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### The takeaways

- For an efficient Transit Oriented Development (TOD), access to transit nodes (sidewalk) is very important.
- Co-ordination between landuse and transport plan is necessary. 3V tools can be helpful in this regard.
- Politicians and the government should have a common vision for the future that will support achieving sustainable life style.

# Applying 3V framework

- In developing the Urban Transport Masterplan for Chittagong, 3V framework will be applied to
- Proposed bus improvement corridors
- Proposed Regional Bus Terminals
- Chittagong City Corporation and Chittagong Development Authority will work together.

Second Transit Oriented Development (TOD) Organized by-Tokyo, Japan

## List of key challenges

- Incorporating opinions of stakeholders, such as residents, business community, transport service providers etc.
- Developing coordination mechanism among government and non-governmental institutions.
- Convincing politicians and bureaucrats about the benefits of TOD.

# The approaches/solutions applicable to our challenges

- To have effective co-ordination between government and non-government institutions.
- Continuous consultation with the stakeholders
- Comprehensive Land Readjustment Scheme is necessary for Chittagong.

## Applying these in our city

- For co-ordination, we will form a coordination committee, consisting of the heads of the stakeholder institutions.
- For continuous consultation, we will arrange periodical consultation meetings.
- For Land Readjustment, we will develop a Land Readjustment policy that fits into our existing framework.

### The implementation plan up to 6 months

- We (Shahinul and Monju) will convince the Mayor of Chittagong City Corporation to set up the Coordination Committee.
- Chittagong City Corporation will implement userfriendly footpaths through its own main road improvement project. The project is being proposed to the central government.
- Chittagong Development Authority will propose to the central government to develop and adopt a Land Readjustment Policy.

Thank you



### 2<sup>nd</sup> TOD TDD Action Planning Brazil

#### May-June 2017



Ms. Agueda Muniz – Secretariat of Urban Planning and Env., SEUMA (City of Fortaleza) Mr. Marcos Santos – National Secretariat of Urban Mobility, SEMOB (Ministry of Cities) Mr. Lucio Gomes – State Secretariat of Infrastructure, SEINFRA (State Government) Ms. Emanuela Monteiro – Urban Specialist, TTL





















# BRT ANTONIO BEZERRA | PAPICU

neiten

++

BIKE SHARING "BICICLETAR"

# METRO SOUTH LINE CHICO DA SILVA STATION

Chico da Silva

dimparts.

GOVERNO DO ESTADIO NO CEARA

Destino



- Completing the integration of the system
- Exploring the development potential in some stations
- Improving ridership
- Promoting the use of public transportation
- Developing the business case for TOD and implementing land value capture around selected stations
  - Accessing funding to conduct the needed investments to improve and complete the system



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### 3. Opportunities



- An existing political and institutional alignment
- Existing city's strategic plan (Fortaleza 2040) integrating economic opportunities, transit and urban planning
- The city has been working with:
  - Special Development Zones: fiscal incentives, economic activities functioning 24/7 and LVC instruments
  - Small scale LVC arrangements for the past 3 years (local PPPs, land use change, air rights)



iovernment of Japan





### **5. PILOT PROJECT**



- How can we improve the system to our users?
- How can we promote higher ridership?
- How can we guide our decisions around densification and urban development having mind the links with the transportation system?







Centro de Vorsulterição

NASS TRANSIT SYSTEM (RAIL)

### 4. PILOT PROJECT | Parangaba Station

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#### NODE

+ Intermodal station ----- metro + LR + buses + BRT + bycicle and car sharing systems

#### PLACE

- + Existing infrastructure + Shopping + Parangaba lake + multiple services and facilities (health, education) + identity
- There is space for improvement of urban quality
- No walkability (design, quality and continuity of the sidewalks is an issue)
- There are imbalances in the mix of uses and income MARKET
- + Potential to increase FAR
- + There is room to perform changes in land use regulation
- + Fiscal incentives can be granted (such as exempting or lowering property tax for those willing to develop in the are)
  + Potential to apply flexible
- permitting regulations (such as business hours)







#### Shopping Center

#### **Bus Terminal**

LRT

Metro

**.** 

e/e

### 4. PILOT PROJECT | Papicu Station



#### NODE

+ Buses + BRT + LR + Bike sharing system

#### PLACE

+ Existing infrastructure + Big shopping mall (Rio Mar) + Large scale private and public health facilities + Density of commercial activities, services and jobs

- Inner city slums
- High violence rates

#### MARKET

+ There is a LVC experience under development (Lagoa do Papicu local PPP, Mixed use development, with a shopping mall, office space, commercial, hotel)
+ Land plots tend to be bigger and belonging to few owners

+ 4th most expensive m2 in the city Existing infrastructure + Big shopping mall (Rio Mar) + Large scale private and public health facilities + Density of commercial activities, services and jobs





Government of Japan







- In our case, the 3V offers a clear pathway and methodology to:
  - Validate the pilots stations where to work: Parangaba and Papicu
  - Choose strategies to boost each "V"





# 6. Key takeaways and lessons from the 2nd TOD TDD

- There is no "one-size-fits-all" solution
- A TOD&LVC approach cannot happen everywhere
- The TOD approach needs to be adapted to each case
- To make your case feasible, you need to:
  - Identify the product to be developed
  - Set your long-term vision + implementation plan
  - You can start small and navigate the process overtime
  - Stakeholder coordination and consensus is a must
  - It is important to combine multiple instruments
  - There is a "menu" of strategies available to balance the

3Vs





#### 7. Institutional Arrangements



### 8. Action Plan

#### Hopefully, with the support of the TOD COP...

- Set up a discussion with the key stakeholders to agree on scope and on needed inputs for the Analytical Work (mid June 2017)
- To conduct a roundtable with key stakeholders from the private sector (June 2017)
- World Bank: To develop and approve the Concept Note (end of June 2017)
- To prepare a draft ToR for the consulting services (August 2017)
- Final Version of ToR (September 2017)
- Get consulting services contracted (October 2017)

