

Original Article

The Role of Gorontalo City in Sustainable Spatial Development

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Abstract - The purpose of this study is to describe and analyze the functions of existing spaces in Gorontalo City and how they relate to each other, as well as to examine the spatial patterns of urban development in Gorontalo City. Gorontalo City, the capital of Gorontalo Province, has undergone a complex transformation of functions, with an increase in the number of functions in this area. Initially, it was only used as a center of government, but now it has developed into a center of commercial trade, education, and residential areas. These changes have had an impact on the patterns and utilization of space, as well as pressure on the maintenance of spatial sustainability. The method used in this study is a qualitative-descriptive analytical method. Using three analytical stages: 1) Spatial Analysis (GIS or AutoCAD), 2) SWOT Analysis (Strengths, Weaknesses, Opportunities, Threats), and 3) Content Analysis. Using these three stages makes it possible to see the interaction between urban functions and morphological structures, as well as to describe the local values integrated into urban space. These findings show that urbanization can encourage adaptive urban forms, but it can also disrupt empty spaces and the preservation of local identity. One of the most influential functions is the economic function, although some areas are at risk of being marginalized due to the dominance of economic functions, thus requiring careful planning so that the uniqueness of local identity can still be expressed through the naming of areas and physical spatial planning. This study emphasizes the importance of urban planning that balances local cultural values, spatial functions, and spatial sustainability. Thus, Gorontalo City has the potential to develop into an efficient and inclusive city while maintaining its identity through accurate function mapping and contextual spatial strategies.

Keywords - Urban Function, Local Identity, Spatial Sustainability, Gorontalo City, SWOT Analysis.

1. Introduction

Gorontalo City is a city and the capital of Gorontalo Province, Indonesia. It is located on the island of Sulawesi. Gorontalo Province was created in late 2000 and is also known as an administrative city because its provincial administration center is located in Gorontalo City. Gorontalo City has evolved to become increasingly crowded and denser over the years. A city that was originally concerned with administrative functions expanded to become a city of multi-functional sectors such as trade, education, and culture. Both the role of space and its use pattern, in terms of urban dynamics, urban relationship, and economic type. Economic concepts have been seriously affected by this transformation. The determination of Gorontalo City as a National Activity Center (PKN/locus) has been regulated in the Provincial Regulation of Gorontalo Province Number 2 of 2024, which can transform it into a place for national and regional activities. Thus, Gorontalo City requires an intelligent approach to manage the complexity of urban functions based on its local identity and character [1].

Gorontalo City Regulation No. 40, issued in 2011, provides names for areas using local languages, such as Bili'u, Pentadu, Bantahyo Lolipu, and Uta'eya, as listed in the regulation. The aim is that the names included in the regulation not only reflect the spatial function of an area, but also show the connection between place names and the cultural values and spatial structure of the city. The change in the city's function has formed a dynamic morphological pattern, allowing the core government zone, trade corridor, and education and cultural clusters to become markers in the new spatial structure that is developing in Gorontalo City. However, the process of spatial transformation in Gorontalo City faces challenges that need to be addressed, such as uncontrolled changes in land use (due to increasing space requirements but limited space), pressure on the need for public open spaces, which can diminish the expression of local values in spatial design and planning [2].

The local identity that exists and is owned by the city of Gorontalo can be seen through symbolic and functional elements. These symbolic and functional elements are not



merely additional attributes (miniatures), but play a central role in directing the direction of sustainable urban development in the city of Gorontalo. Therefore, if cultural values and the functional structure of space can be collaborated, Gorontalo will not only be functionally effective (as an area) but will also have social and historical significance.

This study aims to: (1) Identify the main functions of Gorontalo City; (2) Analyze the relationship between urban functions and morphological structure and local identity; (3) Provide recommendations for spatial planning policies based on urban functions with character.

Through a descriptive-analytical approach based on case studies, this research examines the functions of the city that shape and are influenced by space, and how design strategies can be directed to maintain the spatial and social sustainability of Gorontalo City.

However, some studies on the spatial development of cities in Indonesia, particularly those undergoing rapid growth, such as Gorontalo, still tend to focus primarily on changes in physical aspects and land use. This study aims to integrate the relationships among urban functions and morphological structures while preserving local identity within the limited framework of spatial sustainability. Furthermore, there has been little research examining how the dynamics of urban functions can reshape spatial structures while simultaneously sustaining local values in a sustainable manner.

Therefore, this study offers a novel approach by developing an integrative framework that connects these three elements (*urban functions, morphological structure, and local identity*) within the perspective of sustainable spatial planning. This approach does not view the city's functions as isolated elements but as an interconnected system that shapes its character (form/appearance) in a sustainable manner.

Unlike previous studies, this research combines spatial analysis, SWOT analysis, and content analysis to provide a deeper and more comprehensive understanding of the developmental dynamics of Gorontalo City. Thus, it is hoped that this study will contribute to the development of contextual and sustainable urban design models.

2. Methods

This study employs a *qualitative approach* using *descriptive-analytical methods* supported by spatial analysis data, which are useful for understanding the relationships between urban functions, morphological structures, and local identity in the context of spatial development. This approach enables an in-depth exploration of urban spatial dynamics through the integration of spatial data, interviews, and policy documents.

2.1. Research Location

The research location is in the center of Gorontalo City, which includes the area around the Nani Wartabone Monument, because it has a symbolic and administrative function as the epicenter of the Gorontalo city government. This location falls within three main subdistricts: South City Subdistrict, East City Subdistrict, and Hulonthalangi Subdistrict. The reason for choosing this area as the focus of the research is that it reflects the concentration of various functions of government, trade, education, and culture that are developing simultaneously.



