of an object does not automatically produce a strong urban image when that object is isolated from movement networks and everyday activities.

The concept of urban identity extends legibility from the visual dimension to the production of social meaning. Urban space is formed through relationships among physical form, social practices, and representation, while public memory becomes stronger when history is embedded in everyday landscapes rather than confined to isolated monumental objects [5,6]. An identity-rooted urban image should therefore connect heritage with daily mobility, public services, local economic activity, and community gathering spaces.

2.2. Culture, Civilization, and the Built Environment

Koentjaraningrat describes culture as a system of interrelated elements encompassing religion, knowledge, livelihoods, technology and equipment, language, arts, social organization, and social structure [2]. These elements may be expressed materially through architecture, tools, monuments, signs, and artifacts, as well as non-materially through rituals, memory, language, leadership, and social cooperation. In the Wondama context, this study groups these cultural elements into five dominant civilizational values: religiosity, education and transformation, communal solidarity, local wisdom, and customary leadership.

Rapoport's approach to the relationship between culture and the built environment provides a bridge between these values and urban form [4]. Built form responds not only to climate and technology but also encodes social priorities and symbolic meanings. Bilingual street signs, culturally patterned medians, protected mission buildings, and communal performance spaces can therefore be understood as components of a broader

cultural system rather than as isolated aesthetic interventions. Geertz's interpretive perspective is also relevant because the meaning of a monument or landscape cannot be determined from its form alone, but must be understood through community narratives and practices [3].

2.3. Cultural Urban Development and City Branding

A culture-based approach views urban identity as the outcome of relationships among spatial image, historical narratives, social practices, and community experience. The city-branding literature suggests that a strong identity can improve recognition and regional attractiveness, but its effectiveness depends on consistency between the communicated message and the character of the place as actually experienced [7,8,9,10,24,25,26]. Urban image formation therefore cannot rely on a slogan or a single symbol; it must be translated into networks of spaces, activities, and urban services.

From a planning perspective, a culture-based urban image must balance identity enhancement, heritage protection, local community needs, and economic development. Integrating local identity into public space, strengthening participation, and protecting cultural sites can enable development without eroding the meaning of place [17,22,23]. This approach treats culture as a living system continually reproduced through the use of space, rather than merely as decoration or a tourism commodity.

2.4. Analytical Integration

The analytical framework developed in this study does not claim that Lynch directly linked each city-image element to a fixed cultural category. Instead, it uses functional relevance. Cultural elements were associated with spatial elements when they could plausibly be observed through physical form, activity, symbolism, or use. The relationship was then contextualized through Wondama history and field evidence. Table 1 presents the operational matrix used to organize observation and strategy formulation.

Table 1. Operational Lynch–Koentjaraningrat synchronization matrix

City-Image Element	Relevant Cultural Dimensions	Operational Focus
Path	Technology, arts, social organization, language	Road form and furniture, pedestrian space, local motifs, thematic lighting, bilingual signs, social activity along corridors
Edge	Religion and community structure	District gateways, historical/religious monuments, symbolic territorial transitions, visibility and access
District	Livelihood, arts, language, knowledge	Aitumieri heritage area, local architecture, craft economy, interpretive routes, language and historical character
Node	Social organization, arts, knowledge	Gathering spaces, cultural performance, customary deliberation, port/market/terminal/airport as social activity centers
Landmark	Religion, arts, knowledge	Visually prominent and historically meaningful objects, heritage protection, spiritual significance, orientation and memory

Operational Integration of Cultural Meaning and Urban Form

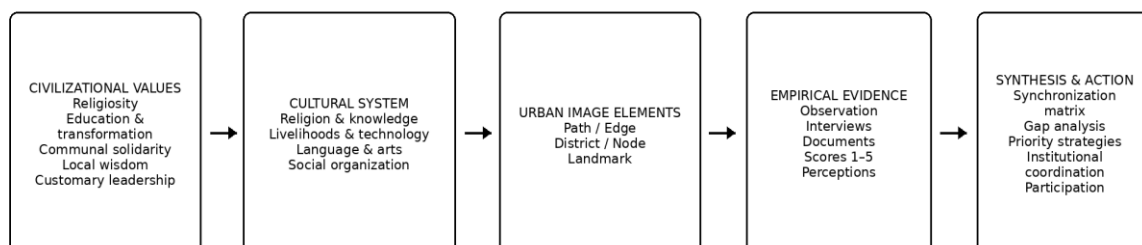


Figure 1. Analytical integration of Papuan civilizational values, cultural dimensions, cityimage elements, empirical assessment, and strategy formulation.

III. RESEARCH METHODS

3.1. Research Design and Study Area

This study employs a qualitative descriptive-analytical case study design [18,19] along the interconnected urban corridor of the Wasior, Wondiboi, and Rasiei districts in Teluk Wondama Regency. The design was selected to interpret cultural values while evaluating how those values are represented through physical form, activities, and urban symbolism, rather than to test causal relationships. Numerical scores from 1 to 5 were used as a descriptive device to standardize observations across indicators, while interpretation remained grounded in field notes, photographs, interviews, and planning documents.

Interviews with key informants were used to obtain information on history, cultural values, local knowledge, social life, arts, language, and development policies related to the formation of Teluk Wondama's urban image. Questions were adapted to the expertise and institutional position of each informant in order to support and clarify observations of the Path, Edge, District, Node, and Landmark elements.

Table 2. Informant groups and interview focus

Informant Group	Interview Focus	Cultural Element	Related Urban Image Elements
GKI Religious Leaders	History of the arrival of the Gospel, role of the church, religious symbols	Religious System, Knowledge System	Edge, District, Node, Landmark
Papuan Cultural Figures/Academics	History of education in Aitumieri, I.S. Kijne, development of civilization	Knowledge System	District, Landmark
Customary Leaders	Solidarity, customary leadership, deliberation, cultural preservation	Social Organization, Knowledge System	Node, District, Landmark
Cultural Practitioners/Artists	Carving motifs, arts, livelihoods, Wondama language	Arts, Livelihood System, Language	Path, District, Node, Landmark
Bappeda/PUPR	Development policy, infrastructure, and cultural integration	Technology System, Knowledge System	Path, Edge, District, Node, Landmark
District Officials	Local conditions, cultural activities, artisans, and facilities	Livelihood System, Social Organization, Religion	District, Node, Edge

