

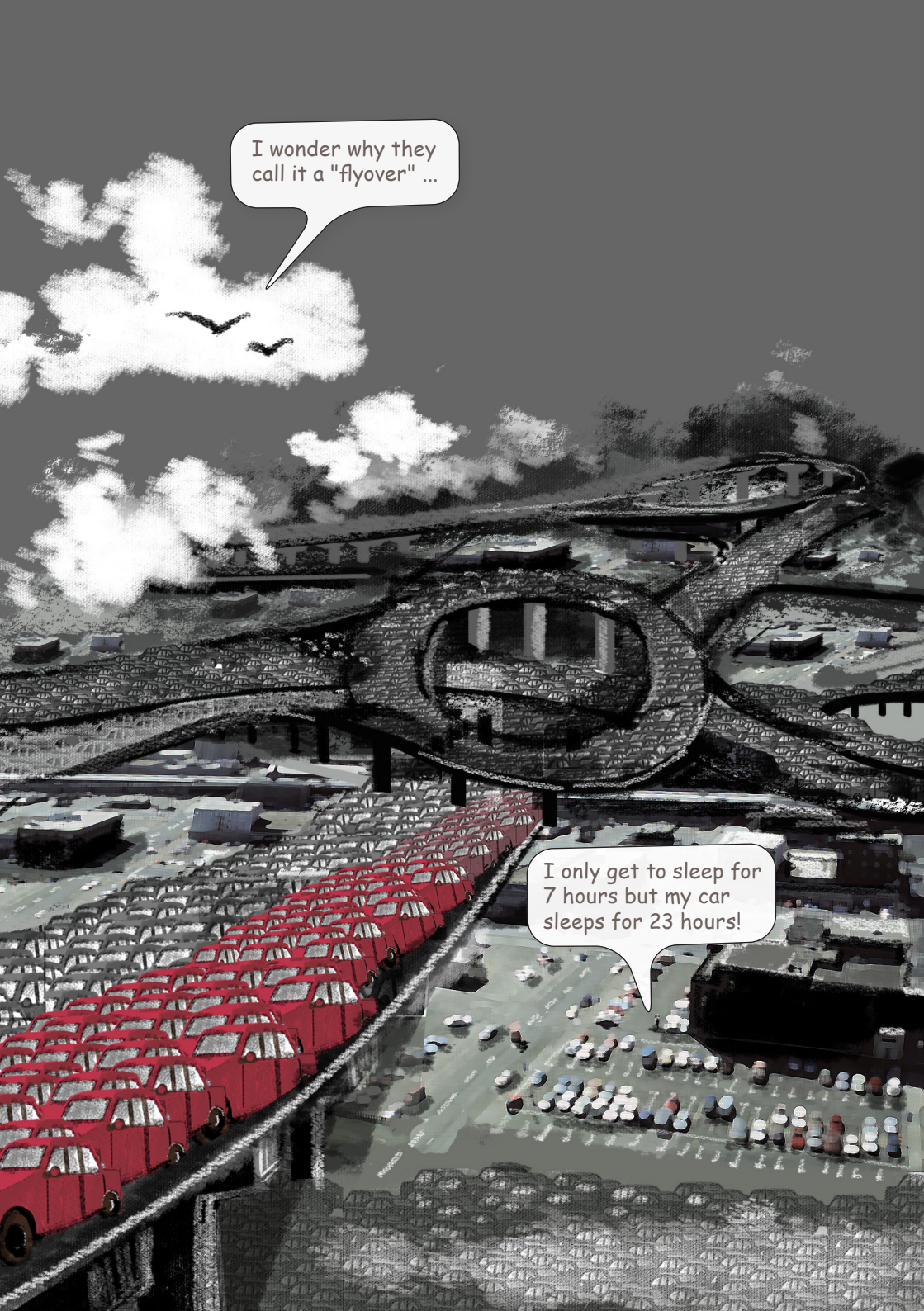


# Parking basics



Paving the way for better cities!





I wonder why they  
call it a "flyover" ...