Fig. 1 Study area location

The delimitation of this research location covers part of the Tenda, Ipilo, and Biawao subdistricts, which are specified in the 2021–2041 Gorontalo City Detailed Spatial Plan (RDTR). The location was also chosen based on the hierarchy of city services and the high intensity of spatial and social activities in the city of Gorontalo. This research is based on its strategic role as the city's administrative center (it houses the Mayor's Office and the official residences of the Governor and Mayor of Gorontalo). In concept, the urban core is a district that contains major functions, including government and business, within an area of continual occupation. According to Carmona et al., the very government / administrative core has several functions, so it is important for an urban core, since the urban core not only performs a function of administration, but in general, this can also represent a symbol of local power and identity [3]. This is corroborated by the view of Knox and McCarthy (2012), which posits that the city center epitomizes the core of physical, social, economic, and political activities in a city [4]. Therefore, considering this area as a strategic area of Gorontalo City, which is the center of government, including the Gorontalo Mayor's Office, we consider it relevant and appropriate as a research object to be discussed because it reflects the complex center of government, accompanied by public services, and the spatial orientation of the entire city of Gorontalo located in this area.

2.2. Data Collection Techniques

The data was obtained from three main sources:

1. Spatial Data: such as land use in the area, the area's road network, zoning, and the distribution of urban functions, obtained from technical agencies or regional planning documents. Spatial analysis is also supported by simple indicators such as the distribution of urban functions, the intensity of area-specific activities, and accessibility levels, which are used to inform decision-making.
2. Interviews: local experts, such as urban planners, government officials, community leaders, and academics.

These interviews aim to reveal how urban processes and local values are reflected in space.

3. Documents: RTRW, RDTR, and regional regulations related to the function and development of urban areas in Gorontalo City.

The informants included in this study were selected through purposive sampling, meaning that the researcher identified those who best understood the city's conditions in line with the study's objectives. It is therefore hoped that these informants, including urban planners, academics, and stakeholders with knowledge of Gorontalo City, will help address the research questions. The data collected is thus relevant and in-depth, aligning with the focus of this study.

2.3. Techniques Analysis

Data analysis conducted through:

1. Spatial Analysis (GIS) or AutoCAD

The GIS analysis used in this study aims to identify the city's functions, land-use patterns, and the morphological structure of the area in Gorontalo City.

2. Analysis SWOT (Strengths, Weaknesses, Opportunities, Threats)

Identifying *strengths*, *weaknesses*, *opportunities*, and *threats* in the development of urban functions based on these aspects, particularly those related to sustainable urban planning.

3. Content Analysis

It is useful to examine the relationship between urban functions, local values, and existing policies through planning documents and interview findings. The findings aim to provide an understanding of the meaning and context of Gorontalo's urban spatial structure.

4. Data Triangulation

To enhance the validity of the research, this process aims to ensure the consistency and accuracy of the research findings.

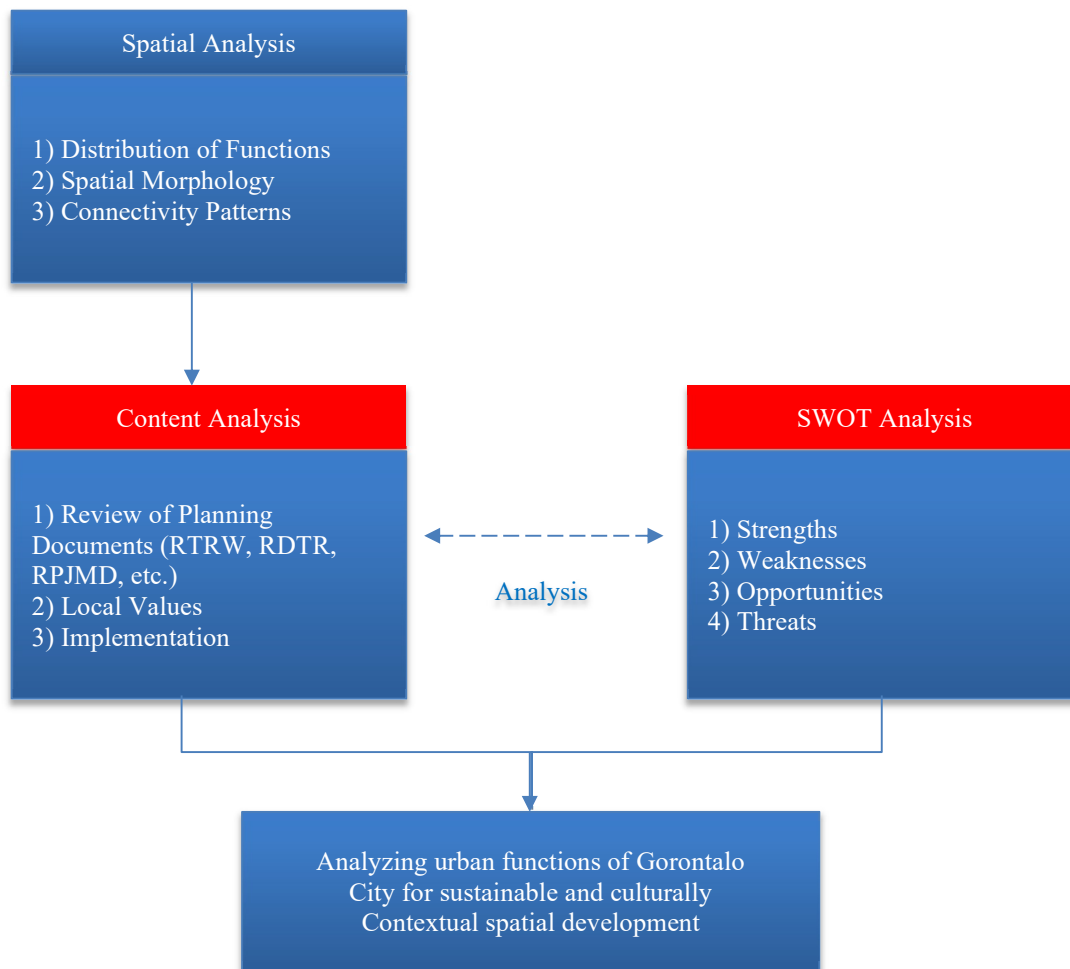


Fig. 2 Stages of data analysis diagram

Triangulation of the data obtained was implemented to ensure trustworthiness of the findings, particularly with regard to their spatial proximity with social narratives and orientation of urban planning policies. The approach gave a better perception of how the city works, grows, and interacts with morphological factors and local culture in Gorontalo City.

