



# INDONESIA NMT DESIGN GUIDELINE

In 2019, 57 percent of Indonesia’s population of 157 million lived in urban areas. Indonesia’s growing cities are experiencing rapid motorisation: the number of cars increased six times while the number of motorcycles grew tenfold from 1995 to 2014. Rising motor vehicle use has led to pedestrian safety challenges and harmful levels of pollution. To tackle these challenges and encourage the use of sustainable modes, the country has adopted new standards for the design of walking and cycling facilities.

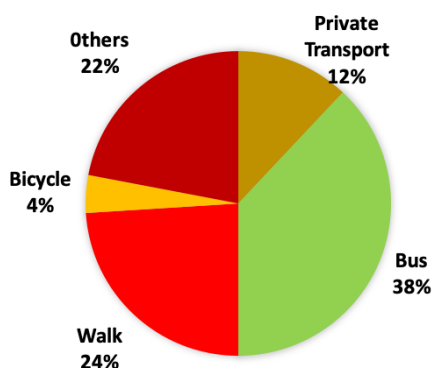
## CURRENT CONDITIONS

Jakarta is the most populous urban centre in Indonesia. Home to approximately 3.9 million people in 1970, Jakarta’s population is projected to grow to 30 million by 2022, making it one of the most populous cities in the world. A dramatic rise in urban migration over the past twenty years is the primary cause of Jakarta’s rapid growth.

While Indonesian cities some footpaths and cycle facilities, sidewalks are discontinuous and pedestrians often are forced to share the carriageway with high-speed vehicles. In an online survey of residents of secondary cities, 22 percent of the respondents reported feeling very unsafe while walking and 41 percent felt somewhat unsafe. Only 20 percent feel safe while cycling. Inadequate provision of walking and cycling infrastructure is a major cause of traffic crashes. Lack of at-



A street in Bogor



Jakarta mode split

grade crossing facilities for pedestrians makes crossing the street risky and unsafe. Cities in Indonesia use ceramics as construction materials for footpaths, making sidewalks unsafe and slippery in the rain.

The provision for disability-friendly facilities for wheelchair users or blind people has not been prioritised. Sidewalks are too narrow and do not support the use of wheelchairs. There is also a lack of regulation and awareness in the communities on the use of NMT facilities. It is important to ensure that regulations are enforced to avoid encroachments on footpaths and cycle tracks.

## OPPORTUNITIES AND CHALLENGES



Use of slippery ceramic tiles on footpaths



Lack of safe at-grade crossings



Lack of last-mile access to public transport



Vehicle parking on footpaths



Well-constructed cycle track



Growing cycling culture

## STRATEGY DEVELOPMENT PROCESS

City and regional governments increasingly see NMT as a solution to concerns such as pollution, traffic congestion, and the high numbers of injuries and deaths due to traffic crashes. However, after several discussions with government officials, it was revealed that city governments face issues in the planning, design, and implementation of NMT infrastructure. Challenges include determining the priority locations for NMT improvements, establishing a comprehensive NMT network, and adapting street designs to the local context.

In accordance with the needs of city governments in improving and developing NMT facilities, ITDP Indonesia in collaboration with UN Environment partnered with the national government to publish the National Non-Motorised Transportation Vision and Guideline as a practical guide for the planning and design of infrastructure for NMT in urban areas.

Several discussions with national and city-level stakeholders were conducted in order to inform a comprehensive and contextual National NMT Vision and Guideline document. Participants included public institutions and representatives from local communities. Some of the engagements were done on a one-on-one basis while others were city-level capacity building workshops hosted by the Indonesian Ministry of Public Works and Housing. Site visits to Yogyakarta, Semarang, Medan, Makassar, and Bandung were also conducted to obtain first-hand insights on the NMT environment in Indonesian cities and the critical challenges that NMT users face.

One-on-one meetings were conducted with government agencies such as the City Planning Agency, the Transport Agency, the Public Works Agency, and members from the House of Representatives of Semarang and Yogyakarta. Intensive

discussions with local communities and advocacy groups representing pedestrians, cyclists, the disabled, students, and street vendors were also conducted to gain different perspectives on the importance of NMT to the daily lives of urban residents. Other participants included architecture lecturers from State University of Semarang, Save the Children Indonesia, and Ikatan Motor Indonesia (the Indonesian Automobile Association).

In collaboration with the Ministry of Public Works and Housing, ITDP helped facilitate a series of focus group discussions in Bandung, Medan, and Makassar. ITDP advocated for the agency to incorporate non-motorised transport facilities in local road development plans and disseminated ideas and approaches that could be used by local governments to plan, design, and prioritise NMT facility projects.



