



# TRANSIT ORIENTED DEVELOPMENT FOR A SUSTAINABLE GENERAL SANTOS CITY

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# Context

- General Santos City is faced with the unintended **effects of rapid and unbridled urban growth**, such as conflicting land uses, conversion of open space to built-up areas, urban blight and decay, and encroachment of human settlements in protected areas.
- The city is also experiencing **the impacts of climate change**, such as drought, typhoons, flooding, flash floods, storm surge, sea level rise, rain-induced erosion and landslides.
- While General Santos City is already known as “the tuna capital of the Philippines,” it aspires to also be **“the green city of the south.”**
- The city has been pursuing the development of a **policy environment of green and sustainable development** through local laws, development plans and investment programs on climate change adaptation and disaster risk management.





- In 2022, the city launched the **Green City Action Plan (GCAP)** that integrates its green investments plan over the short-, medium-, and long-term to make General Santos City clean, green and livable.
- The GCAP, while aimed at enhancing the city's management capacity in integrated planning and management of urban infrastructure, identified several projects, such as:
  - ✓ Alternative source of water supply
  - ✓ Waste-to-Energy Facility
  - ✓ River Esplanade and Baywalk
  - ✓ Sewerage Treatment Plant
  - ✓ Solid Waste Management System
  - ✓ Public Utility Vehicle Modernization Program

- The GCAP appears to have not included any mass transit development project.
- However, General Santos City has a **Local Public Transport Route Plan (LPTRP)** which aims to rationalize and improve the efficiency and effectiveness of public transportation services in the city.
- The LPTRP presents the opportunity of adopting the concept and practice of **TRANSIT ORIENTED DEVELOPMENT or TOD** in General Santos City to address some of the problems created by unbridled urban growth and to guide future urban development.



LPTRP routes

# Transit Oriented Development

**The growth of public transport stimulates urban development, while urban development stimulates transport development.**

**The interaction of transport and urban development constantly enhances the potentials of urban areas, benefitting the city as a whole . . . if planned and not left to market forces alone.**

**Transit oriented development (TOD) capitalizes on this interaction.**

Electric tranvia streetcar, Tondo-Escolta, Manila, Philippines, 1910  
Museum of Ethnology Volkenkunde, Amsterdam, Netherlands @ John Tewell  
The National Museum of Ethnology (Museum Volkenkunde), is an ethnographic museum in the Netherlands located in the university city of Leiden



# Transit Oriented Development (TOD)



- A **planning and design strategy** to ensure compact, mixed-use, pedestrian-friendly, and suitably dense development organized around transit stations. (World Bank)
- A **real estate strategy** that takes advantage of the concentration of passengers in stations of mass public transport systems, especially railways, to promote urban growth.



**Transit Oriented Development (TOD)** refers to a master-planned, walkable, mixed-use form of development focused within a 400m to 800m radius of a Transit Station.

**OBJECTIVES:**

To create an urban development pattern which facilitates the use of public transport, walking and cycling as primary modes of transport, and which supports vibrant, diverse and livable communities.

To implement a more sustainable approach to urban planning and development by building on the connection and synergies between land use and transport.



# Typical TOD Characteristics

- A rapid and frequent transit service
- High accessibility to the transit station
- A mix of residential, retail, commercial and community uses
- High quality public spaces and streets, which are pedestrian and bicycle-friendly
- Medium- to high-density development within 5 to 10-minute walk of the transit station
- Availability of various modes of transport



# Benefits of Transit Oriented Development

## Transit oriented cities are more competitive than other cities because of agglomeration effects.

- In New York City, one of the world's most competitive global cities, 60% of office space is agglomerated on only 9 sq km.
- This offers the opportunity to provide high-quality public open spaces throughout the city.
- TOD increases real estate values in the best-connected cities. In the USA, the average home in TOD neighborhoods is 3.5 times higher than elsewhere.





## Save people time and money.

- Transport and housing are usually the largest expenditures for households, accounting for more than 50% of their income.
- Inclusive TOD plans for low income and affordable housing near mass transit stations enhance access to job opportunities for all.
- In the US, people living near transit stations spend 37% of their income on transport and housing, compared to 51% for people living elsewhere.