3. Results and Discussion

3.1. Identifying and Analyzing Urban Functions of Gorontalo City in the Context of Sustainable Spatial Planning

In urban design, urban functions can also be viewed in terms of fundamental elements. Some of these, such as studies on regional identity and analyses of previous growth and development in Gorontalo, have been discussed by researchers. This also supports Christaller's (1933) [5] theory, namely the Regional Center Theory, which states that the function of a city should be as a service center that provides all goods and services to supply both its own area and the surrounding region. This Regional Center Theory explains the hierarchy and distribution of city services, which greatly influence the structure of spatial development and growth of both the city and its surroundings. Thus, a similar view is also expressed by Mumford's theory (1961), which explains that there is a broad perspective on cities that does not stand alone, that cities are not only economic (basic community needs) and administrative entities, but can also be seen as a reflection of the social and cultural life of a community [6]. Therefore, the function of cities must be understood multidimensionally, encompassing economic, social, political, and symbolic dimensions. This study confirms that urban functions in the context of modern planning are classified into several main categories, namely as centers of government and administration, centers of trade and services, centers of education, centers of culture, and centers of transportation (Krier, 1979; Lynch, 1981) [7]. This classification of Gorontalo city services can be used as a basis for establishing spatial structures, zoning systems, and decision-making in other areas in determining the direction of spatial planning policies.

If you want to see the main activities in a city, you can look at the services provided (functions). The city of Gorontalo has several services in the city center, including administrative, economic, social, and cultural aspects. After observing and understanding the functions of Gorontalo City, it is hoped that spatial planning can be carried out in a sustainable manner, as each of these functions (elements) will have an impact on efficient urban spaces, both in terms of ecology and more specific social aspects (Chapin & Kaiser, 1979; UN-Habitat, 2016) [8, 9]. A unique feature of cities with dimensional functions is that these functions not only shape the physical structure of space but also represent local dynamics, which have the potential to form the basis for developing contextual city models. Based on Gorontalo

Provincial Regulation Number 2 of 2024, Gorontalo City is designated as a National Activity Center (PKN), including in the scope of national and international services. In line with this, Gorontalo City Regulation No. 40 of 2011 states that by fostering cultural values inherent in the area, strategic areas in the city of Gorontalo are named using the local language of the local community (region) that represents the function of the area and the cultural values of the community. The areas in question are Bili'u (central trade and service area), Pentadu (port and logistics area), Banthayo Lolipu (government office area), and Uta'eya (passenger terminal), which demonstrates the close integration between the city's functions and the local identity of Gorontalo City.

The scope of this study is located in the center of Gorontalo City, precisely around the Nani Wartabone Monument, which has very high historical, symbolic, and administrative value. The findings of this study indicate that urban areas are not only used for administrative functions, but also have several main functions that are intertwined and interrelated, interconnected, and mutually reinforcing, which are very important for the structure and dynamics of Gorontalo City with the concept of contextual urban design models.

3.2. The Relationship Symbolic Function

It can be seen that the identity of a city is not only a part of physical elements such as architecture and landmarks, but can also be described through the behavior and social and cultural practices of its people that are inherent in the function of that space (Relph, 1976) [10]. For example, the naming of areas, spatial patterns, spatial structures, and cultural practices in the use of space are part of the expression (*face*) of *local identity* that is brought to life and developed within the urban structure system. This follows Norberg-Schulz's (1980) concept of *genius loci*, which emphasizes the importance of naming places in urban spatial design [11]. The city of Gorontalo has a relationship between function and local values that can create a strong sense of ownership and social cohesion, reflected in its community that upholds its culture. This must be maintained; it could cause a conflict between the function of space and local meaning, which could weaken the identity of the city of Gorontalo (Tuan, 1977) [12]. Contextuality in spatial design is reflected in Gorontalo City, which can bring out local values in a substantial way that is sustainable not only ecologically, but also culturally and socially.

The Nani Wartabone Monument area, as a subject of research, is not only visible from the visual elements in the urban landscape, but also plays an important role as the face and representation of Gorontalo's cultural identity values. This concept is reinforced by the concept of place identity proposed by Proshansky (1978) [13] and Lynch's (1960) theory of imageability, which argues that if an urban space has symbolic power, it can indirectly form strong emotional bonds and a sense of ownership (of place) among the community towards the city they live in [14]. It can be seen that this is not only

physical in nature, but also encompasses the cultural and psychological dimensions of urban life.

The Nani Wartabone Monument, which is an icon of Gorontalo City, is a monumental symbol of the local community's (Gorontalo) struggle for national independence in their region (Gorontalo). Nani Wartabone was the first person to proclaim independence in Gorontalo before Indonesia's independence proclamation on January 23, 1942. This is considered to not only reflect high nationalistic values from a regional/national perspective, but also show the expression of the collective identity of the entire community through the commemoration of Patriotic Day and other public activities that are routinely held in downtown Gorontalo. This function should not weaken but rather strengthen the role of this area as a center of activity for the Gorontalo community while showcasing the character of local identity (*local pride*). Therefore, this historical monument is considered not only a visual and historical focal point but also serves as a symbolic bond that shapes the character of the urban space by uniting the Gorontalo community as a whole.



Nani Wartabone Monument



Nani Wartabone Monument Area

Fig. 4 Nani wartabone monument and square activities

3.3. Government Function as The Center of Urban Governance

The city of Gorontalo is the administrative center of Gorontalo Province. What makes it an administrative center is similar to Christaller's (1933) Theory of Central Places, which states that the city center is the main hub of the public service system. With the construction of the mayor's office, institutions, and other supporting buildings, this area has become a center of power (the core of government) and decision-making that will influence the overall development of urban space in the future. On the other hand, administrative functions should be carried out based on participatory governance.



DESCRIPTION

- Nani Wartabone Monument Area
- Nani Wartabone Monument

Fig. 3 Nani wartabone monument area



DESCRIPTION

- Nani Wartabone Monument Area
- Gorontalo City Government Center
- 1. Biawao Village Office
- 6. Gorontalo Mayor's Office

- | | |
|---|--|
| 2. Gorontalo City Personnel, Education, and Training Agency | 7. Gorontalo Provincial Environmental and Forestry Service |
| 3. Mayor's Official Residence | 8. Gorontalo City Electronic Procurement Service (LPSE) |
| 4. Gorontalo City Finance Agency | 9. Gorontalo City Agency for National Unity and Politics |
| 5. Governor of Gorontalo Official Residence | |

Fig. 5 Gorontalo city government center



Fig. 6 Gorontalo city government center

3.4. Social Function as a Space for Community Interaction

As mentioned earlier, Gorontalo City not only functions as a center of government, but its urban center is also considered a space for interaction between the community and society, marked by the implementation of a car-free day every Sunday and the provision of places that can be used as community (public) interaction spaces. This reinforces Jane Jacobs' (1961) opinion that the success of a city is not determined solely by its physical beauty, but also by its social vitality (activity) [15].