I only get to sleep for  
7 hours but my car  
sleeps for 23 hours!

Personal cars and two wheelers occupy most of our street space, yet they serve less than a third of all trips. They also sit idle for 95 per cent of the time—consuming precious street space that could be put to more efficient and equitable use.

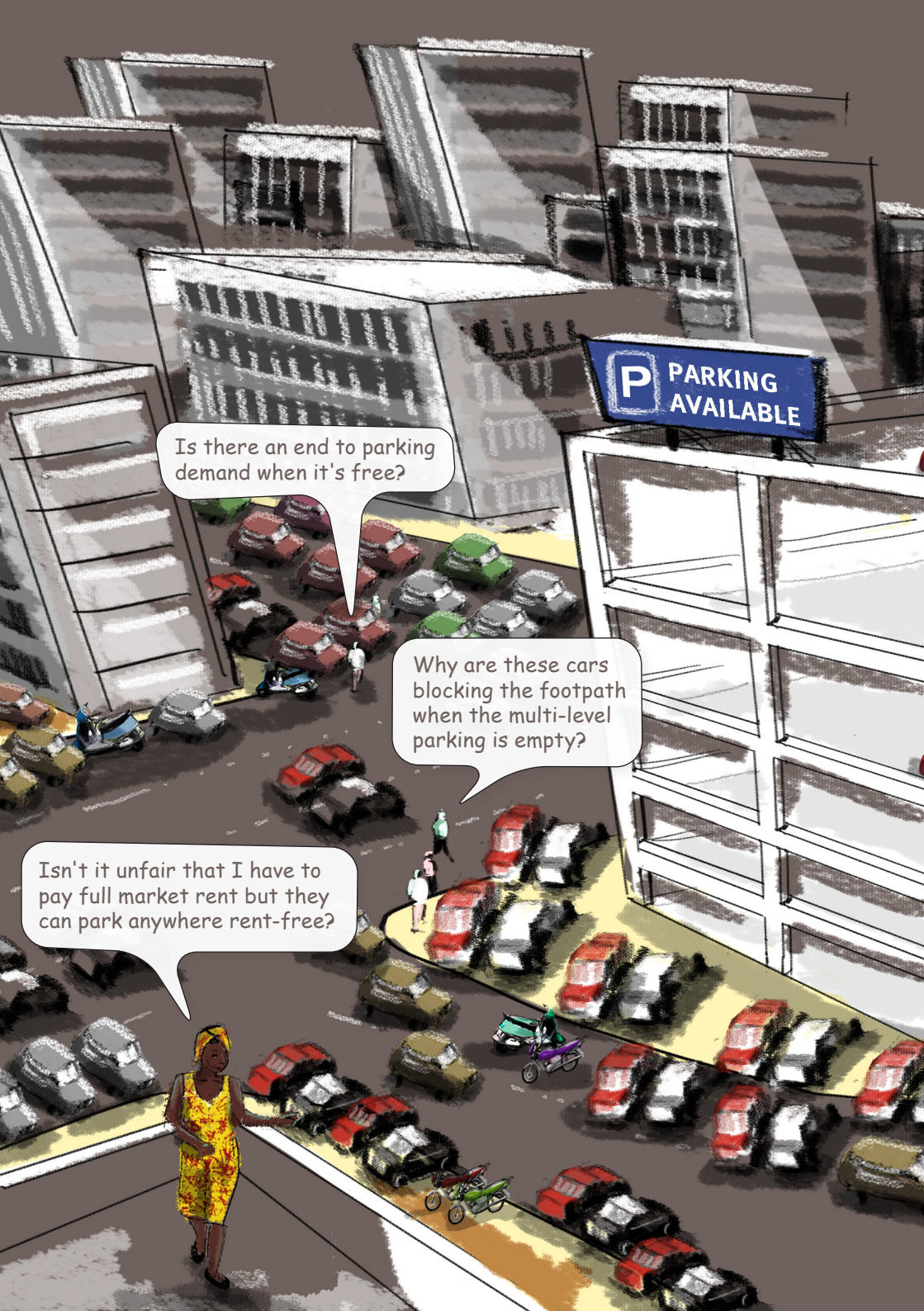
Many public agencies push for more parking in buildings, confident that this will fix the problem. Paradoxically, more parking invites more car use, contributing to traffic jams, toxic air, and miserable urban life. While large sums of public funds are spent creating multi-level parking and flyovers, facilities for walking, cycling, and public transport continue to languish.