A workshop on NMT in Bandung



The Guideline recommends raised pedestrian crossings



Footpath in Jakarta, Indonesia

## NMT DESIGN ELEMENTS

The Guideline outlines the following categories of street elements to enhance the walking environment:

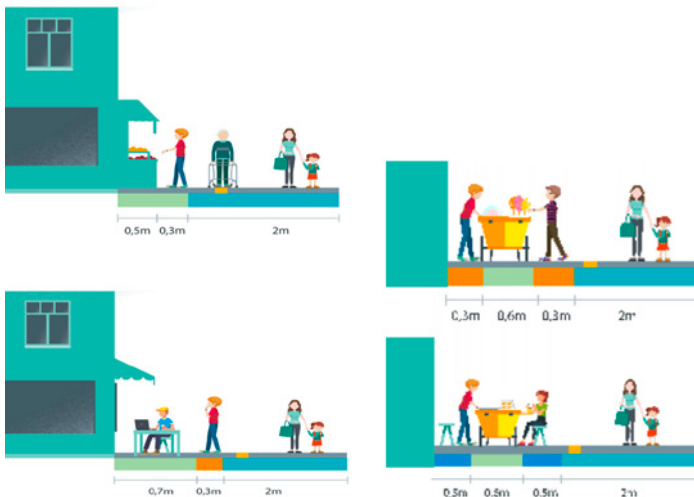
**A complete network:** Establishing a complete NMT network means building a network of pedestrian and cycle facilities that provide connections across an urban area. Pedestrian access should be introduced and/or repaired to connect urban neighbourhoods and encourage walking as a preferred mode of mobility. A key objective of the network is to link various land uses and activities to public transport. Supporting the creation of complete pedestrian facilities means connecting pedestrian facilities to the public transport system and improving the crossings to public transport stops. Areas that need to be prioritised to support this function are streets within 500–1,000 m of bus stops and mass rapid transit stations (e.g., Transjakarta, KRL Commuter Line, MRT, and LRT).

**Safety:** In order to maintain safety and security in pedestrian spaces, there is need for infrastructure development and regulation in order to reduce speeds, ensure there is adequate

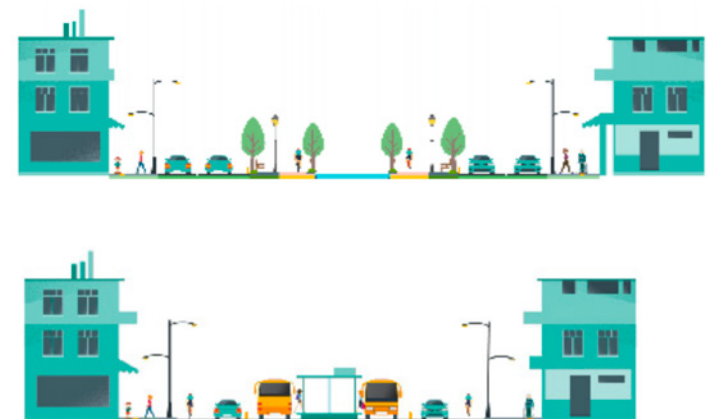
lighting, introduce adequate at-grade crossing, and establish traffic signals. Installation of bollards can improve pedestrian safety and security. By installing bollards, there is reduction in the risk of pedestrian injuries on sidewalks and a lower risk of parking encroachments that force pedestrians into the carriageway.

**Humanistic:** NMT should be accessible to all pedestrians of all ages and genders. This includes men, women, people with disabilities, children, and parents. The provision of humanistic pedestrian space also means the availability of sufficiently wide space to accommodate a variety of users on the sidewalk.

**Comfort:** Ensuring comfort means making pedestrian passages pleasant and inviting. In realizing a sense of comfort, walking space should involve the five human senses. Comfortable walking space can be a supporting factor that encourages more people to walk. Comfort contributes to the creation of a more pleasant walking experience and encourages pedestrians to walk longer and further. Elements that support the creation of comfortable sidewalks are shade, shelters, landscaping, and visually active frontages.



The Guideline illustrates how commercial activity and street vending can coexist with pedestrian space.



Sample cross section from the Guideline incorporating dedicated space for walking, cycling, and public transport



A walking path in Jakarta, Indonesia



Bikeshare Gowes in Jakarta, Indonesia

## GUIDELINE IMPLEMENTATION

The Guideline calls for prioritising pedestrian improvements in rapid transit station areas in order to improve first-and last-mile access. By improving the walking and cycling environment, the city can encourage the use of non-motorised modes and reduce reliance on motorised two-wheeler taxis and cars. The Guideline outlines the following methodology for the identification of priority NMT corridors in station areas:

- Choose a station location and map the 500 m buffer around the station. Priority stations can be identified based on daily boardings on public transport.
- Choose the priority corridors within the station area.
- Prepare designs for NMT improvements on the selected streets.

To support the infrastructure interventions, Jakarta has taken up communications initiatives, including a car-free day where cyclists, pedestrians, roller blade users, and runners get to enjoy a calm environment for five hours every Sunday. The car-free days open up the city's largest avenue for all to use.

The city also has launched a bikeshare system to jump-start

the use of cycles for last-mile connectivity and short trips. The bikeshare system, named Gowes, which means “to paddle” in Indonesian, was launched in Jakarta under a partnership with the Provincial Government. Currently in a trial stage, the bikeshare service debuted with the installation of bicycles at seven points at the Monumen Nasional (Monas) Park in Central Jakarta. The trial is expected to last three months and will be followed by the installation of stations in the area surrounding Monas and City Hall. In the next phase of the trial, the Gowes stations will be integrated with TransJakarta BRT stations in the area. The bikeshare company is also in talks with building owners in the area to provide bikeshare stations in building parking areas.

## MORE INFORMATION

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Jakarta car-free day

## How to develop a non-motorised transport strategy or policy

Visit [nmttoolkit.itdp.org](http://nmttoolkit.itdp.org)