**Reduces greenhouse gas emissions and increases resilience to natural hazards.**

- Hong Kong, Copenhagen and Stockholm each reduced their CO2 emissions for transportation per capita and road gasoline consumption per capita by 10%.
- TOD makes cities more resilient to natural hazards by concentrating high density developments in low-risk areas, and turn those areas into well-connected evacuation centers during emergencies.



## Creates a vibrant, diverse, healthier, pedestrian-oriented neighborhood



- More walking and transit trips means reduced dependence on cars, thus less greenhouse gas emissions resulting in improved physical health.
- Increased mobility choices for everyone, especially low-income families, seniors, and students.
- Increased public safety and property values.

In other words, **TOD** promotes more sustainable urban development.

### **SOCIAL BENEFITS:**

- Greater mobility choice through improved travel options
- Increased housing, employment and service choices
- Promotes a greater housing / jobs balance
- Health benefits of walkable communities

### **ENVIRONMENTAL BENEFITS:**

- Reduced greenhouse gas emissions through higher transit ridership
- Improved air quality through the provision of transportation alternatives
- Reduced energy consumption resulting from efficient land use and transportation linkage

### **ECONOMIC BENEFITS:**

- Maximizing the use of transport infrastructure
- Reduced traffic congestion-related costs
- Development of vacant or under-utilized agricultural and industrial lots
- TOD as catalyst for economic development and decentralization of urban activities