*Something's clearly amiss!*



Here we unravel the parking myths that hamper progress in our cities and present solutions for managing on-street parking and regulating off-street parking.





Is there an end to parking demand when it's free?

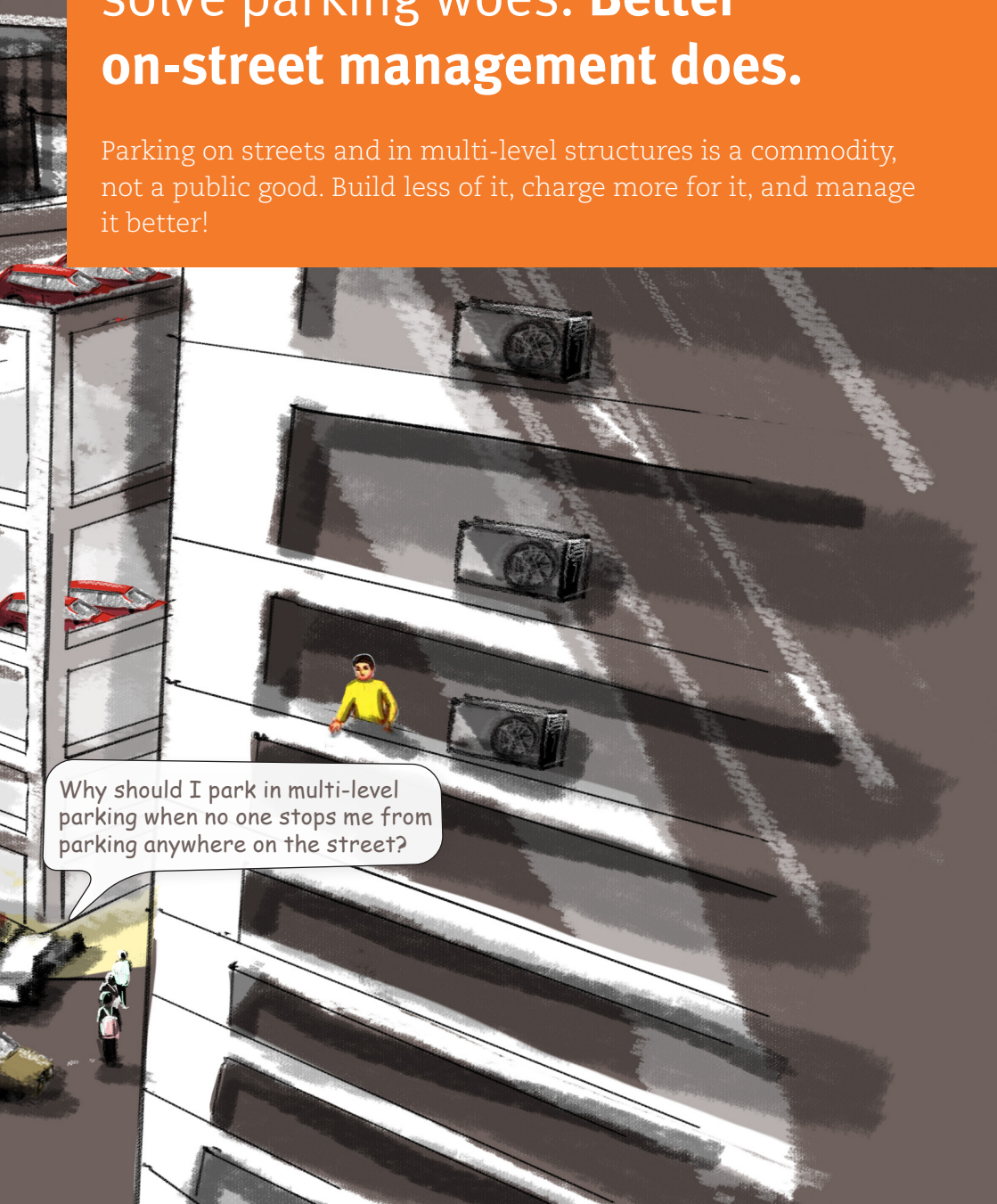
Why are these cars blocking the footpath when the multi-level parking is empty?