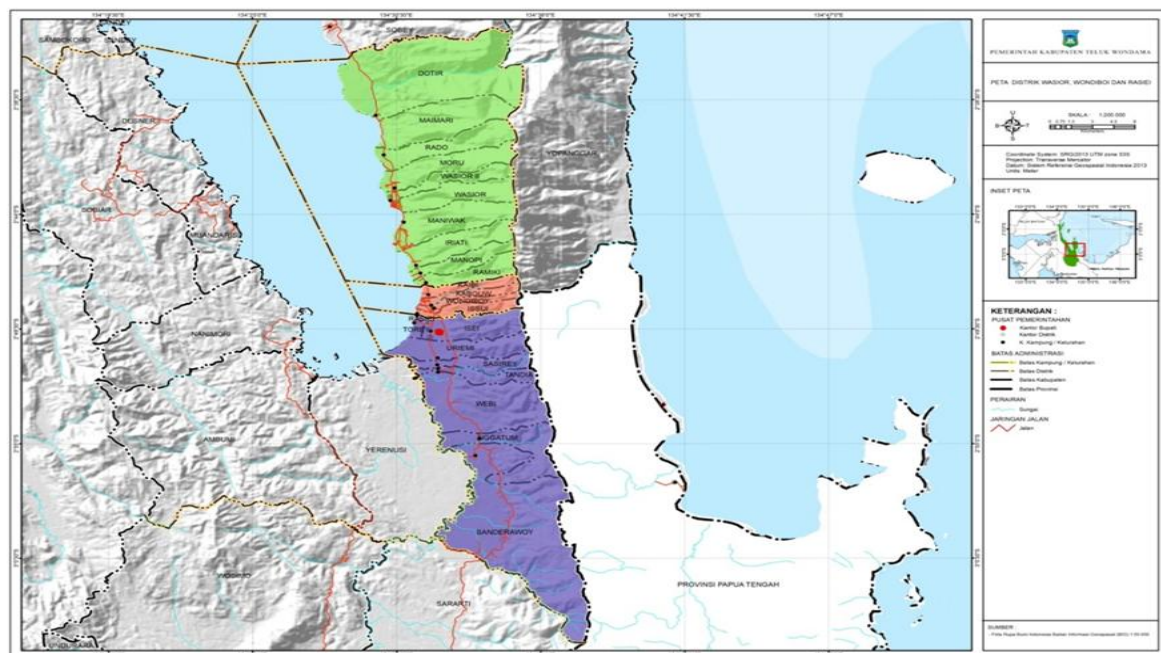


Figure 2. Study area covering Wasior, Wondiboi, and Rasiei Districts in Teluk Wondama Regency

A summary of key-informant interviews was prepared to show the relationship between data sources, substantive information, and their use in the analysis. The interview findings were then grouped according to themes relevant to Koentjaraningrat's cultural elements and Kevin Lynch's urban image elements.

Wasior functions as a center of government, trade, services, and transportation; Wondiboi has important urban and institutional functions; and Rasiei accommodates government functions and cultural development. The three areas are connected by the main coastal road and contain historical, educational, and religious sites, economic activities, and mobility patterns relevant to urban image formation. The study area is shown in Figure 2.

3.2. Data Sources and Collection

Primary data consisted of field observations, in-depth interviews, community-perception interviews, and visual documentation. Observation focused on physical condition, cultural expression, activity, accessibility, visibility, information, and maintenance for the five city-image elements. The field records cited in the thesis were documented during May 2026. Secondary data included regional spatial and development planning documents, technical-agency information, historical records, previous studies, and literature on urban image and Papuan culture.

Informants were selected purposively because of their knowledge or direct involvement in local culture and development. Key stakeholders included customary and religious leaders, district and village officials, technical-agency representatives, cultural communities, artisans, creative-economy actors, and local academics. A separate community-perception module involved twenty residents with varied occupations, including civil servants, fishers, farmers, construction workers, private employees, and homemakers. This combination enabled triangulation between institutional narratives, cultural knowledge, physical evidence, and everyday spatial perception [20,21].

3.3. Observation Instrument and Analysis

The field-observation instrument operationalizes the Lynch–Koentjaraningrat Synchronization Matrix presented in Table 1. Relationships between urban image elements and cultural components were translated into indicators that could be directly observed in physical conditions and spatial activities. A summary of the observation indicators is presented in Table 3.

Each indicator was rated on a 1–5 scale to standardize descriptions of existing conditions: 1 = very inadequate/not found, 2 = inadequate, 3 = adequate, 4 = good, and 5 = very good. Each rating was supported by field notes and documentation as empirical evidence and was then used to identify the representation of cultural values and determine gap priorities.

The observation results were used to assess the degree to which cultural values were represented in each urban image element and subsequently served as the basis for gap analysis and the formulation of urban image development strategies.

Table 3. Field observation sheet

Lynch Element	Koentjaraningrat Element	Observation Indicator
Path	Technology System, Arts, Social Organization, Language	1. Ethnic ornamentation on sidewalks, medians, fences, lighting, and street furniture along major routes 2. Distinctive Papuan carving motifs or colors 3. Social activities along the route
Edge	Religious System, Social Organization	1. Cultural gateways/monuments at district boundaries 2. Customary markers (stones, monuments, or religious symbols) 3. Social functions of territorial boundaries
District	Knowledge System, Livelihood System, Arts, Language	1. Local architecture (roof forms, materials, colors) 2. Culture-based economic activities 3. Architectural character, motifs, materials, or local artistic expression within the district 4. Use of local language on place names and area information
Node	Social Organization, Arts, Knowledge System	1. Centers of cultural activity 2. Traditional arts activities 3. Spaces for customary ceremonies or deliberation
Landmark	Religious System, Arts, Knowledge System	1. Architectural and symbolic form of the Landmark 2. Historical and spiritual meaning 3. Role of the Landmark in the urban image

To maintain consistency among concepts, indicators, and collected data, the research instruments were synchronized according to their respective functions. Observation was used primarily to identify physical conditions and spatial activities; interviews were used to explore meaning, cultural values, history, and community perceptions; and documentation served as supporting evidence and a means of verifying findings. The synchronization of the instruments is presented in Table 4.