The government provides city parks, pedestrian areas, and informal spaces such as cafes (in accordance with spatial planning regulations). Not only that, but nighttime activities are also often used as places to eat, buy snacks, and relax for young people and anyone who wants to hang out. These activities are in line with the idea of the right to the city (Lefebvre, 1968) [16] and the principle of social vitality (Jacobs, 1961). Both agree that cities need public spaces to build a vibrant city so that the city becomes inclusive and resilient. The center of Gorontalo City has become a meeting point for various levels of society, which strengthens social cohesion and fosters a sense of ownership and concern for urban space (feeling of belonging to the city). By applying this to other cities, with Gorontalo City as an initial development model, it is hoped that it can support social interaction and contribute to the quality of an inclusive and sustainable urban life.



DESCRIPTION	
■ Nani Wartabone Monument Area	● Social Functions
1. Bantayo Lo Yiladiya	5. MSME (Micro, Small, and Medium Enterprises) Field
2. Bele Li Mbu'l Hall (Meeting Hall)	6. Tennis Court
3. Governor's Official Residence Garden	7. Food and Coffee Stalls
4. City Park	8. Gorontalo Mayor's Office

Fig. 7 Social functions



Fig. 8 Social functions

3.5. Local Economic Function at the Micro Scale

A dynamic and rapidly growing economy, driven by community economic activities that are oriented towards community needs. The city's function as a local economic

center can be seen in the establishment of MSMEs, street vendors, small shops, and culinary centers along the streets, illustrating the flexibility and adaptability of the local economy. The local economy is supported by its sustainability and attention. Regarding the local economy, Jacobs (1984) states that the economic strength of a city lies in the diversity of functions and flexible local economic actors [17]. This can be seen in this area, which is filled with local economies. Therefore, the local economic function in the city of Gorontalo greatly encourages microeconomic growth while creating a dynamic social space in the region.

by several areas around Gorontalo City, both by visitors and residents, connecting roads and various modes of transportation, both private and public, are needed. Therefore, it is important to design an inclusive urban space for transportation. The developing city of Gorontalo requires the principles of walkability and livability (Gehl, 2010), which emphasize the importance of inclusive circulation planning so that pedestrians, motorists, and public transportation users can interact harmoniously and carry out activities in the urban space provided [18]. Therefore, the mobility function in Gorontalo City also needs to be managed and developed to support connectivity between other functions without causing spatial conflicts or congestion.



DESCRIPTION
 Nani Wartabone Monument Local Economy at the Micro Area
 (Green box) (Yellow dot)

Fig. 9 Local economic functions



Fig. 10 Local economic functions

3.6. Mobility and Accessibility as Support for Urban Functions

To connect existing functions, a connecting factor is needed, because each function is considered very important and interrelated. The goal is for the community to be able to experience the functions provided. Of course, this includes mobility and accessibility in Gorontalo City. If the Nani Wartabone Monument area is a major traffic hub that is passed



DESCRIPTION
 ---> Circulation in the Nani Wartabone Monument Square Area



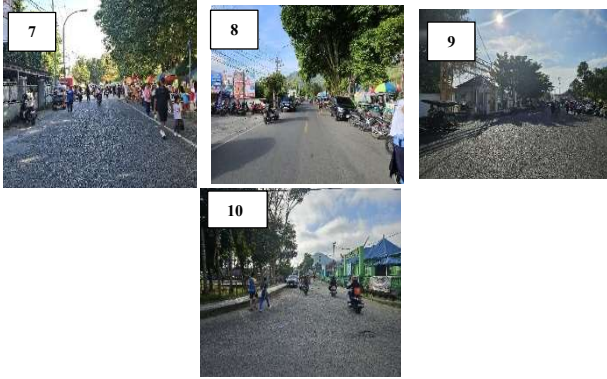
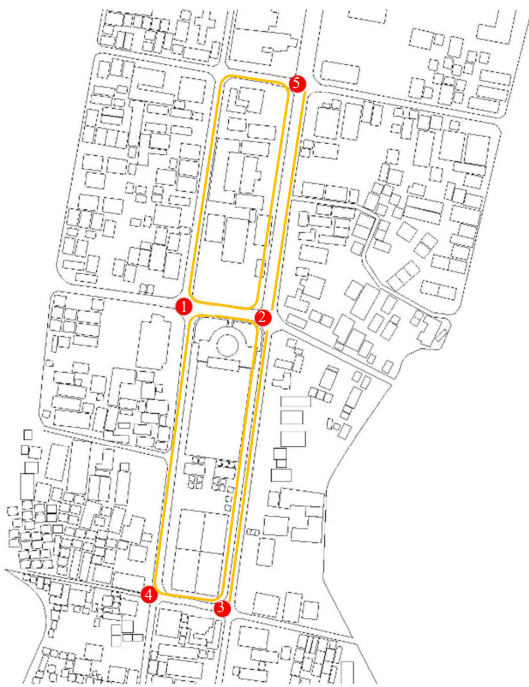


