

AS-A01 TOD READINESS ASSESSMENT TOOL

This Knowledge Product is intended to be used as a checklist along with interactive excel spreadsheet. These tools are available online on the GPSC's <u>TOD website</u> and the World Bank's <u>TOD COP website</u>. The reader should first review the summary presented below before using the spreadsheet tool

TOD

Type: Spreadsheet + User Guide













INTRODUCTION

As cities in World Bank client countries continue experiencing rapid urbanization and population growth, plans on developing urban rapid transit systems are gaining much-needed acceptance. From Tanzania (Dar-es-Salaam), Brazil (20+ cities) and South Africa (6 cities) to China (40+ cities), India (15+ cities) and Indonesia (10 + cities) have launched rapid mass transit systems within the last decade. These investments also act as catalysts to reveal untapped opportunities for developing lands surrounding the transit stations in an economically viable, socially equitable, and environmentally sensitive manner. In order to identify these opportunities early-on in the process is critical in maximizing the benefits of transit-oriented developments (TOD).

Government agencies in World Bank client countries have minimal planning and engineering resources in-house to undertake TOD studies, especially in medium-sized cities. Often, the current resources are not well-equipped to understand the nuances and intricacies of TODs or require a lot of hand-holding in understanding, applying and finally implementing TOD concepts during the development phase. Furthermore, access to data is often a daunting task and restricts informed decision-making. The TOD Readiness Assessment helps cities conduct a rapid assessment of TOD readiness with relatively accessible datasets that are often available at local levels.

Disclaimer: The Transit-Orientated Development Implementation Resources & Tools knowledge product is designed to provide a high-level framework for the implementation of TOD and offer direction to cities in addressing barriers at all stages. As the context in low and middle-income cities varies, the application of the knowledge product must be adapted to local needs and priorities, and customized on a case-by-case basis.

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PURPOSE

The TOD Readiness Assessment Tool is designed to assess the existing TOD potential for three (3) primary scales of intervention:

Initial TOD Readiness Assessment: A checklist designed to conduct a rapid assessment of external factors that are vital for planning and implementing TOD in any city regardless of the context. These factors include: i) existing policy and regulatory framework; ii) technical capacities available in-house; and iii) existing data availability to conduct detailed studies. This checklist is designed only to develop a better understanding of the factors that indicate the level of political support for TOD and are primarily public sector driven. This tool builds on the WB/WRI TOD Corridor Course on "Building Blocks for TOD" and National-level Guidance Document for India (World Resource Institute and World Bank Group 2015; MoUD, World Bank, India 2016).

The City-level TOD Readiness Assessment may be used to inform the Enable, Plan + Design and Implement Knowledge Products (EN-P03 & EN-P05; PD-H01; IM-P03).

Detailed Station Area Level Readiness Assessment: This interactive, spreadsheet-based tool, helps urban planners and decision-makers evaluate the TOD readiness at the station area scale. When planning for TOD, the network of stations in a mass transit network form a corridor; however, each station exhibits characteristics that are often unique but also show some similarities. This spreadsheet is designed to assist urban planners and policy-makers identify the station area attributes to develop context-sensitive strategies to increase readiness for TOD and understand the value of each station within the larger corridor network. This tool can be used by government agencies to build a case for retaining a consultant for further studies and/ or prioritizing investments in station area and/or drafting the terms of reference for retaining consultants to conduct planning studies. Existing literature, specifically the 3V metrics in World Bank's "Transforming the Urban Space through Transit-Oriented Development: The 3V approach" formed the basis to develop this tool (Salat and Ollivier 2017).

The Station Area Level TOD Readiness Assessment may be used to inform the Knowledge Products under the Plan + Design (PD-H03, PD-H04 and PD-H05); and Implement (IM-A01) Detailed Corridor-level Readiness Assessment: This tool overlays the node, place and market potential value for all the stations to show the mosaic of conditions throughout the corridor. All the individual metrics are added, giving each station a total score ranging from 16 points (if it scored "Low" on all 16 metrics) to 48 points (if it scored "High" on all 16). This composite score helps in categorizing stations into three levels: Long-Term, Emerging and Arrived that would require different investment tools and strategies, as well as different phasing of investments will be needed in different locations.