Table 4. Synchronization of research instruments

Urban Image Element (Lynch)	Cultural Element (Koentjaraningrat)	Research Indicator	O	W	D
Path	Technology System	Condition of roads, medians, sidewalks, pedestrian paths, lighting, and street furniture	✓	–	✓
	Arts	Presence of motifs, ornaments, and distinctive Wondama visual character in street elements	✓	✓	✓
	Social Organization	Availability and use of corridors/pedestrian routes as spaces for community interaction	✓	✓	✓
	Language	Use of the Wondama language on street-name signs and signs/information	✓	✓	✓
Edge	Religious System	Presence and symbolic/religious meaning of monuments, markers, or boundary elements	✓	✓	✓
	Social Organization	Presence of boundaries and the role of markers as expressions of territorial and community identity	✓	✓	✓
District	Knowledge System	Presence of historical sites, educational facilities, museums, interpretive routes, and historical information	✓	✓	✓
	Livelihood System	Presence and character of economic activities based on local potential and culture	✓	✓	✓
	Arts	Application of local architecture, motifs, ornamentation, materials, and cultural expression within the district	✓	✓	✓
	Language	Use of the Wondama language on place names and area information media	✓	✓	✓
Node	Social Organization	Use of space for gathering, interaction, deliberation, and community activities	✓	✓	✓
	Arts	Use of space for art, cultural performances, and traditional activities	✓	✓	✓
	Knowledge System	Use of space as a medium for communicating history, local knowledge, and transmitting cultural values	✓	✓	✓
Landmark	Religious System	Spiritual, religious, and symbolic meanings associated with the Landmark	✓	✓	✓
	Arts	Visual form, architecture, ornamentation, and local cultural symbols of the Landmark	✓	✓	✓
	Knowledge System	Historical value, knowledge, and the role of the Landmark in representing Papuan civilization	✓	✓	✓

Notes:

O = observation;

W = interview;

D = documentation.

✓ = used as a data source/data-collection instrument.

– = not used as a primary data source.

Observation scores were not treated as measures that could be generalized statistically, but as a structured descriptive device for comparing conditions across indicators and identifying priorities. Numerical information was therefore always interpreted together with descriptive notes, visual documentation, interviews, and the sociocultural context.

The analysis was conducted in three stages: qualitative data reduction, data display, and conclusion drawing [20]. First, evidence concerning Papuan civilization was coded into five dominant values. Second, field-observation results were organized according to Lynch's five elements and compared with the expected cultural manifestations in the matrix. Third, gap analysis classified each element as a high, moderate, or low priority based on the absence, weakness, or partial representation of cultural content. Community perceptions were analyzed by frequency of mention and interpreted in relation to the observed spatial elements. Strategic recommendations were then formulated by integrating gap level, local meaning, functional role, spatial connectivity, institutional feasibility, and community participation.

IV. RESULTS AND DISCUSSIONS

4.1.Existing Conditions of the Five Urban Image Elements

The Path element exhibits the most pronounced weaknesses. The structured assessment covered medians, sidewalks, pedestrian routes, street names, information boards, lighting, and the potential for cultural corridors. Fourteen of eighteen indicators (78%) received scores of 1–2, with an average score of 1.5. Most medians and streetlights still use standard designs; culturally patterned paving was not found; sidewalks are available only in limited locations and are approximately one meter wide where present; bilingual street signs were not found; and historical information and wayfinding remain very limited. Thus, although the main corridor functionally connects important places, it does not yet communicate the historical and cultural reasons that make those places meaningful to Wondama's identity.

The Edge element also remains weak, although its overall gap level is classified as moderate. There are no culturally distinctive gateways at the Wasior–Wondiboi and Wondiboi–Rasiei transitions. The Kaibi Gospel Landing Monument requires rehabilitation, while the monument at Rasiei is in better condition but still requires maintenance. The Syalom Hill Cross has strong visual potential and is visible from Wasior Port, but access and the surrounding landscape still need improvement. These conditions indicate that symbolic boundaries are present but have not yet formed a coordinated system of urban thresholds.

The District element combines strong historical assets with substantial gaps. *Batu Peradaban* and *Batu Inspirasi* are well maintained, and Aitumieri remains recognizable as a historical and educational district. However, the area lacks an integrated museum or interpretation center; the heritage route is incomplete; information is limited and not yet bilingual; and several mission buildings are deteriorating. Public architecture generally uses conventional roof forms and rarely incorporates Wondama motifs. Craft production continues, but exhibition, training, and marketing facilities have not yet been integrated into a coherent culture-based economic district.

The Node element includes Aitumieri Field, Masasoya Park, Wasior Port, Iriati Market, Wasior Terminal, and Wasior Airport. These places support ceremonial activities, transportation, trade, and social interaction, but their cultural facilities and visual identities remain inconsistent. Aitumieri Field provides adequate space but has only a simple stage and limited information. Masasoya Park still lacks cultural ornamentation and child-friendly facilities. The port and airport function effectively as gateways, but available historical interpretation is minimal. The market accommodates some local-product activity, although a clearly defined traditional culinary zone has not yet developed; meanwhile, the terminal still lacks adequate waiting facilities, culturally distinctive design, and bilingual information.

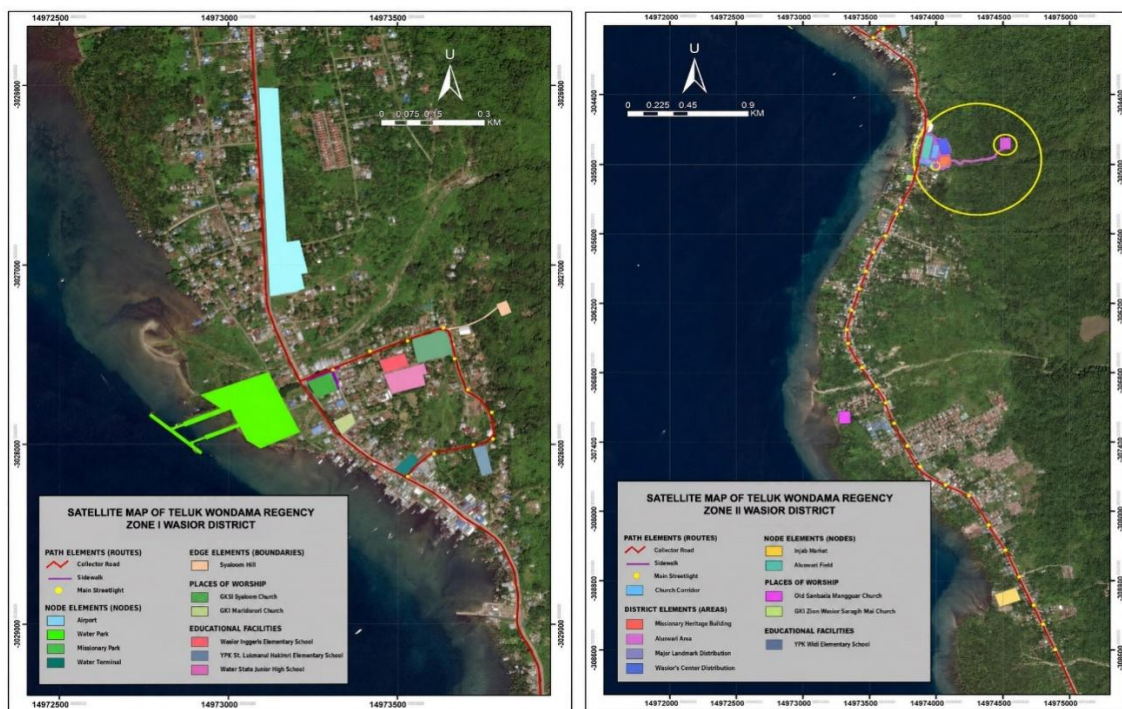
The Landmark element is relatively stronger because Aitumieri Hill, *Batu Peradaban*, *Batu Inspirasi*, the historic churches, and the Syalom Hill Cross have clear visibility and meaning. *Batu Peradaban* received a high condition score and retains its inscription, protective structure, and contemplative atmosphere. The access route to Aitumieri, consisting of approximately 710 steps, has also been revitalized. Nevertheless, the interpretation system remains limited, the historic churches have not yet received comprehensive heritage protection, and an