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### 2<sup>nd</sup> TOD TDD Action Planning China - Guiyang

#### May-June 2017



Zhai Wei Cao Wenke Wang Xueman Zhou Weimin





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### 1. City of Guiyang

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#### Population: 4.7million; Size: 8,034 km2; urban area: 2,403km2





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#### Guiyang Metro – S2


## 2. TOD Project



GEF financed project: part of sustainable city program

- TOD city wide strategy for Guanyang
  - Mass transit strategy that integrates land use and transport
  - Feasibility study for transport and land use planning to prepare for Guiyang's new master plan
- Land use planning and strategy along metro line development
  - The second metro line is expected to enter into operation in 2019
  - Connectivity to other transport mode (e.g. BRT)
- Land use planning and strategy along BRT line
  - Walkability, bicycle lane design and urban design for improving accessibility to BRT stations
  - Station hub design to improve rapid transit and use of public transportation
  - Optimizing public transport network and stations to improve efficiency and service





#### **3. Institutional arrangements**



- Guiyang project implementation:
  - Vice mayor led process
  - Designated Project management office that coordinates planning, finance, construction, land use, transport bureaus, and bus and metro companies





## 2. Key takeaways from the 2<sup>nd</sup> TOD TDD



- Japan experience:
  - Carefully designed, taking time for consultation, integrating commercial development to transit
  - New town development observation:
    - Distance between old town and new town is not too far with good transport connections
    - A good reference to China new town development and high speed rail station development
  - Construction without obstructing existing transportation
- Deep dive learning
  - China's overall transport strategy still lacks of integration between transport and land use and development;
  - 3 Vs would be a useful approach but take time to establish deep understand and implement





- At national level, different ministries need to share the concept of TOD; need to give more authority to the province and cities on how to implement
- Technical assistance provides a good basis but uncertainty for actual implementation:
  - Changing mind set of leadership and city residents using public transport and non-motorized transport (e.g. car ownership and driving car remain an goal for many Chinese)
  - Connecting to "reality": practical issues (e.g. Coordination among different bureaus and their interest)
- Implementation of land acquisition and re-adjustment
- Financing the implementation of the plan









- Share learning with other authorities, consulting firms and other stakeholders in order to incorporate the concept into the relevant studies
- Exchange experience with Japan's experts with the help of TDLC
- Incorporate 3Vs analysis into studies and explore financing options for TOD









#### Action Plan Sea Transport of THESSALONIKI and reshaping the coastal front of Thermaikos Gulf

by Maria Zourna & Thomas Tziatzios

#### Photos from Thessaloniki







- Combination of development and transit expansion can provide efficient, convenient and safe cities
- Transit expansion should not provide just short distances but connectivity as well as social inclusion
- TOD relies on commitment and perseverance, by all stakeholders involved, through time
- Legal and regulatory changes must be implemented as prerequisite, for example:
  - Increase FAR beyond specific limits
  - Change land uses without limitation

#### Application of 3V Framework



TOD as any other tool cannot be used as piecemeal, but has got to be adapted to local situations

Applicable principles in Thessaloniki

- Walk, Cycle, Connect, Transit, Mix, Shift
- Not applicable principles
- Densify, compact

TOD diagnostic tools

Adapted and weighed to task

Key Challenges

To unlock and capture funding resources to pay back investments, to not purely rely on public budgets

Preserve local identity in defining unique places and creating a sense of belonging among residents

Better understanding and coordination between stakeholders, to re-evaluate decisions already taken on transit and development issues









#### Approaches applicable

Intermodality between different means of transport. Connecting existing and planned traffic nodes to new waterboat-stops

Use station scale urban regeneration to connect physically nodes that are not necessarily next to each other

Step by step approach, to provide an example, promoting to all stakeholders what can be achieved through TOD









### Ways of application

TOD analysis to diagnose hidden conflicts and incompatibilities or gaps on imposed decisions

Redesign urban spaces according to TOD principles and methodology, as close as possible

Design a solid framework consisting of:
involvement of different stakeholders
their participation in different stages
coordination of their timetables
Finding the necessary resources for implementation
Securing necessary permits <u>on time</u>









#### Short term implementation plan



Formalization of the collaboration framework between the municipality and the World Bank team

- Steering Committee
- Technical Board
- Tasks, Duties, Timetable, etc.

Internal (within the municipality) debate, in order to persuade all parties on the benefits of implementing TOD concepts

Educating the key stakeholders of TOD principles and added value on potential investment plans



Special thanks to The World Bank and TDLC for the chance provided to widen our horizons

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## 2<sup>nd</sup> TOD TDD Action Planning KENYA

1. John M. Ndirangu, Secretary, Metropolitan Dev. State Dept. of Housing & UD, MTIHUD

- 2. Kithinji Kanyaura, Project Manager (Infrastructure), Kenya Railways
- 3. Charles Mutunga, Supt. Engineer, Urban Development Department, MoTIHUD

4. Ajalu J. Stephen, Urban Specialist, World Bank













Nairobi Population: 4.5 Million

The Ministry of Transport, Infrastructure, Housing & Urban Development (MOTIHUD) is redeveloping the existing Nairobi Central Station to a modern Core for Urban Public Transport.

The Project is being implemented through the Nairobi Metropolitan Services Improvement Program (NAMSIP).