Isn't it unfair that I have to pay full market rent but they can park anywhere rent-free?



# Multi-level car parking doesn't solve parking woes. **Better on-street management does.**

Parking on streets and in multi-level structures is a commodity, not a public good. Build less of it, charge more for it, and manage it better!



Why should I park in multi-level parking when no one stops me from parking anywhere on the street?

## 1

# Implement a smart parking system

Create a parking management unit that brings together urban local bodies, traffic police, and other stakeholders. Staff the parking management unit with competent professionals who are capable of monitoring system operations. Engage service providers to set up and operate the system in return for a performance-based service fee.

### ► Demarcate parking zones

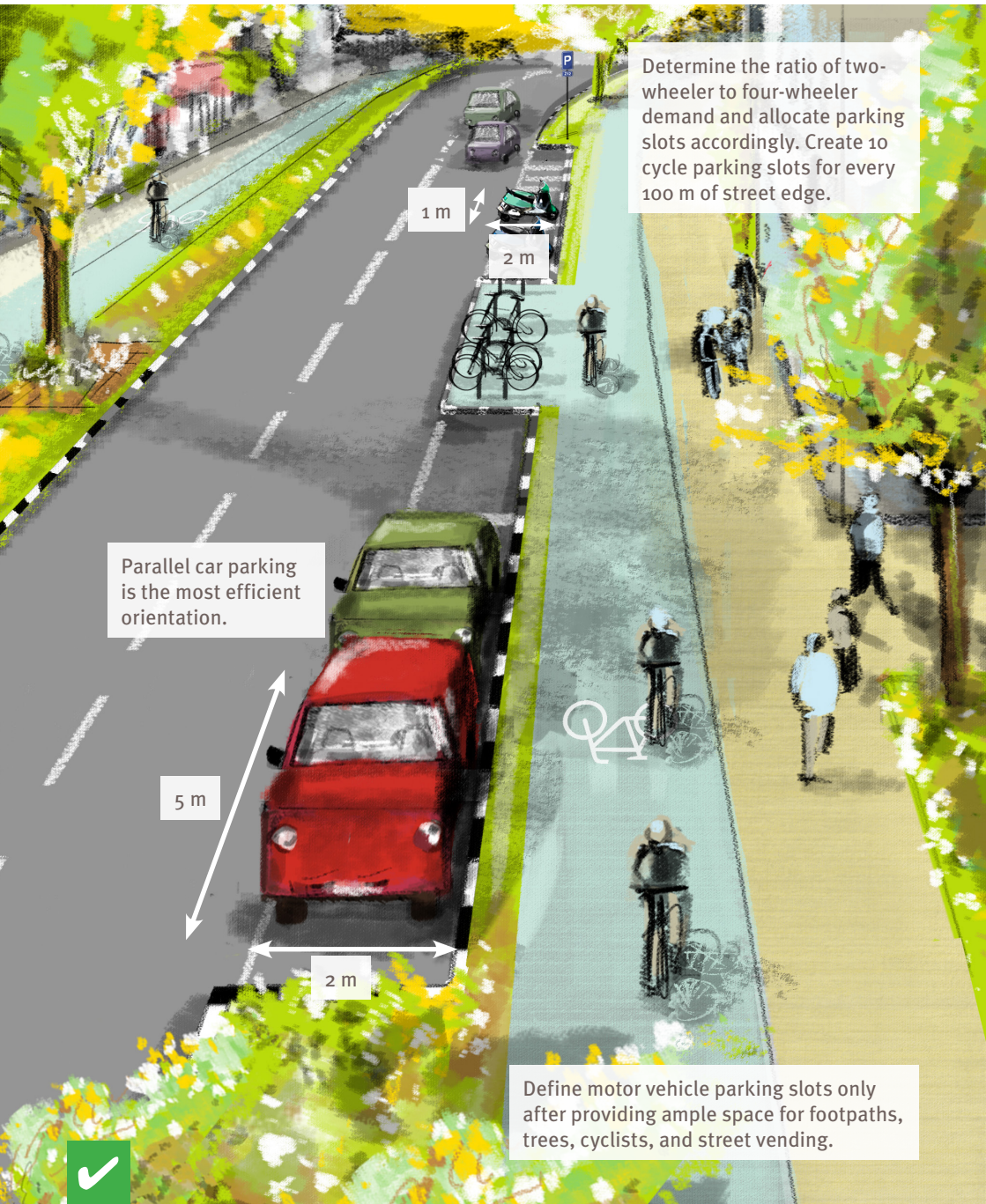
Create parking management zones at the city level based on existing administrative areas or the level of public transport access (e.g., good, average, poor). Each zone may have its own parking rates, rules, and transport improvement plan.