I.S. Kijne monument has not been constructed. The strength of the Landmark element is therefore still concentrated in individual objects and has not yet developed into a fully connected urban narrative.

Table 2. Summary of existing conditions and gap levels

Element	Key Empirical Findings	Gap Level
Path	Average score 1.5; 14 of 18 indicators rated 1–2; limited sidewalks, cultural road furniture, bilingual signs, interpretation, and cultural corridors	High
Edge	No district gateways; Gospel monuments require maintenance/revitalization; Syalom Cross visible but access and surroundings need improvement	Medium
District	Strong Aitumieri heritage assets, but no integrated museum; aging mission buildings; weak local architectural identity; craft center not integrated	High
Node	Activity centers exist, but cultural stages, amenities, thematic design, local-product zones, and bilingual information are limited	Medium
Landmark	Aitumieri and associated stones are strong symbols; heritage status and interpretation remain incomplete; I.S. Kijne monument absent	Medium

The spatial configuration demonstrates that the urban image elements do not stand alone. Spatial experience begins at entry points or territorial boundaries (Edge), proceeds along the main Wasior–Wondiboi–Rasiei corridor (Path), passes community activity nodes (Node) and areas with distinct character (District), and eventually reaches major Landmarks such as Aitumieri Hill. This sequence confirms that the legibility, orientation, and identity of Teluk Wondama are shaped by relationships among the elements rather than solely by the strength of individual objects.



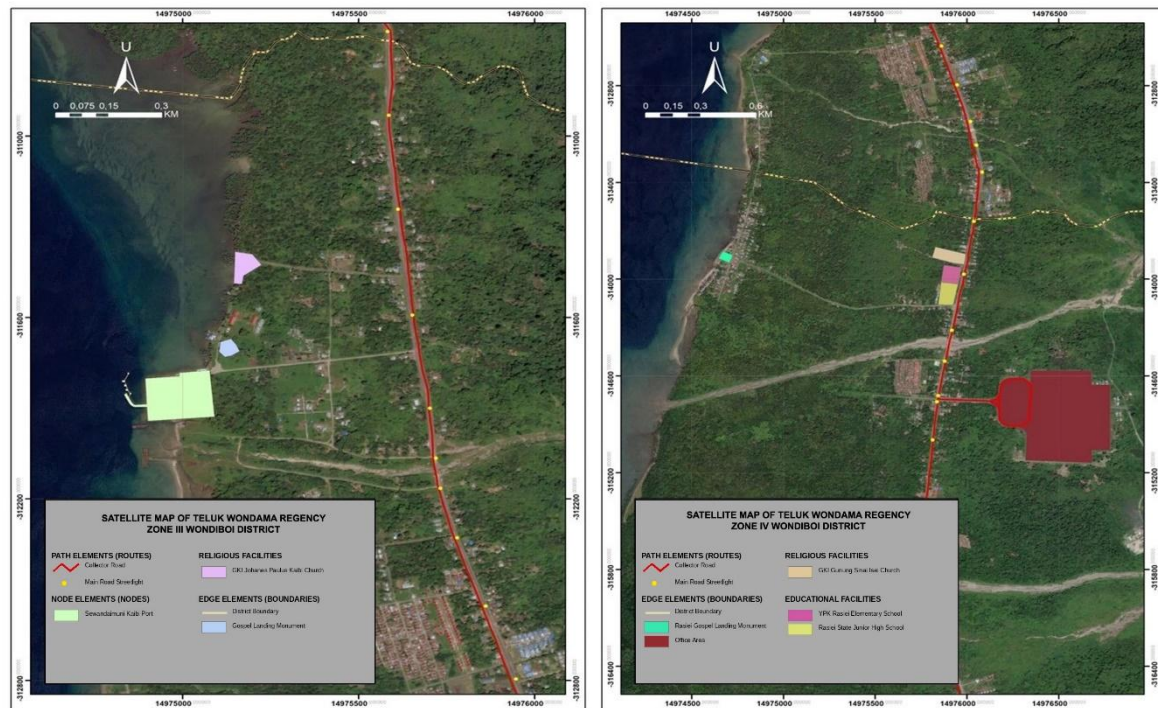
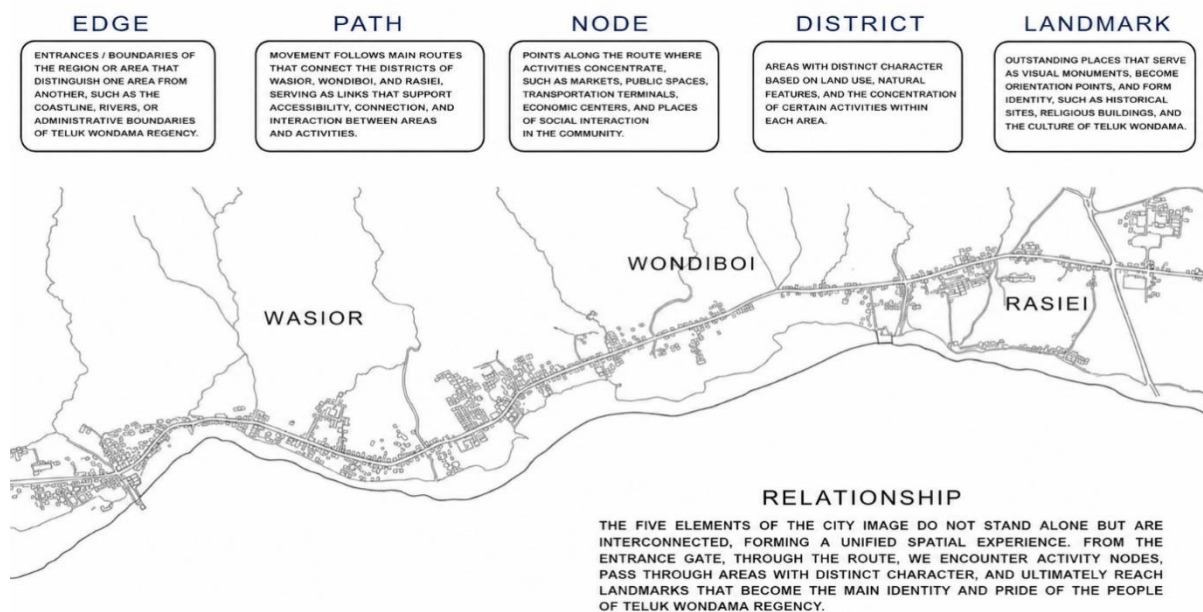