# Location









- •Compact,
- •Sustainable transport,
- •High density,
- •Mixed land use,
- •Diverse,
- •Green

## **EXTENDED CBD**



#### **Transit Plan**



#### 2. Key Takeaways from 2<sup>nd</sup> TOD TDD



- Have a clear vision of Railway City
- Create a sustainable dense urban core by integration of efficient transport and mixed land use
- Stakeholder engagement and buy-in is crucial
- ToD plans are complex and take long time to implement
- Start with less complex components





# 3. Institutional Arrangements (Interagency Coordination)





#### 4. Challenges to address

- Legal framework
- Institutional framework
- Financing exploring various financing options
- Viable satellite nodes
- Land Administration
- National and County Government collaboration



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OKVO

Development

#### 5. Application of 3V Framework



 Due to land size and location Node, Place and Market Potential Value all apply to proposed re-development of Nairobi Central Station.







 Apply TOD concept to urban plan and designs of Railway City to achieve compactness and sustainability





#### 7. Next Steps: Implementation Plan (First 6 months)

- Tokyo Development Learning Center
- Stakeholder mapping and Communication Plan
- Develop design standards
- Planning process as per law-Urban plans/Designs
- Technical Work- Urban designs
- Institutional review







# 2<sup>nd</sup> TOD TDD Action Planning Pakistan



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Senior Urban Development Specialist, WB

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- In the Planning & Design of Mass Transit Systems, Transport, Urban and Economic Planners should work together from the project initiation
- TOD concept must be applied at the project conceptual stage and relevant stakeholders including the private sector taken on board
- Highly Dense and Compact cities Support high quality transit & local services (Tokyo and Hong Kong urban space constrained necessitated vertical development)
- Mass Transit System can never be efficient without a mixed use, mixed income, friendly pedestrian and Bicycle urban development
- Reduce dependency on motor vehicles Requires integrated urban transport Planning and Sustainable Urban Land Use Planning
- Integration of Public Transport Modes Easy access to public transport Key (Door to Door)
- TOD Corridor Level or Station Scale Level

- Value must be created first before capturing it (Land Value capture: change in land use or floor area ratio)
- Land value capture can be a tool to attract private sector investment as a major financier of the project
- Private Sector more efficient in Operations of a Mass Transit Line Better service provider
- Connectivity of the main corridor with the feeder or branch lines will increase ridership that will in turn create value for future TOD in the vicinity
- Extension of Corridors New well planned suburbs can be developed by providing fast mass transit connections with the City Centres, stations along the corridor can be selected for station level TOD that will increase market potential at each station

- Transparent Land Management System mandatory for success of any TOD project
- Japan opts for rail system as opposed to Bus Rapid Transit because of space required for road Right of Way and also because large number of buses will be required to cater for the high number of passengers
- In Japan, railway lines operated by private companies Revenues through fares (1/3 of total), advertisement, shops, departmental stores and hotels.
- Make Regulations that allow Land Re-adjustment

# **Application of 3V Framework**

Methodology for identifying economic opportunities in areas around mass transit stations

#### Node Value

- passenger traffic volume
- Intermodality
- Centrality

#### • Place Value

- Urban quality of space
- Amenities, school and health care
- Accessibility through walking & cycling
- Mixed pattern of land use

#### Market Potential Value

- Current & future human densities (residential plus employment)
- Jobs accessible by transit within 30 minutes
- Developable land
- Potential changes in zoning such as increasing floor area ratios

# **Key Challenges**

 Transit Oriented Development not considered for design of Mass Transit Systems at the Corridor or Station Scale level – corridor alignment selected based on estimated Ridership seeking full funding from the Government alongwith operational subsidy

 Mass Transit Systems lack integration of various modes – Feeder lines not developed – Non provision of Walking and Cycling facilities – Results in traffic congestion, poor ridership and subsequently large sums of public money spent on operational subsidy

 No concept of leveraging private sector financing through land value capture – projects fully funded & operated by the Government

## **Solutions Applicable for Addressing Challenges**

#### City Master Plan & Transport Plan Development

Objective of these plans should be Sustainable Urban Development with Integrated/Intermodal Public Transport that reduces traffic congestion, allows easy access to public transport and an urban infrastructure that facilitates walking & cycling

**Neighborhood improvements** Objectives are to focus on smaller scale implementation to improve neighbourhod environments like public spaces, safety, walkability and better connect them to transit node

- Use TOD approach at the City and Station level
  - Land Assembly
  - Good Urban Design
  - Land Value Capture
  - Private Sector investment / Operation of corridor
## How to apply these Solutions

- City Master Plan and Transport Plan should be analyzed. In case deficient or out dated – should be developed first
- The Planning & Design of Mass Transit Systems should be carried out by Transport & Urban Planners in consultation with Land Authorities and Private Sector with a clear objective to minimize public sector investment and leverage private sector financing, TOD concept must be applied at the conceptual stage
- Private sector should operate the mass transit corridor Government to provide a conducive environment only, Land Value Capture requires flexibility in Floor Area Ratios and Land use. Future extension of mass transit systems not possible without private sector involvement/financing

## **Implementation Plan (6 Months)**

- Presentation on the TOD concept (3V Framework) to the Federal and Provincial Authorities involved in the Planning, Design, Approval and Implementation of Mass Transit Projects
- Provincial Authorities to come up with TOD potential projects at Corridor and Station Scale level for operational, under construction and planned mass transit projects using 3V Framework
- Start Discussion with the Land and Law authorities for enabling legal and Regulatory Framework to enable and leverage upon TOD.
- Steering Committee at the Federal level on Mass Transit Projects to include all public (includes provincial / city governments) and private sector stakeholders
- Explore projects similar to WB Karachi Neighbourhood Improvement Project (KNIP) (improved walkability, public spaces and connectivity to BRTS) and how they can be extended to other cities in Pakistan and other areas in Karachi with transit nodes
- Leverage on Steering Committee set up under KNIP for better coordination with government agencies, civil society and businesses to build momentum for similar neighborhood upgrading and TOD related projects.
- Identify Potential Technical Assistance and investment from WB and Japanese Agencies for development / improvement of City Master Plan, Transport Plan and analysis of Mass transit Systems