Fig. 12 Mobility Functions



DESCRIPTION

— Pedestrian Street

Fig. 13 Accessibility functions

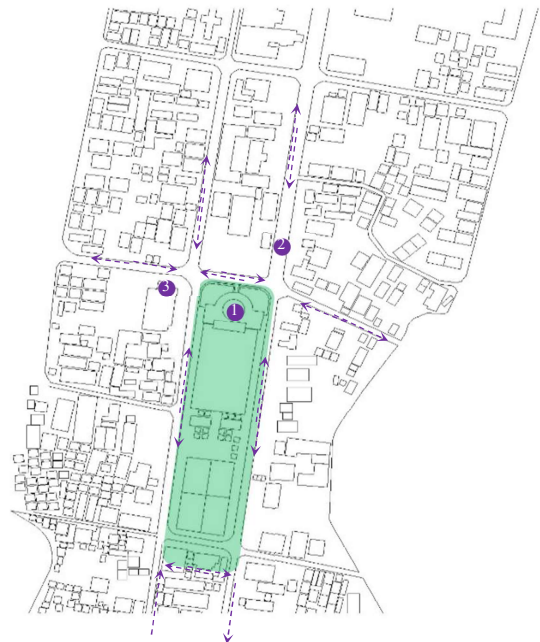


Fig. 14 Accessibility functions

3.7. Morphological and Aesthetic Functions as The Reflection of The City's Face

A growing and developing city will leave an urban morphological footprint. If not planned, the city will be influenced by the physical structure of the area, including the patterns of roads, buildings, open spaces, and transportation networks (Conzen, 1960) [19]. The city of Gorontalo has a multidimensional function that is intended to influence the formation and transformation of its morphological structure. For example, the centralized nature of its government tends to result in monumental administrative zones, while its commercial function often triggers economic growth in small corridors, making the area dense and dynamic. If it can be predicted through contextual planning and taken into consideration, long-term changes in spatial function caused by factors such as land conversion, population density fluctuations, and the emergence of informal settlements, especially if the direction of development is not accompanied by adaptive spatial control policies, can be controlled (Pacione, 2009) [20]. Therefore, the relationship between the two (function and morphology) must be viewed and considered as a single process that mutually shapes the context of urbanization dynamics.

This area reflects and can be used as an example in reflecting the image of the city of Gorontalo. Elements such as colonial architecture, radial street patterns, and the presence of historical monuments make it a landmark of Gorontalo, making it easily recognizable and serving as a point of orientation (Lynch, 1960). Not only that, its aesthetic function not only supports the legibility of the city space, but also strengthens the visual identity of Gorontalo City, both in terms of *local pride* (identity) and *tourism* (visitors).



DESCRIPTION	
■ Nani Wartabone Monument Area	● Morphological and Aesthetic Functions
1. Nani Wartabone Monument (Focal Point)	
2. Street Network	
3. Colonial Architecture	

Fig. 15 Morphological and aesthetic functions



Fig. 16 Morphological and aesthetic functions

3.8. Educational and Cultural Tourism Functions

Not only symbolic and meaningful, but the research area in Gorontalo City also has educational and cultural tourism functions through activities such as student visits, historical events, and the preservation of local symbols. These functions reinforce cultural values and serve as relevant public education tools to strengthen historical awareness and local identity in Gorontalo City.



DESCRIPTION	
■ Nani Wartabone Monument Area	● Educational and Cultural Tourism Functions
1. Nani Wartabone Monument Area	7. Gorontalo Post Office
2. Angelato	8. PT. Pelni Gorontalo
3. Indis 22 (Jl. Pangeran Kalengkongan 1)	9. Saronde Hotel
4. Indis 03 (Environmental Agency)	10. Tepbek XII-44-01
	11. PKK Building
	12. Governor of Gorontalo Official Residence

5. Indissss (Aisyah Farma Pharmacy Taruna)
6. Pertiwi Coffee House (Jl. Pertiwi)

Fig. 17 Educational and cultural tourism functions



Fig. 18 Educational and cultural tourism functions

3.9. Comparative Analysis with Other Cities

To reinforce the findings of the analysis on Gorontalo City, a comparison was conducted with several cities in Indonesia that exhibit distinct developmental characteristics, such as Yogyakarta, Banda Aceh, Makassar, and Manado.

The selection of these cities as comparators was based on their unique characteristics and the relationship between urban functions, morphological structure, and local identity.

The analysis results indicate that Yogyakarta and Banda Aceh exhibit strong integration between urban functions and local identity, as reflected in their spatial patterns, planning policies, and development orientations that prioritize key cultural and historical values.

Conversely, cities such as Makassar and Manado have shown development patterns that focus more on the expansion of economic functions and urban growth (due to their coastal locations), resulting in faster changes in urban spatial morphology and placing increasing pressure on sustainability and a shifting local identity.

In this context, the city of Gorontalo occupies a transitional position, where it is capable of integrating urban functions with a local identity that remains relatively intact; however, this should not overshadow other factors, such as the pressures resulting from the dominance of excessive economic functions and the increasing demand for space in Gorontalo, which could alter the city's structure and erode its local identity. This situation indicates that the development of urban functional needs has a direct and significant impact on morphological structure and has the potential to displace local values if not anticipated or managed sustainably.

Conceptually, these findings confirm that the relationship between urban functions, morphology, and local identity is dynamic and mutually integrated. Therefore, sustainable urban planning within the proposed model must integrate these three aspects into a cohesive framework, not merely a city focused on spatial efficiency (meeting spatial needs), but one that also preserves its social and cultural values.

In this way, the City of Gorontalo has the potential to be developed as a model of a sustainable city that integrates function, morphology, and local identity within a spatial planning framework, while also serving as an example for other cities with similar characteristics.

3.10. Study Area as a Microcosm of Sustainable Urban Functions

Based on the results of a comparative analysis of other cities, Gorontalo exhibits unique and distinct characteristics that reflect the integration of urban functions, morphological structure, and local identity within the context of sustainable urban planning in Gorontalo, it can be concluded that the functions identified in the city of Gorontalo show that the

study area has fulfilled most of the principles of a sustainable city: accessibility, dual function, social inclusiveness, with regard to local identity values.

However, sustainability issues remain, particularly in terms of traffic management, spatial zoning, and preservation of historical values. This area is well-suited to serve as an experimental model for urban forms that respect sustainable spatial planning. All of these environmental asset protections are essential to ensure that well-established urban functions do not undermine long-term sustainability.

The model of interaction between urban functions also shows that these functions do not stand alone, but rather interact and reinforce each other. This means that urban planning must consider spatial, economic, social, and cultural factors in an integrated manner.