Figure 3. Spatial configuration of selected path, edge, district, node, and landmark elements in the Wasior and Aitumieri–Rasiei zones.

Figure 4. Spatial experience scenario of urban image elements in Teluk Wondama Regency



4.2. Civilizational Values of Teluk Wondama

The analysis identified five interrelated values that shape the civilizational identity of Teluk Wondama. First, religiosity reflects the historical role of Christianity, churches, Gospel landing sites, and spiritual practices in processes of social transformation. Second, education and transformation are associated with Aitumieri and the development of modern education since 1925, including the role of I.S. Kijne in advancing knowledge, discipline, music, and collective consciousness [11,12]. Third, communal solidarity is reflected in mutual assistance, collective work, customary deliberation, and shared responsibility.

Fourth, local wisdom encompasses language, carving traditions, dance, music, ecological practices, the use of local materials, livelihood knowledge, and cultural production. The study identified eight distinctive Wondama carving motifs and emphasized the continuing importance of noken, woodcarving, weaving, sago-

related practices, and traditional performances. Fifth, customary leadership is expressed through the Manarir system, the role of customary leaders in mediation and conflict resolution, and their contribution to social order and cultural continuity. These five values overlap: religious institutions support education, customary leadership sustains solidarity, and local arts transmit historical knowledge.

These findings confirm that Teluk Wondama possesses rich cultural content as a foundation for urban image formation. The central problem is not the absence of identity but the incomplete translation of that identity into space. The strongest values remain concentrated in particular sites and community narratives and are therefore not experienced continuously throughout the city. This distinction is important because cultural identity can remain socially vibrant while simultaneously becoming visually fragmented in the built environment.

4.3. Synchronization and Gap Analysis

The synchronization analysis shows that the physical representation of each value is uneven. Religiosity is the most visible value because the Gospel Landing Monument, churches, the Syalom Hill Cross, and sacred landscapes function as both religious and historical symbols. Education and customary leadership are partly represented through Aitumieri and *Batu Peradaban*, but facilities for interpretation, commemoration, and knowledge transmission remain incomplete. Communal solidarity and local wisdom are the least visible in everyday urban infrastructure. Although both remain active in social practice, roads, gateways, public buildings, parks, and transport nodes rarely express communal space, local language, carving traditions, traditional arts, or customary decision-making processes.

The high gaps identified for Path and District are strategically significant. Path is the urban element most frequently experienced in daily life, and its current visual neutrality weakens continuity among major heritage sites. At the same time, the absence of a legible cultural district makes it difficult for residents and visitors to understand Aitumieri as a structured area rather than a collection of separate objects. Edge, Node, and Landmark are classified as having moderate gaps because recognizable assets are already present, but their design, interpretation, accessibility, maintenance, and network relationships still need to be strengthened.

These findings support Lynch's argument that the capacity of an environment to form an image depends on relationships among elements rather than merely on the presence of isolated icons [1]. Aitumieri Hill can function as a memorable Landmark, but its contribution to urban identity is weakened when the route to the site lacks thematic information, entry points do not yet function as cultural thresholds, nearby public spaces provide only limited interpretation, and the wider area lacks an integrated museum and heritage route. A more effective strategy is therefore not to multiply symbols indiscriminately, but to connect existing meanings through a coherent spatial sequence.

4.4. Community Perceptions and Collective Recognition

Community perceptions reinforce the importance of education and Aitumieri in Teluk Wondama's identity. Among the twenty community informants, education was mentioned twelve times as a defining civilizational value, followed by history with ten mentions, religion with eight, culture with seven, local wisdom with six, and the economy with four. This pattern indicates that residents do not define Teluk Wondama primarily through commercial functions, but through historical transformation, learning, faith, and cultural continuity.

Aitumieri Hill was selected by eleven informants (55%) as the object that best represents Teluk Wondama. Wasior Port ranked second at 15%, while the Gospel Landing Monument received 10%. *Batu Peradaban*, Iriati Market, Masasoya Park, and other objects each received 5%. These responses reveal a distinction between symbolic centrality and functional centrality. Aitumieri is the strongest historical Landmark and District in collective memory, whereas Wasior Port functions as a major Node because of its role in mobility and economic interaction. Both are important to the urban image, but they perform different functions.

The consistency between observation results and community perceptions strengthens the credibility of the proposed strategy. Aitumieri was not selected only by planners or researchers; it was also recognized by residents from diverse occupational groups. The community's emphasis on education further indicates that design interventions should not stop at reproducing decorative motifs. They should communicate historical knowledge, support learning processes, and create opportunities for community participation in cultural transmission.