## Mass Transit System – Important Data

Feasibility Stage	Preliminary Design	Detailed Design	Approval	Construction
Length (Kms)	Metro/LRT/BRT Selection basis	No. of Stations	Ridership	Distance between Stations
Cost of Project/ Who is funding	Subsidy	Sources / Total Revenue	Operational Cost	Maintenance Cost
Corridor Selection Basis TOD/only ridership	Time Required for Design	Time Required for Construction	Feeder Routes	Park & Ride Facility
Urban Infra Development	Walking / Cycle Track	Buses / Rolling Stock incl in cost OR Private Operators	No. of Buses/Train per Day Max/Min	Capacity of one Bus or Train
Design Standards Used	Follows City Master Plan and Transport Plan	EIA	BRT S <b>Gold, Si</b> Speed, Cap quality	Standard Iver, Bronze acity, reliability, of service

## Karachi Neighbourhood Improvement Project





## DESIGN ELEMENTS PROPOSED TO BE FOCUSED ON FOR ACHIEVING THE DESIRED OBJECTIVES

**Bus stands** 











Proposed landscape is a combination of hardscape & softscape features to uplift the existing urban fabric consisting of streets and vacant lands found within our studied area of cityscape. The intent behind the provision of landscape is to bring the urban fabric of land into its productive state for its users by involving features that may bring positive impact on overall environment interms of their layout treatment.

- Hardscape features will be provided to promote user desired activities like paved areas, walkways, platforms etc.
- Softscape features will be provided such as local region trees, shurbs, grass patches etc.
- Proposed landscape will lower the rates of anxiety & less we will be aware of pain.
- Proposed landscape will benefit health as it will helps to bolster the immune & stimulate the body's natural healing proclivity.
- Landscape sunken & elevated platforms will serve as furniture itself for users.





## DESIGN ELEMENTS PROPOSED TO BE FOCUSED ON FOR ACHIEVING THE DESIRED OBJECTIVES

Street corners and curb stones











### Trees and Landscape Strips













### Metrobus Rawalpindi – Islamabad

### **MBS – Priority Corridor**







## **METROBUS TO**

## **NEW ISLAMABAD INTERNATIONAL AIRPORT**

### **Proposed Stations**



### **Typical Cross Section in Trench Section**



### **Typical Cross Section at Bridge Location**



### **Typical Cross Section in Median of Kashmir Highway**



### **Perspective View of MBS Station**



CONSTRUCTION OF INFRASTRUCTURE & ALLIED WORKS FOR METRO BUS SERVICE (PESHAWAR MORR ~ NEW ISLAMABAD INTERNATIONAL AIRPORT)

3D VIEWS (AT GRADE)



#### CONSTRUCTION OF INFRASTRUCTURE & ALLIED WORKS FOR METRO BUS SERVICE (PESHAWAR MORR ~ NEW ISLAMABAD INTERNATIONAL AIRPORT)

3D VIEW (MBS TRENCH)



## Lahore – Orange Line – Metro Train Project



### **Stations**



### **PESHAWAR METROBUS PROJECT**

			BS 1
rand of Univers BS 25 B	ity s 24 BS 23 BS 22 BS 22 BS 22 BS 19 BS 18 BS 17 BS 16 BS 15 BS 15 BS 16 BS 15 BS	BS 11B BS 8 BS 7 BS 6 BS 5 BS 11B BS 9 BS 112 BS 10 Khyber Bazaar	BS 4 BS 3 BS 2 Chamkani
BS 30 BS 20 BS 20	Airport Airport tion overlap with routes	BRT Station BRT 1A - Cl BRT Corrido Desmobi, 2010	hamkhani to Hayatabad Dr
BS 1 - Chamkani Chowk	BS 17 - Khyber Road Airport		2 (1
BS 2 - Chughal Pura	BS 18 - Gora Qabristan - Christian Cemetery	0 1 2	3 4 km
BS 3 - Dr. Zareef Memorial School	BS 19 – Tehkal	1	
BS 4 - Sethi Town	BS 20 - Tambuwaan – Tents		
BS 5 - Sikandar Town	BS 21 - Abdara Road	Poute Name	
BS 6 - Gulbahar Square	BS 22 - University Town	Koutervame	IA (Silver Line)
BS 7 – Hashnagri	BS 23 - KTH University of Peshawar	Route Alignment	
BS 8 - Qila Balahisar	BS 24 - Islamia College	Nouce Alignment	Chamkani to Hayatabad
BS 9 - Hospital Road	BS 25 - Board Bazar Regi	Route Length	25.9 km
BS 10 - Khyber Bazaar	BS 26 - Taj Abad	Houro FoilBui	23.0 KIII
BS 11 - Soekarno Square Secretariat	BS 27 - Hayatabad Model School	Route inside BRT Corridor	25 8 km
BS 12 - Dabgari Gardens	BS 28 - Hayatabad Phase 3		23.0 MI
BS 13 - Railway Station	BS 29 - Tatara Park	Number of BRT Station Overlap 31 station	
BS 14 - State Bank of Pakistan	BS 30 - PDA Hayatabad		
BS 15 - Saddar Bazar	BS 31 - Cancer Hospital	With Houtes	
BS 16 - Mall Road			



## Thank You

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## 2<sup>nd</sup> TOD TDD Action Planning Cebu City, Philippines

### May-June 2017



Arnulfo Fabillar, Department of Transportation (DOTr) Nigel Paul Villarete, Cebu City Government Vickram Cuttaree, WB Task Team Leader









## 1. TOD Project in Cebu City, Philippines

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- <u>Key takeaways from the Technical Deep Dive relevant to the</u> <u>Cebu BRT Project</u>:
  - 1) TOD takes land use and transport integration to another higher level, integrating further urban functions into the whole concept of inclusive mobility;
  - 2) TOD concept was not discussed in the Cebu BRT project formulation. But what we can realize now, is that it should have been from the very start.
  - 3) TOD will definitely double the benefits of the Cebu BRT project, especially in many sense other than better transport socially, environmentally, etc.
- Takeaways from peer to peer learning:
  - 1) Different countries/cities have different circumstances, and more critically, different legal framework/legal regulations. But everybody seems to agree that TOD is good, but its application has to be adapted to the local conditions of the cities.