# TOD Good Practice Guidelines

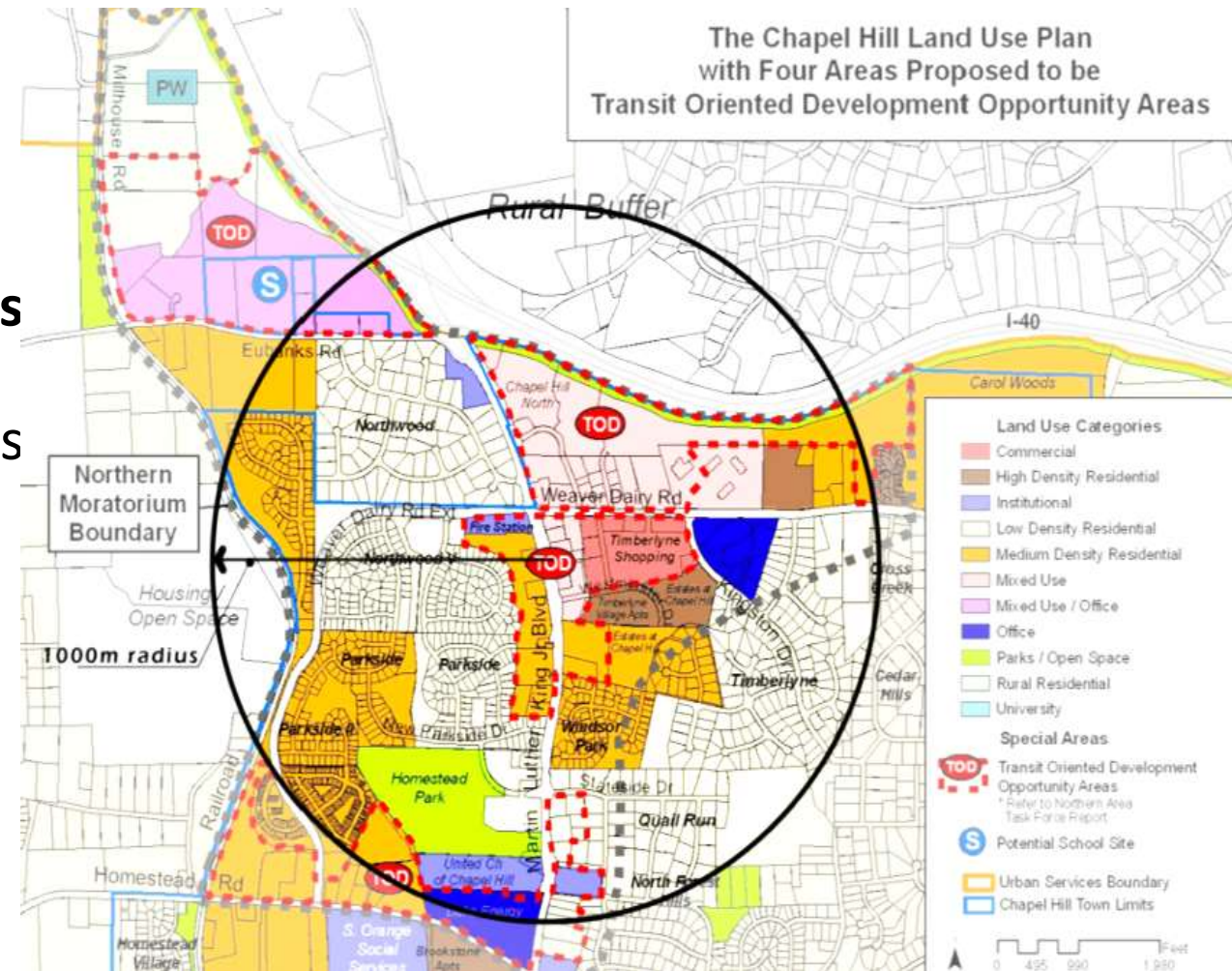
# 1. LOCATION

- Locate development around nodes where infrastructure capacity exists, or can be created. Prioritize locations with high levels of transit frequency.
- Ensure TOD occurs at a scale that is appropriate for the location.
- Apply TOD principles in new communities where transit nodes exist, or are proposed.