Table 6. Community perceptions of civilizational values and representative objects

Category	Item	Frequency/Proportion	Interpretation
Value	Education	12 mentions	Foundation of Papuan development through Aitumieri
Value	History	10 mentions	Collective journey and regional identity
Value	Religion	8 mentions	Beginning of major social transformation
Value	Culture	7 mentions	Ancestral heritage requiring continuity
Value	Local wisdom	6 mentions	Guidance for life and community identity
Object	Aitumieri Hill	11 informants / 55%	Primary symbol of education and regional identity
Object	Wasior Port	3 informants / 15%	Center of movement, economic activity, and coastal interaction
Object	Gospel Landing Monument	2 informants / 10%	Historical and religious transformation
Object	Other objects mentioned	4 informants / 20%	<i>Batu Peradaban</i> , Iriati Market, Masasoya Park, and other local references

4.5. Urban Image Development Strategy

The development strategy is structured around the five urban image elements and reinforced by cross-sector measures involving institutional coordination and community participation. Priority is assigned to Path and District because both exhibit high gaps and have the potential to connect existing Landmarks, Nodes, and Edges into a continuous spatial experience. Interventions should be selectively adapted to area functions: commercial corridors require clear information and comfortable pedestrian movement; government areas require consistent and representative public architecture; residential areas need community-scale markers and gathering spaces; and Aitumieri requires stronger historical interpretation and heritage management.

For the Path element, the strategy seeks to transform the main corridor from a visually neutral route into both a movement space and a space of cultural expression. Interventions include medians and paving with local motifs; thematic streetlights inspired by the tifa, noken, bows, arrows, and Wondama motifs; bilingual street-name and directional signs; improved sidewalk continuity; development of cultural corridors; curated murals; and interpretive signage leading to heritage sites. These measures directly respond to the low Path scores while strengthening local wisdom, language, arts, and the experience of history along the journey.



(a)



(b)



(c)



(d)

Figure 5. (a) Sidewalks use paving blocks with carving motifs and guiding blocks for persons with disabilities; **(b)** Thematic streetlights adapt the forms of the tifa (a traditional Wondama musical instrument), noken (traditional bag), spear, or bow and arrow as traditional hunting equipment.

Figure 5. (c & d) The cultural corridor uses murals or reliefs depicting Aitumieri history on walls along the main route, including park walls and landscaped medians. Educational panels on the history of Papuan civilization include QR codes for audio guides, together with statues or art installations of Izaak Samuel Kijne at strategic points.

For the Edge element, the strategy seeks to strengthen territorial boundaries not merely as administrative divisions but as symbolic markers that clarify the cultural and historical identity of Teluk Wondama. Key interventions include constructing district gateways at the Wasior–Wondiboi and Wondiboi–Rasiei boundaries using distinctive Wondama carving ornaments, architectural forms adapted from local character, and bilingual information. The Edge system should also be strengthened through the revitalization of the Kaibi and Rasiei Pantai Gospel Landing monuments as markers of the community’s historical journey and religious transformation, including landscape improvements, parking areas, and historical information. The Syalom Hill Cross should be maintained as a dominant visual edge through improved road access, site landscaping, nighttime lighting, and enhanced visibility from Wasior Port. In addition, the entrance gateway to the Aitumieri area, village boundary markers, and natural boundaries such as the coastline can be developed as part of an Edge system that reinforces urban legibility and continuity of identity.



(a)



(b)



(c)



(d)

Figure 6. (a & b) A large cross is positioned on the hilltop with the relief inscription “Syalom.” LED spotlights make it visible at night from Wasior Port (approximately 2–3 km away). The structure uses concrete with a white finish. Access consists of a footpath, steps, and handrails.

Figure 6. (c & d) District gateways at the Wasior–Wondiboi boundary uses distinctive Wondama carving ornaments and roof forms adapted from traditional Wondama architecture. Gateway information is presented in Indonesian and the Wondama language.

For the District element, Aitumieri should be strengthened as an integrated civilizational district. Key components include a Museum of Papuan Civilization or interpretation center, conservation and adaptive reuse of mission buildings, interconnected heritage trails, bilingual interpretation, public-architecture guidelines, and stronger craft and cultural-economy centers. Development should preserve the educational meaning, religiosity, and collective memory that have shaped Aitumieri’s identity while improving connections among currently fragmented sites.



(a)



(b)



(c)



(d)

Figure 7. (a & b) Government buildings, including the District Office and regional-agency offices, adopt local Papuan architecture. Roof forms use distinctive Wondama characteristics; walls combine timber and natural stone; doors and windows incorporate carved ornamentation; and the dominant colors are black, red, white, and yellow.

Figure 7. (c & d) Revitalization of the original 1925 building retains its original architectural character. The building is proposed as a mini-museum displaying historical photographs, old textbooks, and school equipment from that period. A historical panel states: “The first school for Papuan people, founded by I.S. Kijne, 25 October 1925.”

For the Node element, the development strategy focuses on enhancing major gathering spaces as centers of social, cultural, economic, and transport interaction that also represent Papuan civilizational values. Aitumieri Field should be strengthened as a cultural and ceremonial node through a permanent cultural stage, spectator stands, seating and landscaped areas, improved lighting, and educational panels, inscriptions, bilingual information boards, and technology-based interpretation media. Masasoya Park can be developed as a green public space that displays cultural ornamentation and provides space for community expression. Meanwhile, Wasior Port and Wasior Airport, as the region’s principal gateways, should incorporate strong markers, historical information, and local architectural expression; Iriati Market can be strengthened through dedicated

zones for craft products and the cultural economy; and Wasior Terminal can be organized as a transport node that expresses Wondama's visual identity. In this way, each Node serves not only a practical function but also becomes an experiential space connecting everyday community activities with the historical and cultural narratives of Teluk Wondama. The study identifies six priority nodes: Aitumieri Field, Masasoya Park, Wasior Port, Iriati Market, Wasior Terminal, and Wasior Airport.



(a)



(b)



(c)



(d)

Figure 8. (a) An open field accommodates large-scale mass dance performances and customary activities. The proposed area is 10,000–15,000 m² with a capacity of 5,000–10,000 people; **(b)** The port entrance includes a welcome gateway reading “Welcome to Teluk Wondama – The Land of Papua Civilization.” Tourist-information panels are provided in Indonesian, the Wondama language, and English. Other facilities include photo spots with Aitumieri Hill and the Syalom Hill Cross as backdrops, waiting areas with cultural ornamentation, and a center for historical and cultural information.

Figure 8. (c) The market adopts local architecture with bilingual shop signs, dedicated areas for local craft products such as noken, carvings, and woven goods, traditional culinary zones for foods such as papeda, grilled fish, and sago, and spaces for traditional-art performances on weekends; **(d)** The terminal is strengthened with cultural ornamentation, a Wondama-themed entrance gateway, bilingual information boards, waiting areas with carved benches, and murals depicting the history of Papuan civilization on terminal walls. The design concept includes the entrance gateway and the architectural character of the building.