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## **3. Application of 3V Framework**

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### **Corridor Approach**

• Application of the 3V Framework

### For Nodes, we map out

- 1) future BRT network
- 2) current and future PT network to identify the high value nodes and places as the city develops
- 3) assess the potential for market value increase and priotization of TOD development.
- 4) consult with the private sector and other involved stakeholders on the whole scheme to achieve collective agreements and commonality.





- A. Lack of a clear existing business case information both for the BRT corridor and its stations;
- B. Legal and Institutional Environment need to be adjusted to achieve better working conditions for the TOD approach
- C. Need to identify and secure the financing for both the public requirements and the private sector participation in the entire TOD scheme;



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- More in-depth application of the basic concepts of Land Use and transport Planning integration in the Comprehensive Land Use Plan (CLUP) and the City Zoning Ordinance, along the BRT corridor;
- Apply mixed use and integrated development for residential, commercial, and urban services around and adjacent to BRT stations;
- In general, and in the long-term, integrate the whole TOD concept to the long-term City Development Plan, and the City Land Use Plan (CLUP)



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### What is your implementation plan (up to 6 months)?

- Create a TOD Technical Working Group (TWG) to map out a more detailed Implementation Plan, with specific Terms of Reference, Resource Requirements, Schedules and Timelines, as well as identification of Key Stakeholders to engage;
- Undertake a more in-depth assessment of the constraints and develop the business case for TOD for the corridors and stations;
- Communicate the vision and business case to the different stakeholders in order to generate public support
- Study and execute legal and institutional reforms
- Develop a more detailed Implementation Plan.





## 7. Next steps: Implementation Plan (First 6 months)

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# How could World Bank (and TDLC) support the implementation plan:

- Undertake the Detailed Assessment and Develop the Business Case for TOD Application along the WB-assisted BRT Project corridor;
- 2. Prepare a prioritization Criteria for the Stations and Develop the Business Plan, including the Financing options;
- 3. Support the Legal Regulations at the National Level and Institutional Reforms at the City Level;



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### The Cebu Bus Rapid Transit (BRT) Project



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# Thank you very much.









## 2<sup>nd</sup> TOD TDD Action Planning Senegal

### May-June 2017



Fatim Tall, Ministry of Urban Renewal, Housing, and Living Environment Abdoulaye Sy, CETUD Aiga Stokenberga, World Bank









## 1. Transport and Land Use Planning in Dakar





### Urban disaster risk due to housing expansion into unsuitable areas

- Limited supply of affordable housing
- Concentration of commercial activities in the Plateau putting a strain on infrastructure
- Inequality across the urban area in access to urban services
- Need to strengthen local technical capacity to prepare PUDs and PDUs

### Land Use Plan for 2035 proposes to:

- 1. Transform the present monopolar urban structure to a multipolar one
- 2. Introduce an Urban Growth Boundary (UGB)
- 3. Promotion of development along mass public transport networks
- 4. Differentiation of urban poles, urban centers, and sub-centers with unique functions

<u>Target</u>: Increase share of mass PT (BRT and rail) from 0.3% today to 25% in 2035





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## 2. Key takeaways from the 2<sup>nd</sup> TOD TDD

- Institutional coordination
- Political vision, stakeholder endorsement
- Incremental, iterative improvements that take time
- Need to create value first to capture it
- Articulated densities, articulated development potential
- Comprehensive/systematic tools for identifying development potential
- Land development tools (LR) not yet mainstream in peer cities
- Learning from peer cities developing TOD initiatives near BRT (process as important as end product)



Development





## 3. Institutional arrangements

TRANSPORT (BRT)	LAND USE (TOD)	
STEERING COMMITTEE	STEERING COMMITTEE	
Ministry of Transport/Infrastructure	Ministry of Transport/Infrastructure	
Ministry of Urban Renewal, Housing and Living	Ministry of Urban Renewal, Housing and Living	
Environment	Environment	
Ministry of Finance	Ministry of Finance	
Ministry of Local Governments	Ministry of Local Governments	
Ministry of Investment Promotion	Ministry of Environment	
Municipalities (Dakar)	Representatives of other ministries (Health,	
Agencies (CETUD)	Education, Sport, etc.)	
Private sector	Territorial Administration (national)	
	Municipalities (Dakar)	
	Agencies (CETUD)	

#### **TECHNICAL COMMITTEE**

Technical representatives of agencies, directorates Civil society Private sector Municipalities Utilities

#### **TECHNICAL COMMITTEE**

Representatives of all sector, agencies, directorates Municipalities Utilities





**1.** Political vision / support for TOD: specific targets at the level of transit corridors; city-level TOD policy

example: % of population living near transit

**2.** TOD-specific technical capacity within Ministry of Urban Renewal, Housing and Living Environment and CETUD

example: site Master Plan for a specific TOD pilot project pedestrian/bicycle access to BRT

**3.** Understanding / identifying TOD opportunities along the corridor depending on current conditions

example: built-up/informal station areas vs. station areas with more land availability





## **5. Application of 3V Framework**





3.1% - 5%

012525

75 10

5.1% - 10% 10.1% - 15% 15.1% - 27.4%

### NODE VALUE

Transport demand model has allowed identifying stations that will serve as 'hubs' – largest number of transfer passengers, intersection of trunk and feeder lines