No.	Urban Function	Theoretical Foundation / Concept	Field Condition in Study Area (Naul Wartabone Monument)
1.	Symbolic / City Identity	- Kevin Lynch (1960) – <i>Image of the City</i> - Norberg-Schulz – <i>Genius Loci</i>	The monument as a symbol of Gorontalo's struggle, serving as a landmark and identity focal point.
2.	Administrative / Governance	- <i>Central Place Theory</i> (Christaller, 1933) - <i>Urban Core Function</i>	Mayor's office and strategic government agencies located within the study radius.
3.	Social / Public Space	- <i>Jane Jacobs</i> (1961) – <i>Social Vitality</i> - <i>Lefebvre – Right to the City</i>	Used by residents for gatherings, sports, cultural performances, and demonstrations.
4.	Local Economy / Micro Scale	- <i>Jacobs</i> (1984) – <i>Mixed-use Cities</i> - <i>Urban Livelihoods</i>	Numerous MSMEs, street vendors, shops, and coffee stalls active throughout the day.
5.	Mobilitas / Konektivitas	- <i>David Harvey – Urban Circulation</i> - <i>Jan Gehl – Walkability & Livability</i>	Major urban traffic node, high traffic intensity, active pedestrian use.
6.	Estetika / Morfologi Kota	- <i>Urban Morphology</i> - <i>City Image & Legibility</i> (Lynch)	Monument as focal point, grid street layout (colonial heritage), colonial and local architecture.
7.	Edukasi & Wisata Budaya	- <i>Place-making</i> - <i>Heritage Tourism</i> - <i>Cultural Landscape Theory</i>	Functions as local historical tourism, student visits, and annual educational events.

Fig. 19 Relationship between urban functions, theoretical foundations, and field findings

The following is a conceptual model that illustrates the relationships between the seven main interconnected functions identified in Gorontalo City:

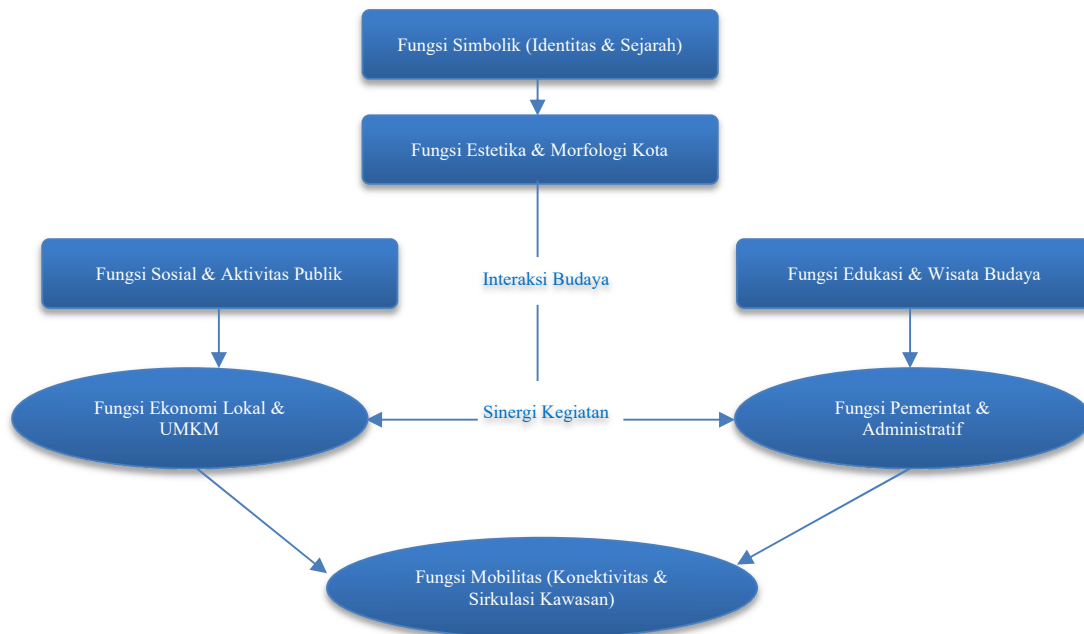


Fig. 20 Conceptual model of interrelationships urban functions

The conceptual model in Figure 19 shows the interaction of the activities in Gorontalo City around the circular area of the Nani Wartabone Monument. This model reveals that the city's functions are intrinsically related to each other, not isolated or separated from each other.

1. The Symbolic role is a core object that defines the spatial meaning of the territory. The Monument Nani Wartabone is of great historical significance as a marker of the local struggle and identity of Gorontalo City. From this central meaning, other functions emerge, such as aesthetic and morphological functions, as well as educational and historical tourism functions.
2. The aesthetic and morphological functions have developed as representations of the physical and visual symbolic values. Elements such as landmarks, colonial architecture, street patterns, and open spaces contribute greatly to the legibility of the city (*the face of the city*), which is in line with Lynch's (1960) framework.
3. Social functions are now growing through community activities that greatly need and utilize public spaces for social, cultural, and recreational interactions. These functions are interrelated with educational and cultural tourism functions as elements that shape the city of Gorontalo, which are reflected in activities such as educational visits, cultural celebrations, and the preservation of historical values.
4. Local Economic and Governmental functions reinforce each other. The government, as the planner and regulator of space, facilitates the development of infrastructure in public services, which in turn encourages (*utilizes*) small to medium-scale economic activities such as food stalls, street vendors, and other informal services.
5. Mobility functions as an element that binds all other functions together. This area is located at a major intersection in the city, with high levels of vehicle and pedestrian traffic. Therefore, mobility is an important requirement to ensure that all urban activities run efficiently and inclusively.

Thus, this study area exhibits characteristics as a microcosm of sustainable urban functions, as it includes the basic elements of spatial planning that are:

1. Rooted in local values,
2. Community-oriented,

3. Supporting economic activity, and
4. Integrated into a dynamic connectivity system.

These interrelated connections emphasize that ideal urban design must consider existing spatial functions holistically, comprehensively integrating physical, social, economic, historical, and mobility aspects.

3.11. Urban Function Relationships with Identity and Morphology

Next, the relationship among these three elements, urban functions, morphological structure, and local identity, is analyzed to understand how they interact in shaping the character and dynamics of the urban landscape.