For the Landmark element, the strategy seeks to strengthen objects with historical, religious, cultural, and visual-orientation value so that they can function as primary icons of the ‘City of Papuan Civilization.’ Aitumieri Hill is prioritized as the principal Landmark because it represents the history of education, religiosity, and the transformation of Papuan civilization. It should therefore be developed in an integrated manner through maintenance of access and the route to the summit, improved information boards and interpretation facilities, and construction of an I.S. Kijne Monument in recognition of his role in Aitumieri’s educational history. *Batu Peradaban* and *Batu Inspirasi* should be reinforced as symbols of the civilizational narrative through improved site design and adequate historical interpretation. Historic churches should also be designated and managed as part of the cultural heritage system, while the Syalom Hill Cross should be strengthened as a religious and

visual landmark recognizable from the coastal area and Wasior Port. Integrating the landmarks through interpretive routes, bilingual information, lighting, and a consistent historical narrative will create a stronger network of urban markers and enhance the imageability of Teluk Wondama. The proposed strategy specifically emphasizes Aitumieri Hill and the I.S. Kijne Monument, *Batu Peradaban* and *Batu Inspirasi*, historic churches as protected heritage, and the Syalom Hill Cross as a major visual Landmark.



(a)



(b)



(c)



(d)



(e)



(f)

Figure 9. (a) The existing natural stone is cleaned and reinforced as *Batu Peradaban*, with an inscription of I.S. Kijne's prophecy. The area includes a historical explanation panel made of ironwood, seating made of natural stone, and a photo spot with the inscription as a backdrop; **(b)** *Batu Inspirasi*: The second large rock serves as a symbol of inspiration and motivation for the Papuan people. A plaque has been added featuring a quote from I.S. Kijne: "Whoever works in this land faithfully, honestly, and obediently shall walk from one wonder to another." There is a meditation and prayer area surrounding the rock.

Figure 9. (c, d, e, & f) The church buildings are proposed for designation as cultural heritage and revitalization while retaining their original architecture, which combines European and local influences. A historical panel states "The oldest church in Teluk Wondama"; nighttime lighting highlights the architecture, and the surrounding area is landscaped as a garden.

To translate these strategies into a more operational form, the development concepts are visualized according to the five urban image elements. The visualization links existing conditions, relevant cultural elements, and intervention concepts for Path, Edge, District, Node, and Landmark so that the proposals can be read as a unified system for developing the urban image of Teluk Wondama.

Landmark development should emphasize protection, interpretation, and connectivity rather than monumental competition. The proposed I.S. Kijne Monument can strengthen recognition of the history of education if it is designed through consultation with churches, customary leaders, historians, and residents. Historic churches should also be directed toward cultural-heritage protection under the applicable regulatory framework [23], accompanied by an interpretation system that connects them to the Aitumieri heritage trail.

Implementation of the strategy requires strong institutional coordination. A cross-agency urban image team should involve the regional planning agency, public works, culture and tourism, transportation, communications, district governments, the Papuan Customary Council, churches, cultural studios, artisans, and community representatives. Cultural values should then be translated into design guidelines, priority programs, financing, maintenance, and evaluation, using community co-design mechanisms so that decisions do not stop at visual symbolism alone. These strategic directions are summarized in Table 7.

Table 7. Strategic directions for urban image development

Element	Priority Actions	Primary Actors
Path	Culturally patterned medians and paving; improved pedestrian-route continuity; thematic lighting; bilingual signage; interpretive corridors and murals; and route information to heritage sites.	Public works, transportation, communications, district government, artists, and communities
Edge	Culturally legible district gateways; rehabilitation of the Gospel Landing Monument; and improved access, lighting, and landscape treatment for the Syalom Hill Cross.	Public works, culture/tourism, district government, churches, customary leaders
District	Museum of Papuan Civilization; Aitumieri heritage trail; conservation and adaptive reuse; local design standards; and an integrated craft and cultural-economy center.	Planning agency, culture/tourism, public works, heritage experts, artisans
Node	Permanent cultural stage; improved park quality; culturally responsive port, market, terminal, and airport; local-product and culinary zones; and bilingual information.	Transportation, trade, culture/tourism, facility managers, community groups
Landmark	I.S. Kijne Monument; heritage designation for historic churches; strengthened Aitumieri pilgrimage and educational landscape; and a coordinated interpretation system.	Culture/tourism, churches, customary council, historians, planning agency
Cross-sector	Coordination team; integration into RPJMD/RTRW/RDTR planning instruments; design regulations; dedicated financing; community co-design; and maintenance and evaluation.	Regency government, customary and religious institutions, private sector, and civil society

4.6. Implications and Limitations

This study offers an operational approach to culturally grounded urban planning. The findings show that cultural identity can be assessed not only through attitudes or promotional narratives, but also through the

spatial continuity of everyday infrastructure, public spaces, activity centers, districts, and landmarks. The synchronization matrix helps translate cultural meanings into planning practice while maintaining distinctions among the theoretical frameworks: Lynch explains spatial image, Koentjaraningrat organizes cultural content, and community interpretation determines local relevance.

The proposed strategy also has implications for sustainability. Reusing heritage buildings, strengthening walking routes, supporting local craft economies, and improving the quality of public space can reduce reliance on large new monuments as the primary means of constructing identity. Cultural tourism can provide benefits, but it must be managed in ways that protect sacred meanings, ecological carrying capacity, local community access, and community control [10,14,22]. The urban image should therefore be maintained as a living cultural system rather than merely as a staged representation for visitors.

This study is limited to three districts and Lynch's five elements. The quantitative component consists only of a simple descriptive scale and a community-perception module involving twenty informants; the findings are therefore not intended to be statistically generalized to the entire regency. The study also did not measure economic impacts and was conducted during a period of substantial revitalization in Aitumieri. Future research should expand the sample, evaluate post-implementation changes, assess visitor and resident experiences, examine the feasibility of cultural tourism, and compare Teluk Wondama with other areas of Papua that possess strong historical identities.

V. CONCLUSIONS

Teluk Wondama has a strong civilizational foundation shaped by religiosity, education and transformation, communal solidarity, local wisdom, and customary leadership. These values remain active in community memory and practice, but their physical representation along the urban corridor has not yet been fully developed. The main planning challenge is therefore not to create a new identity, but to translate an existing identity into an urban environment that is legible, connected, and carefully managed.