#### **PLACE VALUE**

<u>Next step:</u> collect data on local pedestrian accessibility, amenities, quality of urban space near the main transfer hubs

### **MARKET VALUE**

<u>Next step:</u> analyze real estate market data for the 'hubs' (data is available)







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Stakeholder coordination

Private sector participation in infrastructure/ finance and land development The novelty of TOD in the Dakar context

The two approaches to TOD used in Japan are both applicable in Dakar:

New towns well connected to transit (Diamniadio) City redevelopment (Medina, Guediawaye)





## 7. Next steps: Implementation Plan (First 6 months)

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Identify development opportunities along the BRT corridor (especially near the transfer hubs)

NODE + PLACE + MARKET

Further development of stakeholder mapping

Visioning workshop to discuss initial landuse development plans at the corridor level and for specific station areas (political)

Targeted discussion about development concepts for prioritized stations (technical)

- 1. Analysis and mapping of existing data on market trends
- 2. Collection of station-area specific data on place characteristics (land use, environment, resident perceptions)
- Technical (GIS) experts within CETUD, Ministries
- Possible World Bank assistance
- 1. Agree on priority station areas to be developed
- 2. Allocate institutional responsibilities
- Possible World Bank (or hired consultant) assistance to coordinate/facilitate discussions and document agreed-upon actions







## 2<sup>nd</sup> TOD TDD Action Planning Serbia

### May-June 2017



Milutin Folic, City of Belgrade Chief Urban Planning Officer, Mayor's Office

Dr Zaklina Gligorijevic, Urban Planning Institute of Belgrade Joanna Masic, WB Group, SUR&R, ECA Tamara Nikolic, WB Group, SUR&R, ECA









## City Development Goal BELGRADE IS A COMPLEX CITY

To position Belgrade on the map within a network of competitive and desirable SEE destinations while enabling sustainable, livable, smart, and healthy environment for Belgrade citizens.



ПЕШТАНЕ

БЕЛИ

- Revision of the Transport Master Plan SMARTPLAN and first Metro line
- Relocation of the Main Rail Station from the City center and Construction of two new Rail Stations

## Creating Market Value NODE 1 - Block 42 Future Rail & Bus Station







NEW BUS AND RAILWAY STATION IN BLOCK 42

### NODE 2 - STATION "CENTRE"



### ENCOURIGING HIGHER DENCITY AROUND NODES SKYLINE BELGRADE



## **BELGRADE WATERFRONT**

7



## FOR BETTER QUALITY OF LIFE IN BELGRADE

## **120 KM** Enhancing Node Value

OF BICYCLE PATHS



## Creating Place Value Pedestrian friendly public spaces around the Nodes

Tokyo Development Learning Center











## **Creating Place Value**

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• Plans for the underground garages, reconstructions of the City boulevards Belgrade Waterfront For pedestrians & cyclists, Share of Car traffic only 25%







## 2. Key takeaways from the 2<sup>nd</sup> TOD TDD

### What were your key takeaways from the Technical Deep Dive relevant to your project?

- ToD can be an excellent mechanism to achieve strategic vision through integrated planning
- 3V is important lesson for the city managers. Multiplying the outcomes of the overall and detail transportation planning.
- The real estate development can be supported or spurred by new transport facilities.
- **Tod** or **DoT** is the question for Belgrade! The result should be the comfortable, safe, livable city.

### What were the lessons from local partners, speakers?

- Long term Planning and flexible action plan,
- Evacuation of results achieved, monitoring and reshaping the implementation,
- Multi stakeholder engagement during the whole project lifetime

### What were your takeaways from peer to peer learning?

Coordination





## 3. Institutional Mapping for TOD



### **National level**

MINISTRY OF CONSTRUCTION, TRANSPORT AND INFRASTRUCTURE (technical & functional aspects of the project, procedures)

- Department for railways and intermodal transport, and
- Department for construction works and land for construction

MINISTRY OF FINANCE (responsibility for PPP, DFI, procurement, legislation, subsidies)

### **City level**

Mayor's Office

Land Development Agency, PE

City Authorities: Secretariat for Transportation, Secretariat for Public Transport, Secretariat for Urban Planning and Constructing, Secretariat for Environmental Protection, and Secretariat for Investments

**Urban Planning Institute** 

### Coordination mechanisms (planning and implementation)?

Integrated Strategy,

Planning procedures,

**Coordination Body** 





## 4. Challenges to address

- Please list key challenges (up to 3) you would like to address upon your return home
  - Establishing TOD delivery mechanisms/institutional arrangements
  - Developing the business case for TOD and implementing land value capture (direct/indirect) with the engagement of all stakeholders
  - Preparing detailed site specific TOD design and plans for implementation
  - Measuring impact of TOD, including land value before and after the TOD project





What is your view how 3V approach can be applied to TOD project in your city/country?

Some points and philosophy already incorporated in planning system and the Belgrade practice, like integrated transportation and urban planning, different levels of stations and multimodal public transportation.

Better places with economic value can be cratered or improved through ToD

- The functional Node value can be improved by place making , good urban design and add to the market values.
- 3V ToD is a tool to contribute to transformation of urban space.





## 6. Approaches and actions

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### The main Take away :

- Integrated planning , PROJECT BASED.
- Consensus of stakeholders in visioning the future development,
- Shared responsibilities,

### How would you do differently compared to before joining the TDD?

- Making the common vision with ,
- Involving bigger pool of stakeholders into the process,
- Focusing on CREATING VALUE in order to CAPTURE the VALUE

How would you like to address the challenges among your bureau and to wider stakeholders?

- Establishing COORDINATION BODY within the CITY management,
- More flexible legal framework
- Bringing ToD best cases and knowledge exchange to Belgrade



## 7. Next steps: Implementation Plan (First 6 months)

• What is your implementation plan (up to 6 months)?