An analysis of the functions of the city of Gorontalo shows that the city's morphology has developed adaptively in line with urban dynamics. Core areas, such as those around the Nani Wartabone Monument, have undergone densification and spatial restructuring, including the emergence of organically arranged functional clusters (*governmental, economic, and social*). However, traditional urban patterns such as radial patterns and community-based settlement structures can still be seen. Local identity remains strongly reflected in the naming of areas, the design of urban elements, and the community's socio-cultural activities. However, pressure from economic functions and urban modernization poses the risk of marginalizing the local values that have become embedded in the space. Therefore, urban planning that is sensitive to the context of morphology and identity is important to maintain continuity between urban functions.

The interconnectedness of urban functions with several of the elements mentioned above shows that urban spaces are not merely built as containers for activities, but also as spaces for the expression of values and collective memories of the community. This strategy can integrate the functions, forms, and meanings that form the foundation of Gorontalo's sustainable urban design while retaining its own characteristics. To examine the potential and challenges of the area in more depth, a SWOT analysis can be conducted with the following results:

Table 1. SWOT analysis of urban functions in gorontalo city

Aspect	Description
Strengths (Kekuatan)	<ul style="list-style-type: none"> • Concentration of central government institutions in the city center. • Presence of historic buildings (<i>Bantayo Lo Yiladiya</i>, Governor's Official Residence). • Active socio-cultural functions. • Adequate infrastructure and strategic location.
Weaknesses (Kelemahan)	<ul style="list-style-type: none"> • High activity density causes traffic congestion and spatial conflicts. • Lack of integration between green open spaces and government buildings. • Limited integrated public transportation system.

Opportunities (Peluang)	<ul style="list-style-type: none"> • Potential to develop as a heritage and urban tourism area. • Opportunity for integrated area development based on smart city concepts. • Strengthening urban identity through revitalization of social and cultural functions.
Threats (Ancaman)	<ul style="list-style-type: none"> • Uncontrolled land-use conversion. • Commercialization that disregards <i>asyara (local identity values)</i>. • Flood risk due to an inadequate integrated drainage system.

Government functions are evident through the presence of the Mayor's Office, the Governor's Office, the Environmental Agency, as well as sub-district offices and other technical agencies. The socio-cultural function is realized through the use of public spaces such as Bantayo Lo Yiladiya, Taruna Remaja Field, and others, which are locations for community activities, ranging from formal meetings to art and sports performances. In addition, this area

has high historical and symbolic value through the Nani Wartabone Monument, which reinforces the area's role as a space for the collective identity of the Gorontalo community. Environmental and infrastructure functions also support the sustainability of the area, such as the presence of parks, drainage systems (e.g., flood pump stations), and pedestrian corridors. All these functions and meanings are already present in this city.

Table 2. Focus: Urban Functions from a Spatial Planning Perspective

Element	Description
Government Function	<ul style="list-style-type: none"> • This government function includes crucial central offices of the Gorontalo City government, such as the Gorontalo Mayor's Office, the Government Office, and the Governor's Office (the Governor's office was originally located in this area). • This shows the area as an administrative and symbolic function of the city of Gorontalo.
Socio-Cultural Function	<ul style="list-style-type: none"> • Bantayo Lo Yiladiya is a meeting hall used for social and cultural activities and sometimes as a historical building. It is equipped with a Youth Field, which is the main activity center (<i>epicenter</i>) for the community. • The social and cultural functions demonstrate the interaction between the government and its citizens.
Historical and Identity Function	<ul style="list-style-type: none"> • In addition, one of the iconic aspects of history is the construction of the Nani Wartabone Monument and other cultural heritage buildings that reinforce the collective memory and identity of the city of Gorontalo.
Infrastructure Function	<ul style="list-style-type: none"> • Infrastructure consisting of facilities and amenities can be seen from the availability of sports facilities (GOR), drainage, city parks, and pedestrian walkways (Infrastructure). • The existence of supporting infrastructure can support the sustainability of the urban environment.

Based on the results of the analysis discussed above, this area has tremendous potential to be developed as a center or key point in the urban spatial structure of Gorontalo. The integration of various urban functions is the first step in creating a sustainable urban space. A deep understanding and a holistic planning approach are needed to take into account the unique characteristics of the city of Gorontalo (local). This will enable a highly adaptive living space (adaptable and meeting needs), as well as one that is capable of responding to the social dynamics of the city of Gorontalo and changes in its ecology. Through this approach, it can reflect the cultural values of Gorontalo while responding to the demands of modern urban development.

GIS analysis of the urban center indicates that the distribution of urban functions is not yet evenly distributed,

but rather concentrated in specific segments of the area, which has led to changes in the structure of urban space and activities.

3.12. Socio-Economic and Environmental Factors in Sustainable Spatial Planning

This study has identified several key factors contributing to sustainability, as reflected in the social, economic, and environmental dimensions of Gorontalo City. These three dimensions serve as an analytical framework to assess the extent to which the city's evolving functions are capable of supporting the overall sustainability of the region.

The social factor is evident in the intensity of activities among Gorontalo City residents, who enjoy spending time in public spaces, the availability of social facilities, and the social interactions that take place within the urban area. The analysis results indicate that the central area of Gorontalo City exhibits

a higher level of social activity compared to other areas, as it functions not only as a hub for office activities and other functions but also as a space for interaction (*communication*) that strengthens social cohesion and the city's local identity.

On the other hand, economic factors are reflected in the dominance of permitted trade and service activities, including the presence of Micro, Small, and Medium-sized Enterprises (MSMEs), as well as informal economic activities such as street vendors, which are no less significant. The development of economic functions in Gorontalo City plays a role in shaping the dynamics of the urban landscape and serves as a key driver of growth in the main districts. However, there is a point to note: the rapid dominance of economic functions can put pressure on the spatial planning order and affect other functions.

Finally, regarding environmental factors, these include the availability of green open spaces, both green and non-green RTH, sufficiently good basic infrastructure, such as drainage systems, and the level of pressure on land use. These findings indicate that the increasing intensity of land use in the downtown area results in the gradual erosion of open spaces and an escalating risk of environmental issues if left unaddressed, thereby necessitating more integrated management across various functions.