The Corridor-level TOD Readiness Assessment may be used to inform the Knowledge Products under the Plan + Design (PD-H01, PD-H02, and PD-H03)



ASSUMPTIONS AND LIMITATIONS

- The tool is applicable for city, corridor and station scales. It is not intended to be applied on individual TOD projects at the site level.
- The tool is applicable in multiple contexts- greenfield, urban infill, suburban and redevelopment.
- The tool is not intended to compare different station areas along a corridor but highlight each station area's TOD potential.
- The tool is a relative measure of a station compared to other stations, and of imbalances in terms of connectivity, urban space and market potential. It is used for planning purposes, not design purposes.
- This tool is applicable for municipalities, development agencies, transit agencies, private developers or any agency interested in getting their city ready for TOD.

DATA SOURCES

- High-definition aerials/ satellite photography/ Google Earth/ Open Street
- Census information
- Local government GIS data
- Site Survey; Photos
- Local government transport data
- Secondary documents- applicable zoning codes; adopted master plans
- Field surveys
- Third-party reports
- Community mapping participatory planning exercises
- Open Source data
- Crowdsourced data
- Google Street view or other similar applications

INTENDED OUTCOMES

- Develop a preliminary checklist to identify potential pitfalls early-on in the process that prioritizes interventions needed to enable and implement TOD.
- Create an inventory of data availability.
- Gauge existing strengths and weaknesses of station areas to understand its full TOD potential and opportunities for improvement.
- Prepare a specific scope of work and terms of references for retaining external consultants, based on a preliminary understanding of data availability.
- Utilize spreadsheet tool results to refer other TOD Knowledge Products for additional technical guidance.



HOW TO USE THE TOD READINESS ASSESSMENT TOOL?

First, the user should read the User Guide Tab before using the spreadsheet. The application of the TOD Readiness Assessment tool consists of four basic steps:

INITIAL ASSESSMENT TAB

Populate the Initial Assessment tab as a checklist of the citywide policy, regulatory, and institutional framework; and evaluating technical data availability for detailed assessment.

[Refer following pages for details]

CREATE A CITY OR CORRIDOR BASE MAP

Identify station nodes along a transit network or transit corridor. Collect base data for each station, including ridership, land use conditions and other important data needs as specified in the Detailed Assessment Tab

DETAILED ASSESSMENT TAB

Enter data requirements in the Detailed Evaluation tab. The spreadsheet tool has measures developed that make use of readily available data and in some cases GIS-based analysis.

[Refer following pages for details]

SUMMARY TAB

Fill the template under the Summary tab to identify the station area's strengths and weaknesses, based on the readiness score calculated automatically through the tool.



INITIAL ASSESSMENT TOOL

The Initial Assessment tool is applicable at **any scale**. It measures the technical and regulatory readiness of the city agency to take up TOD planning and implementation. It includes three categories of measures –

- 01 Technical Capacities
- 02 Data Availability
- 03 Policy & Regulatory Environment

- Check each applicable measure listed in the spreadsheet.
- 1 point is assigned per item checked; 0 points are assigned if the item is not checked.
- Sub-scores for the three categories are derived from a group of individual metrics. A total of 30 individual metrics are used and reclassified as "Low, "Medium", "High".

The total score is converted to the following outputs:

TECHNICAL CAPACITIES									
Review of existing technical and professional staff available to manage, implement and monitor TOD planning activities									
		Score	Knowledge Product Reference						
A	Low	0–3	HIGHER INDICATES BETTER READINESS	If high, refer to EN-H01. If medium or low, refer to the following KPs for capacity building: IM-H01 . IM-P01 , refer to the following KPs for					
в	Medium	4–6		retaining external consultants: PD-P01. If low, external consultants					
с	High	7–10		should be hired to undertake TOD planning and activities. Refer to Procurement tools.					

DATA AVAILABILITY								
A comprehensive database as a resource to help document baseline conditions and analyze constraints based on the GIS/								
AutoCAD database for the last 5 years.								
		Score	Knowledge Product Reference					
А	Low	0–5	HIGHER INDICATES If high, refer Plan + Design KPs: PD-H01 to H04					
В	Medium	6–10	BETTER READINESS If medium or low, refer following KPs for retaining external consultants:					
С	High	11–15	PD-P01.					