Action	Location	Timing	Outcome	World Bank
Increase knowledge for waterfront developments	Seoul	July	Define Tools and Approaches for further study	Organize and facilitate
Convene stakeholders for high- level discussion on TOD	Belgrade	Sept?	Increased awareness of TOD at city level	Facilitate & bring expertise
Build awareness of TOD and potential for Block 42	Vienna	Feb-March 2018 Parallel to Mayors Symposium	Enhanced approaches for station area development	Arrange & facilitate visit to TOD site
Detailed proposal for World Bank technical support	Belgrade	June - October	Draft Proposal	Support proposal preparation





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### **Possible Future Proposals**

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- 1. Build capacity for Institutional Coordination of transit and urban planning and for major TOD developments,
- 2. Develop geospatial tools, data governance and platform for enhance decision making and impact assessment,
- 3. Develop intensive two way communication with the public supporting the ToD project
- 4. Prepare policies and guidelines for TOD (city/corridor/station), financial instruments and land value capture methods,
- 5. Creating metro/rail/bike based concept of sustainable transport.
- 6. Complete city bike network while building up the broader support of the ToD Belgrade overall project.



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## 2<sup>nd</sup> TOD TDD Action Planning TANZANIA



Eng. Julius Ndyamukama; TANROADS Eng. Ronald Lwakatare; DART Eng. Ezron Kilamhama: PORALG Mr. Charles Mariki : PORALG Ms Chyi-Yun Huang; WB TTL Eng. Yonas Mchomvu; WB TTL







### **Planned TOD Project in Dar es Salaam**





# **Proposed Corridor Dev. Phase 1**





### **Selected Photos from the Project**











Urban morphology around BRT station







### 2. Key takeaways from the 2<sup>nd</sup> TOD TDD

- What were your key takeaways from the Technical Deep Dive relevant to your project?
- There is a need to have clear policy, strategy and legislations in order to implement TOD
- DART would not rely on revenues from bus fare rather other sources from investment in TOD
- A well implemented TOD generates employments, maximize Land Use , boost Urban and National Economy growth
- TOD can start from small scale and expanded to bigger scale after stakeholders realizing its benefits
- Encourage Private sector to participate in development of TOD
- To design our urban infrastructures taking into considerations of cyclist and pedestrian
- Designing our urban infrastructure taking into consideration of green infrastructure





### 2. Key takeaways cont'd

- What were the lessons from local partners, speakers?
- All fellow partners admitted that TOD is the best model to be implemented for sustainable growth of our cities
- Land adjustment along BRT corridors is required to enable implementation of TOD
- To support TOD we need to have Land Management & Administration, high quality Urban design
- One of the main challenge to implement TOD is acquiring land
- Convert ownership of the land to ownership of floor(s)
- What were your takeaways from peer to peer learning?
- Possibility of land reclamation for urban development
- Invest in high rise to reduce urban sprawl
- Use of underground infrastructures where there is limitation of land





### 3. Institutional arrangements



Government (National & Sub- National Level)	Private/ Semi- Private Sector	Civil Society	Development Partners
Dar City Council	African Real Estate Society	AMEND Traffic Safety Association	African Development Bank
Dar es Salaam Regional Commissioner's Office	Architects Association of Tanzania	Ardhi University – Institute of Human Settlements Studies	JICA
Dares Salaam Water and Sewerage Authority	Association of Tanzania Real Estate Entreprenuers	Automobile Association of Tanzania	UNEP
and Dar es Salaam Water and Sewerage Corporation	Association of Transporters in Dar es Salaam	Center for Community Initiatives	UN-HABITAT
Energy and Water Utilities Regulatory Authority	Dar es Salaam Taxi Drivers Association	Cycling Association	World Bank
Ilala Municipal Council	Dar es Salaam Chamber of Commerce	Lawyer's Environmental Action Team	
Kibama Municipal Council	Dar es Salaam Commuters Bus Owners Associations	National Housing Tenants Association	
Kigamboni Municipal Council	Hotel Association of Tanzania	Tanzania Civil Society Forum on Climate Change	
Kinondoni Municipal Council	Tanzania Chamber of Commerce	Tanzania Cities Network	
Ministry of Finance and Planning	Tanzania Drivers Association	Sumatra Consumers Consultative Council	
Ministry of Industry and Trade	Tanzania Green Building Council	University of Dar es Salaam	
Ministry of Lands, Housing, and Human Settlements Development (MLHHSD)	Tanzania Institution of Valuers and Estate Agents		
Ministry of Transport	Tanzania Private Sector Foundation (TPSF)		
Minstry of Water	Tanzania Truck Owners Association (TATOA)		
Ministry of Works	Tanzanian Union of Industrial and Commercial Workers		
National Institute of Transportation	Traders / Vendors Association (VIBINDO, DAKOA, and ASBO)		
National Housing Corporation	Usafiri Dar es Salaam Rapid Transit (UDA-RT)		
National Environment Management Council			
Presdient's Office Regional Administration and Local			
Government Roads Fund Board			
TANROADS - Regional Manager for			
Dar es Salaam			
Tanzania Building Authority			
Tanzania Investment Center			
Tanzania Revenue Authority			
Temeke Municipal Council			
Surface and Marine Transport Authority			

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## 4. Challenges to address

- Key challenges to addressed
  - Creating the enabling legal and regulatory framework for TOD (Planning & Implementation)
  - Formulating the TOD/LVC Policy/ approach for the City
  - Developing of TOD in build up areas
  - Readily available land for TOD
  - Establishing TOD mechanism/institutional arrangements
  - Developing the business case for TOD and implementing the LVC (Direct /indirect)
  - Understanding TOD opportunities based on site specific conditions
  - Prepare detail site specific TOD designs and plans for implementation





### 7. Next steps: Implementation Plan (First 6 months)

#### Corridor Development Strategy (CDS)

-- Providing a roadmap for transport and land use integration

Objective: To develop an integrated land use and transport plan and guidelines to facilitate the detailed development and appropriate densification along the first line of the Dar es Salaam BRT Corridor.