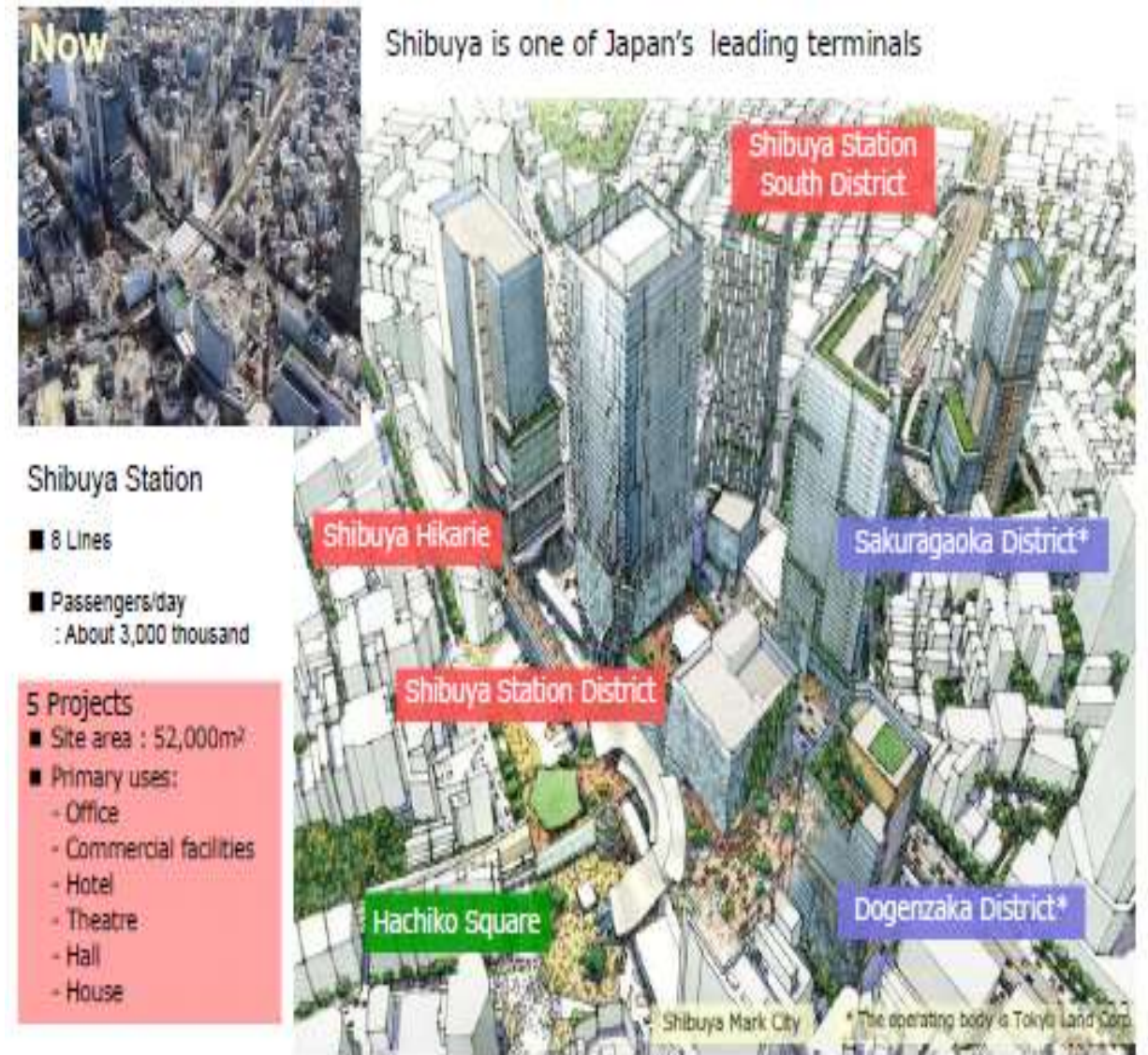
## 2. LAND USE

- Ensure TOD precincts are dominated by land uses that support transit, and encourage **continuous 24/7 activity** to create vitality and safety.
- Incorporate **higher density residential uses** in TOD precincts to increase vitality and provide more convenient access to services and transport.
- Incorporate high employment intensities and a **mix of employment opportunities**.
- Provide convenient access to services and facilities to support **people's daily needs**, including a mix of commercial and retail, jobs, community infrastructure, and open space relevant to the context of the area.



# 3. DESIGN

- Ensure a development form that **allows for adaptation or redevelopment** over time to modify uses or increase densities.
- Ensure development features **high-quality tropical design** that maximizes amenity, pedestrian connectivity and street activity, and promotes a high sense of personal and community safety.
- Provide equitable access to a **high-quality public realm**, including green open space, pedestrian areas and transit access.
- Locate, design, provide and **manage car parking** to support walking, cycling and public transport accessibility.



# 4. SOCIAL DIVERSITY AND INCLUSION

- Ensure development that includes different age, cultural, employment and income groups, as well as the informal sector.
- Provide a mix of housing types, tenures and affordability to support social diversity.
- Promote physical and social connectivity between existing and new communities.
- Ensure community development initiatives are carried out to foster a sense of belonging and community identity.



# 5. TRANSPORT

- Create an increased sharing of transport modes for walking, cycling and public transport by providing high levels of accessibility for pedestrians and cyclists between transit station and surrounding areas.
- Facilitate a high level of intermodal connection – buses, jeepneys, taxis, tricycles
- Provide for future development of a mass rapid transit system



## 6. PROCESS

- Ensure a coordinated planning effort involving all stakeholders, especially land owners, local government, national agencies, and the real estate industry.
- Engage early and throughout the planning and development process with the local community that is likely to experience change to promote a sense of ownership and involvement.
- Be mindful that TOD outcomes take time to deliver and that TOD precincts mature over time.