Based on these three findings, it can be concluded that the interaction between social, economic, and environmental factors indicates changes and impacts on the sustainability of Gorontalo City's spatial planning, which is significantly influenced by the balance among existing functions. This imbalance, particularly the increasingly rapid dominance of economic functions, has the potential to displace or erode social functions and degrade environmental quality in the area. Therefore, this study aims to integrate these three factors proportionally to maintain stability, character, and sustainability in the central area of Gorontalo City.

4. Conclusion

The findings of the study on urban functions in the area surrounding the Nani Wartabone Monument (the study site) demonstrate their relevance to the spatial dynamics of Gorontalo City. Various functions, such as governmental, social, economic, mobility, aesthetic, educational, and cultural functions, are located in strategic areas where they interact and complement one another.

References

- [1] Bappeda Provinsi Gorontalo, Regional Regulation (Perda) of Gorontalo Province Number 2 of 2024: Gorontalo Province Spatial Planning Plan 2024-2043, 2024. [Online]. Available: <https://peraturan.bpk.go.id/Details/305904/perda-prov-gorontalo-no-2-tahun-2024>
- [2] Mayor of Gorontalo, Regional Regulation of Gorontalo City Number 40 of 2011 Concerning the Spatial Planning Plan for Gorontalo City 2010-2030, Gorontalo City Government, 2011. [Online]. Available: <https://klinikhukum.gorontaloikota.go.id/uploads/pdf/PERATURAN%20DAERAH%20NOMOR%2040%20TAHUN%202011.pdf>

In Gorontalo City, the relationship between urban functions, morphological structure, and local identity demonstrates a strong and dynamic interconnection. Changes occurring in urban spatial functions have direct impacts on the city's physical form and even extend to socio-cultural practices tied to local values. This indicates that urban space is not shaped solely by functional (*physical*) needs but also by social and cultural (*non-physical*) dimensions.

Therefore, the study area can be viewed as a microcosm of a sustainable city, as it reflects key principles such as inclusivity, efficiency, and the preservation of local identity through effective spatial planning in Gorontalo City. From an urban design perspective, these findings underscore the importance of integrating the relationships between various functions in spatial planning. This integration is not merely about spatial efficiency but also about strengthening cultural identity and social cohesion. Without such integration, urban development risks becoming physically modern while losing the city's meaning and character. Therefore, urban functions must be understood as dynamic elements that both shape and are shaped by the local context (the city's culture), thereby contributing to the uniqueness of each city's character.

Based on these findings, the following recommendations can be proposed:

1. Spatial planning policies and guidelines need to be developed in a contextual and adaptive manner, without neglecting the dynamics of urban functions while maintaining the sustainability of local identity and morphological structures.
2. The local government of Gorontalo City needs to make this monument area a prototype for urban development based on local wisdom and the principle of sustainability.
3. Further in-depth research using various approaches, including quantitative and spatial analyses, is needed to gain a more accurate understanding of the dynamics of urban functions and their impacts on environmental conditions and community well-being.
4. Strengthening the capacity of stakeholders—including government officials, academics, and the public—is crucial to supporting a participatory and sustainable urban planning process.

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- [3] Matthew Carmona, *Public Places, Urban Spaces: The Dimensions of Urban Design*, 3rd ed., Routledge, New York, 2021. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [4] Paul L. Knox, *Urbanization: An Introduction to Urban Geography*, 3rd ed., Boston: Pearson, c2012. [[Google Scholar](#)] [[Publisher Link](#)]
- [5] Alexander Melamid et al., "Central Places in Southern Germany," *Geographical Review*, vol. 57, no. 4, pp. 574-576, 1967. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [6] Lewis Mumford, *The City in History: Its Origins, its Transformations, and its Prospects*, Houghton Mifflin Harcourt, vol. 67, 1961. [[Google Scholar](#)]
- [7] Rob Krier, and Colin Rowe, *Urban Space*, London: Academy Editions, 1979. [[Google Scholar](#)]
- [8] Edward J. Kaiser, David J. Godschalk, and F. Stuart Chapin Jr, *Urban Land use Planning*, 4th ed., University of Illinois Press, Urbana, 1995. [[Google Scholar](#)] [[Publisher Link](#)]
- [9] United Nations-Habitat, *World Cities Report 2016: Urbanization and Development-Emerging Futures*, UN-Habitat, 2016. [[Google Scholar](#)] [[Publisher Link](#)]
- [10] Edward Relph, *Place and Placelessness*, Academic Books, London, vol. 67, London: Pion, 1976. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [11] Christian Norberg Schulz, *Genius Loci: Towards a Phenomenology of Architecture*, New York, Rizzoli, pp. 22-23, 1980. [[Google Scholar](#)]
- [12] Yi-Fu Tuan, "Space and Place: The Perspective of Experience," *Human Ecology*, vol. 6, no. 3, pp. 355-357, 1978. [[Google Scholar](#)] [[Publisher Link](#)]
- [13] Harold M. Proshansky, "The City and Self-Identity," *Environment and Behavior*, vol. 10, no. 2, pp. 147-169, 1978. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [14] Kevin Lynch, *The Image of the City*, The MIT Press, 1964. [[Google Scholar](#)] [[Publisher Link](#)]
- [15] Jane Jacobs, *The Death and Life of Great American Cities*, Vintage Books, 1992. [[Google Scholar](#)] [[Publisher Link](#)]
- [16] Henri Lefebvre, "The Right to the City," *L'Homme et la Société*, vol. 6, no. 1, pp. 29-35, 1967. [[Google Scholar](#)] [[Publisher Link](#)]
- [17] Jane Jacobs, *Cities and the Wealth of Nations: Principles of Economic Life*, 1st ed., Vintage Books, 1985. [[Google Scholar](#)] [[Publisher Link](#)]
- [18] Jan Gehl, *Cities for People*, Island Press, 2013. [[Google Scholar](#)] [[Publisher Link](#)]
- [19] M.R.G. Conzen, "Alnwick, Northumberland: A Study in Town-Plan Analysis," *Transactions and Papers (Institute of British Geographers)*, no. 27, pp. 1-122, 1960. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]
- [20] Michael Pacione, *Urban Geography: A Global Perspective*, 3rd ed., Routledge, London, 2009. [[CrossRef](#)] [[Google Scholar](#)] [[Publisher Link](#)]