The largest gaps occur in Path and District. A total of 78% of Path indicators received scores of 1–2, indicating weak cultural expression in road infrastructure, pedestrian spaces, lighting, signage, and interpretation systems. Aitumieri possesses strong heritage assets, but the area still lacks an integrated museum, continuous interpretation, comprehensive conservation, local architectural standards, and an organized cultural-economy center. Edge, Node, and Landmark exhibit moderate gaps: meaningful sites and activity centers already exist, but design, access, facilities, information, and network relationships remain incomplete.

Community perceptions confirm Aitumieri's strategic position. Fifty-five percent of the twenty informants identified Aitumieri Hill as the object that best represents Teluk Wondama, while education was the most frequently mentioned civilizational value. These findings support the development of Aitumieri as both a major cultural-historical District and Landmark connected through culturally legible routes to Wasior Port, markets, public spaces, territorial thresholds, religious monuments, and government areas.

The recommended strategy integrates culturally expressive corridors, district gateways, a Museum of Papuan Civilization and heritage trails, culturally responsive public Nodes, conservation of historic sites, an I.S. Kijne Monument, heritage designation, bilingual information, local economic spaces, coordinated institutions, and community co-design. Conceptually, the study demonstrates that civilization-based urban image development should connect cultural meaning with everyday spatial structure so that identity is not only visible in Landmarks but is continuously experienced throughout the urban system.

REFERENCES

- [1] K. Lynch, *The Image of the City*, Cambridge, MA: MIT Press, 1960.
- [2] Koentjaraningrat, *Pengantar Ilmu Antropologi (Introduction to Anthropology)*, revised ed., Jakarta: Rineka Cipta, 2005.
- [3] C. Geertz, *The Interpretation of Cultures*, New York: Basic Books, 1973.
- [4] A. Rapoport, *House Form and Culture*, Englewood Cliffs, NJ: Prentice Hall, 1969.
- [5] H. Lefebvre, *The Production of Space*, Oxford: Blackwell, 1991.
- [6] D. Hayden, *The Power of Place: Urban Landscapes as Public History*, Cambridge, MA: MIT Press, 1995.
- [7] M. Kavaratzis, "From city marketing to city branding: Toward a theoretical framework for developing city brands," *Place Branding*, vol. 1, no. 1, pp. 58–73, 2004.
- [8] M. Kavaratzis and G. J. Ashworth, "City branding: An effective assertion of identity or a transitory marketing trick?" *Tijdschrift voor Economische en Sociale Geografie*, vol. 96, no. 5, pp. 506–514, 2005.
- [9] S. Anholt, *Competitive Identity: The New Brand Management for Nations, Cities and Regions*. London: Palgrave Macmillan, 2007.
- [10] G. Richards and J. Wilson, "Developing creativity in tourist experiences: A solution to the serial reproduction of culture?" *Journal of Urban Affairs*, vol. 28, no. 2, pp. 120–140, 2006.
- [11] B. Meteray, *Nasionalisme Ganda Orang Papua (The Dual Nationalism of Papuan People)*. Jakarta: Kompas, 2014.
- [12] H. Wanma, *Domine Izaak Samuel Kijne: Mengenang Hidup dan Karyanya untuk Tanah dan Bangsa Papua (Domine Izaak Samuel Kijne: Remembering His Life and Work for the Land and People of Papua)*. Papua, 2015.
- [13] E. H. Rumansara, "Memahami kebudayaan lokal Papua: Suatu pendekatan pembangunan yang manusiawi di Tanah Papua (Understanding Papuan local culture: A humane development approach in Papua)," *Jurnal Masyarakat & Budaya*, vol. 17, no. 2, pp. 233–244, 2015.
- [14] A. Burami, J. Rumbiak, and S. Wantik, "Analisis pengembangan potensi wisata Bukit Aitumieri Kabupaten Teluk Wondama (Analysis

- of tourism-potential development at Aitumieri Hill, Teluk Wondama Regency),”*Jurnal Pengembangan Wilayah dan Kota*, vol. 12, no. 1, pp. 52–58, 2018.
- [15] R. K. R. Hammar, “Proses dan bentuk penataan ruang masyarakat hukum adat Arfak Papua Barat dalam perspektif penataan ruang nasional (Processes and forms of spatial planning among the Arfak customary-law community of West Papua from the perspective of national spatial planning),”*Jurnal Wilayah dan Lingkungan*, vol. 7, no. 3, pp. 193–210, 2019.
- [16] L. Mulyadi, *Arsitektur Kota Berkelanjutan Berbasis Kearifan Lokal (Sustainable Urban Architecture Based on Local Wisdom)*. Malang: Institut Teknologi Nasional Malang, 2020.
- [17] D. Ratri and H. Kusuma, “Integrasi identitas lokal dalam ruang publik perkotaan di Timur Indonesia’ (Integration of local identity into urban public spaces in Eastern Indonesia),”*Jurnal Perencanaan Wilayah dan Kota*, vol. 32, no. 4, pp. 241–252, 2021.
- [18] J. W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed., Thousand Oaks, CA: SAGE, 2018.
- [19] R. K. Yin, *Case Study Research and Applications: Design and Methods*. Thousand Oaks, CA: SAGE, 2018.
- [20] M. B. Miles, A. M. Huberman, and J. Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed., Thousand Oaks, CA: SAGE, 2014.
- [21] Y. S. Lincoln and E. G. Guba, *Naturalistic Inquiry*, Beverly Hills, CA: SAGE, 1985.
- [22] Ministry of Public Works and Housing of the Republic of Indonesia, *Pedoman Penataan Kawasan Berbasis Kearifan Lokal (Guidelines for Area Planning Based on Local Wisdom)*, Jakarta: Directorate General of Human Settlements, 2020.
- [23] Republic of Indonesia, *Law No. 11 of 2010 concerning Cultural Heritage*, State Gazette No. 130, 2010.
- [24] A. Putra and S. Nugroho, “Partisipasi masyarakat dalam city branding (Community participation in city branding),”*Jurnal Ilmu Sosial dan Ilmu Politik*, 2021.
- [25] P. Harsasto, “Strategi pengembangan kota berbasis budaya: Studi kasus Kota Surakarta (Culture-based urban development strategy: A case study of Surakarta),”*Jurnal Tata Kota dan Daerah*, vol. 10, no. 2, pp. 87–98, 2018.
- [26] A. Pradana, “Strategi city branding Pekalongan sebagai World’s City of Batik (Pekalongan city-branding strategy as the World’s City of Batik),”*Jurnal Administrasi Publik*, 2013.