POLICY & REGULATORY FRAMEWORK								
To evaluate the TOD readiness of the city with respect to the institutional support, plans, policies, and development market.								
Score Knowledge Product Reference		Knowledge Product Reference						
А	Low	0-3	HIGHER INDICATES BETTER READINESS	If high, refer Plan + Design KPs: EN-C01 to C02; EN-P01; PD-H05.				
В	Medium	4-6		If medium or low, refer following KPs for retaining external consultants:				
С	High	7–10		PD-H01 to H02				



DETAILED ASSESSMENT TOOL

The Detailed Readiness Assessment tool is applicable at the **corridor and station scales**. It is a relative measure of a station compared to other stations as well as evaluation of the station itself. It includes three categories of measures –

- 01 Node Value
- 02 Place Value

03 Market Potential Value

These categories rely on the "3V Framework", developed by World Bank (Salat and Ollivier 2017). The three values are defined as:

A. NODE VALUE

Node value describes the importance of a station in the public transit network based on its passenger traffic volume, intermodality, and centrality within the network.

B. PLACE VALUE

Place or placemaking value describes the urban quality of a place and its attractiveness in terms of amenities including schools, plazas/open spaces representing the urban fabric around the station.

C. MARKET POTENTIAL VALUE

Market potential value refers to the unrealized market value of station areas. It is derived through market analysis measured analyzing major drivers of demand including current and future human densities (residential plus employment). Understanding where, when and how potential economic value can be created requires tools that help differentiate the opportunities offered by the diverse stations in a mass transit network. The Detailed Readiness Assessment tool assessment is designed to highlight the interdependencies of economics, land use, urban design and mass transit networks and stations. The results of this tool may be used to direct the city for drafting a TOD vision and subsequently prepare detailed plans that enhance the value and economic potential of a station area.

- Input data into each of the metrics listed in the Detailed Assessment spreadsheet.
- Each metric is evaluated and simplified into a 1 to 5 score, where 5 indicates high readiness, 3 indicates medium readiness and 1 indicates low readiness
- The total score reveals several key strengths and opportunities. Based on the identified strengths, weaknesses, and opportunities, the city can develop targeted strategies to increase the area's readiness for TOD.

References:

MOUD (Ministry of Urban Development, India). 2016. Transit Oriented Development Guidance Document. Consultant Report, IBI Group, New Delhi: Global Environment Facility, UNDP and World Bank.

Salat, Serge, and Gerald Ollivier. 2017. Transforming Urban Space through Transit Oriented Development - The 3V Approach. Washington DC: World Bank Group.

World Resource Institute and World Bank Group. 2015. Corridor Level Transit-Oriented Development Course. Washington, DC.

Capital Metropolitan Transportation Authority. TOD Priority Tool – A Resource for Identifying TOD Opportunities to Support High-Capacity Transit. Austin, Texas



WHAT IS THE 3 VALUE FRAMEWORK?

The 3V Framework is a methodology for identifying economic opportunities in areas around mass transit stations and optimizing them through the interplay between the node, place, and market potential values. It provides a typology to cluster stations based on the three values. It equips policy and decision makers with quantified indicators to better understand the interplay between the economic vision for the city, its land use, its mass transit network, and its stations' urban qualities and market vibrancy. It outlines planning and implementation measures for the different clusters of stations that can help prioritize limited public resources and create value through coordinated interagency measures.

B. PLACEMAKING VALUE

Placemaking value describes the urban quality of a place and its attractiveness in terms of amenities, schools, and healthcare; the type of urban development; local accessibility to daily needs by walking and cycling; the quality of the urban fabric around the station, in particular its pedestrian accessibility, the small sizing of urban blocks, and the fine mesh of connected streets that create vibrant neighborhoods; and the mixed pattern of land use.

Value is calculated through the following indicators:

- Density of street intersections
- Local pedestrian accessibility
- Diversity of uses
- Density of social infrastructure within 800
 meters of the station



Hansit Service

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800m / 10