### ► Mark parking slots

Within each zone, define parking and no-parking areas on streets through physical design, signage, and road markings. Parking rules should be transparent to all users.







Determine the ratio of two-wheeler to four-wheeler demand and allocate parking slots accordingly. Create 10 cycle parking slots for every 100 m of street edge.

Parallel car parking is the most efficient orientation.

5 m

2 m

1 m

2 m

Define motor vehicle parking slots only after providing ample space for footpaths, trees, cyclists, and street vending.



Sign up for a parking account with mobile number and vehicle registration details.



## ► Install customer-oriented parking systems

Use a modern parking management system with an information technology (IT) backbone. Enable quick and hassle-free payment of parking fees through a mobile phone-based payment system.

Recharge using a credit card, net banking, or parking coupons bought from stores.



Use this account to manage all parking payments.



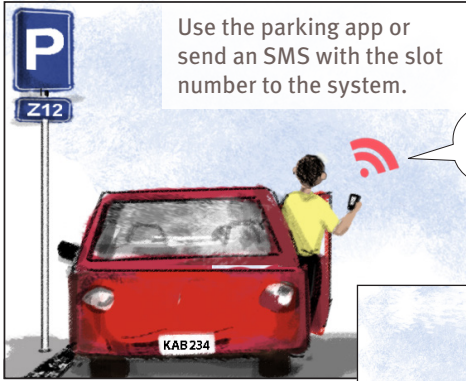
## ► Disseminate information about parking policies

Inform citizens of the benefits of parking management, new parking regulations, and system features. Provide real-time information to customers through various media, including the internet, smart phone apps, and on-street signage.

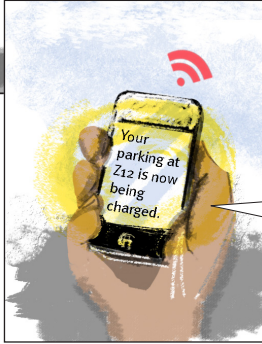
Before a trip, find streets or lots with vacant slots and applicable rates.







"Start parking at Z12"



"Stop parking"

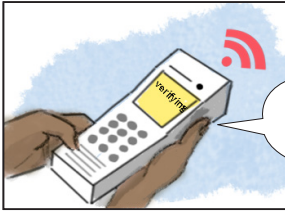


Employ enforcement officers to scan licence plate numbers using handheld devices.