# Conclusion

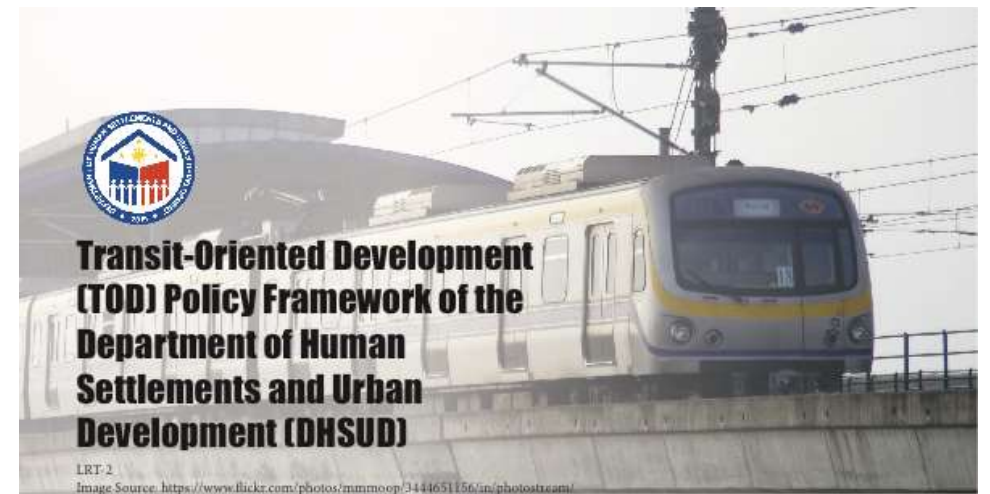


# Critical Challenges in TOD Implementation



- Land acquisition and consolidation
- Provision of Socialized Housing
- Provision of jobs and livelihood
- Provision of infrastructure and utilities
- Development financing
- Estate Management

- DHSUD encourages LGUs to implement TODs as a strategy for developing affordable / socialized housing.
- To encourage private landowners and developers to implement TODs, LGUs have to adopt a TOD Overlay Zone in their Zoning Ordinance.
- To implement socialized housing within their TODs, LGUs have to either acquire the site for it, or enforce the “Balanced Housing” requirement of R.A. 7279 through a local ordinance.



#### Introduction

Transport is transformational. This is the basic principle in land use and transport planning; transport interventions have the potential to shape the growth of a city or municipality. This is anchored on the fundamental tenet of land use and transport interaction which represents the interactive, synergetic, and ideally symbiotic relationship between land use and transport activities.

Land use and transport interaction can be best exemplified through Transit-oriented Development (TOD). It drives the creation of compact or high-density, walkable, mixed-use communities centered on quality mass public transportation systems such as rail, bus rapid transit (BRT), intermodal passenger terminals and bus interchanges. It ultimately aims to promote better quality of life with greater mobility, reduced traffic congestion and accidents, less household expenses related to transportation, reduced energy consumption and greenhouse gas (GHG) emissions. To reap the significant economic, environmental, as well as societal opportunities of well-planned transport developments, DHSUD adopts TOD as a modality for integrating land use and transport planning in its goal of achieving sustainable housing, human settlements, and urban development.

The TOD Policy Framework presented in this document illustrates the Department's overall

goals, policies, and objectives on TOD, and the supporting strategies and actions to realize the vision of mainstreaming TOD in national and local land use planning, and its implementation in major urban areas in the Philippines.

#### Rationale

Transit-oriented Development (TOD) is consistent with and supportive to existing laws, plans, and policies on urban, transport, and socio-economic development of the country. It is aligned with the strategies in the National Urban Development and Housing Framework (NU DHF 2017-2022) on integrating mobility and transport planning in land use planning, compact and mixed-use development, and urban redevelopment, among others. The National Housing and Urban Development Sector Plan (NH UDSP) 2040 identified TOD as a banner program of the Department in pursuit of achieving its goal of providing Sustainable Housing and Well-Planned Communities for Every Filipino Family. The goal is for TOD to be mainstreamed in the urban development and housing framework of the country through land use guidelines and strategies, and for the TOD program to kickstart in Metro Manila, Metro Cebu, Metro Davao and other highly urbanized cities and regions in the country.

TOD as a strategy is also consistent with the Philippines' National Transport Policy (NTP) which aims to establish an integrated,



TOD embraces the idea that locating amenities, employment, shops and housing around transits hubs promotes the use of public transit and non-motorized travel.

Well-planned TOD is inclusive, because it focuses on ensuring access to jobs for all social groups through public transit.

Therefore, properties within well-planned transit-oriented developments have the best location because of their easy access to most if not all of people's daily needs through walking, bicycling or public transit.





# END OF PRESENTATION

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