#### Stakeholder Consultations & Workshops











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### Dar es Salaam Metropolitan Development Project

Provision of Consultancy Services to Support Integrated Transport & Land Use Planning

#### Report 2

### Diagnosis of Existing Condition, TOD Guidelines and Development Vision for Corridor

Draft Submission







### 5. Application of 3V Framework/ Approaches

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#### **TOD Station Evaluation Matrix**

Measurement & Weighting



SOCIAL DEVELOPMENT

#### TOD Station Evaluation Matrix Urban Planning



The higher the % of nonbuilt up coverage the more land will be avaiable for TOD development A higher floor area ratio would indicate that an area has been more intensively developed and could be more diffificult to re-develop A higher number of uses would suggests that an area will have greater potential to accommodate TOD activities



#### TRANSIT ORIENTED CHARACTERISTICS Measuring the Criteria



#### Transit Options (Public Transport density)

Number of different transit options that are accessible within walking distance



#### Station Accessibility (time - isochronal analysis) Population/Jobs reached within 30 min travel time **16**



Station Accessibility (Distance) Population and employment catchment within 500 m walking distance



Block Permeability Linear meterage of pedest and stop and BANK GROUP routes

### Support from the Bank

- The Bank supported financing to procure consultant who is carrying out study on integrated Land Use Development along BRT Corridor.
- The study commenced on January 2017 and expected to be completed end of June 2018
- Phase 1 draft report already submitted for review; Phase 1 consultation workshop planned in July 2017.
- Phase 2 to begin (Aug 2017 April 2018)





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# 2<sup>nd</sup> TOD TDD Action Planning Viet Nam

#### May-June 2017

Mr. MINH Nguyen Du, MOC Mrs THUY Le Hong, MOC Mr PHONG Phung Phu, Da Nang City Mr VINH Dinh The, Da Nang City

Mr CUONG Dang Duc, WB Task Team Leader





WORLD BANK GROUP Social, Urban, Rural & Resilience



- Please provide a context and overview of the WB TOD Project in VletNam
  - There is no living examples of TOD projects in Viet Nam. Some lines of the public transportation are under construction and there is no signs of TOD integrations.
  - Law on Urban Development Management will provide a framework for TOD and land readjustment.
  - Increasing awareness of stakeholders

Some photos from DA NANG City, VIETNAM





### **1. TOD Project in my city/country**





### 2. Key takeaways from the 2<sup>nd</sup> TOD TDD

- Tokyo Development Learning Center
- What were your key takeaways from the Technical Deep Dive relevant to your project?
  - Roles of TOD to city development
  - Vary of TOD scales can be applied to different contexts
  - Land management tools to conduct TOD's project
- What were the lessons from local partners, speakers?
  - All local partners agree on an importance of TOD solutions.
  - Needs of participations from stakeholders
  - Subsidies is crucial for a success of TOD project
- What were your takeaways from peer to peer learning?





### 3. Institutional arrangements



Social, Urban, Rural &

• Please illustrate institutional mapping at national and sub-national level to prepare and implement your TOD project.





of Japan

- Please indicate how urban and transport bureau cooperate. What are the coordinating mechanism both at the planning and implementation phase?
  - At the planning phase, urban and transport bureau are together to create urban master plan which will show vision and scale of TOD. The coordinating mechanism is clear.
  - At the implementation phase, should establish a committee including representatives of all stakeholders. Depend on fund, features, type of land mechanism of TOD project, implementing bodies could be vary but there should be a good capacity cooperation (jointly by state, private...) to implement TOD's projects.





### 4. Challenges to address



• Please list key challenges (up to 3) you would like to address upon your return home

#### At central level:

- Identify TOD's contents in the Law on Urban Development Management.
- Providing LR mechanism in the context of unique land system in Viet Nam.
- Increasing public awareness on TOD

#### At local level:

- Institutional coordination (Getting all stakeholders sit together for implementing first project)
- Mobilizing funds
- Capacity building





### 5. Application of 3V Framework

- What is your view how 3V approach can be applied to TOD project in your city/country?
  - 3V approach is potential in Viet Nam especially in big cities

There are few difficulties:

- Vision of city development is influenced by politic point of views then sometime does not go in line with real demands.
- Most of lesson learned for 3V are from developed countries and big cities (London, Hong Kong, Seoul, Tokyo...). Viet Nam there are only two big cities but without any metro systems, the rest are medium and small cities.
- Lacking of data in all levels. Some is not exactly (land value, real estate market are showing a very different pictures of city development and even people income).





### 6. Approaches and actions

- What approaches/solutions that were presented during the TDD are most applicable to addressing your challenges? What are the methods you would like to apply?
- How would you do differently compared to before joining the TDD?
- How would you like to address the challenges among your bureau and to wider stakeholders?
  - Integrating urban, land and transportation within urban master plan and in districts or project level.
  - Considering TOD is an urban development program (other factors should be involved not only transportation such as commercial, housing, health care facilities...)
  - Legalizing LR mechanism.





### 7. Next steps: Implementation Plan (First 6 months)

- What is your implementation plan (up to 6 months)?
  - Continuing study about Law on Urban Development Management.
  - Work with other agencies to understand main points of TOD which should be modified or applied into Viet Nam's contexts.
  - Work closely to Danang for further understanding the real situation of first TOD project implementation.
- How could World Bank (and TDLC) support the implementation plan
  - Provide supports for MOC on building the Law (experts, training course)
  - Capacity building on TOD (Station and urban renewal program)
  - TOD assessment (3V framework)
  - Sharing knowledge from TDLC, Yokohama City
  - Preparing for the full FS