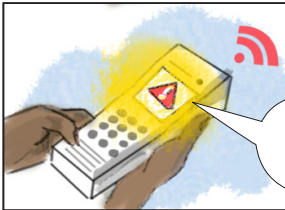
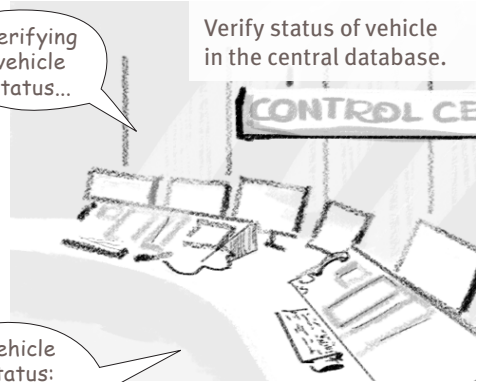
## ► Enforce parking rules

Enforce parking rules in both parking and no parking areas through random spot checks by enforcement officers. Monitor no-parking zones to ensure that no unauthorised parking occurs.



Verifying vehicle status...

Verify status of vehicle in the central database.



Vehicle status: UNPAID

If vehicle user has not paid the parking fee, clamp or tow the vehicle.



Make payment online or by SMS to get your vehicle released.





# 2

## Use parking revenue to build people friendly streets

Use surplus parking revenue to fund zonal improvements that shift people away from cars and towards walking, cycling, and public transport. For example, revenue generated by 1 km of paid parking is sufficient to pay for footpaths along the same stretch and 10 buses to serve the area.



# 3

## Price parking to manage demand

The price of parking influences user choice. When demand is high, increase the price so that people who have the highest willingness to pay are able to find vacant slots.

### ► Charge on high-occupancy streets

Start charging for parking on streets with peak-period occupancy greater than 60 per cent. Increase the price when demand is high—i.e., when occupancy is more than 90 per cent.

### ► Set price based on:

#### Location

Charge more in areas with high demand for parking. On-street parking is a premium service. Encourage people to use off-street facilities by charging more for on-street than off-street spaces.

#### Time of day

Charge more for parking during peak periods to prevent people from taking cars out and adding to congestion.

#### Vehicle size

Charge proportionately higher rates for four-wheelers as compared to two-wheelers. Parking for non-motorised vehicles including cycles and cycle rickshaws should be provided free of charge.

#### Parking duration

Charge in proportion to the amount of time parked. Don't provide any discounts for longer-term parking.





Parking costs less if I avoid the peak hours.

Everyone wants to park on the main road, so it's expensive. But I can always park a little farther away and pay less.

I use a fifth of the space so I pay a fifth of the price.

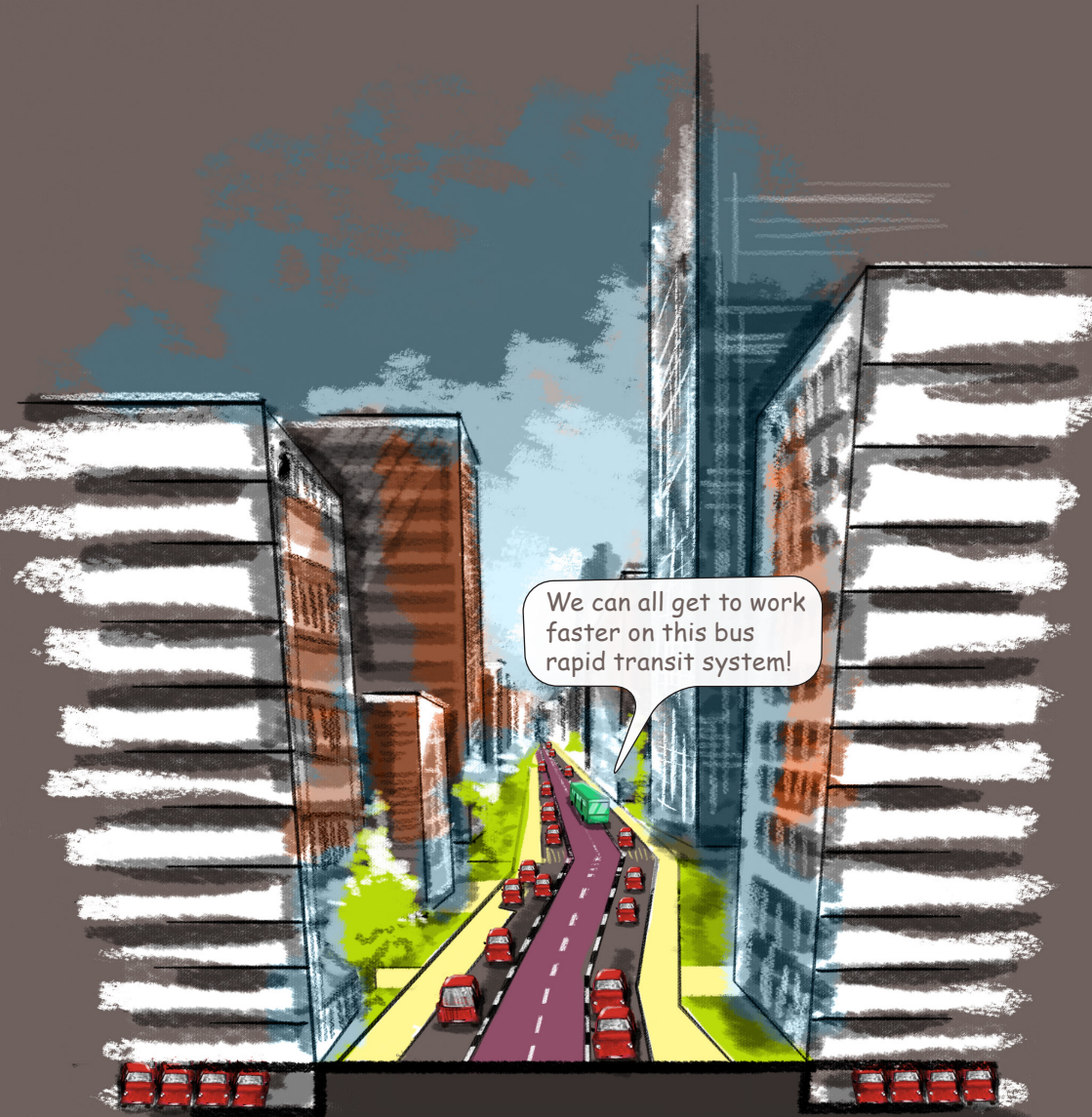
# Building density doesn't create traffic—more parking does. So build transit, add density, and cut parking!

An excessive supply of cheap parking encourages people to use personal motor vehicles—even when good public transport is available. So, in areas with good connectivity to mass rapid transit, building density is welcome but parking is not.



Excessive parking invites car use, causing congestion even with low density development.





Limited parking dissuades car use. Dense development is supported by rapid transit.

## REGULATE OFF-STREET PARKING

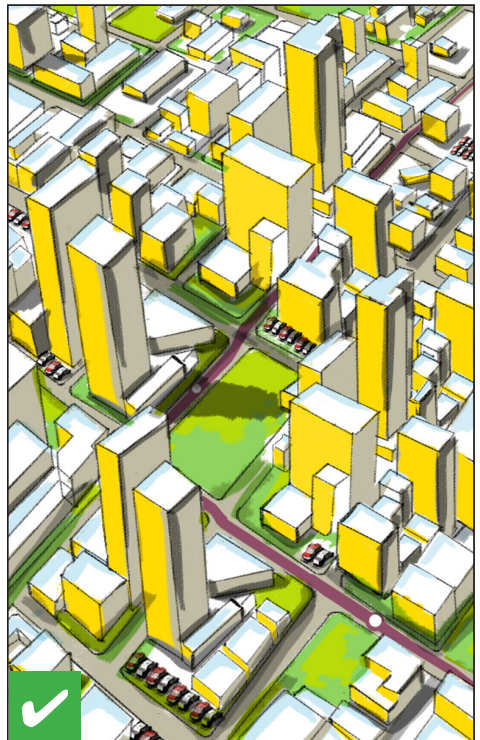
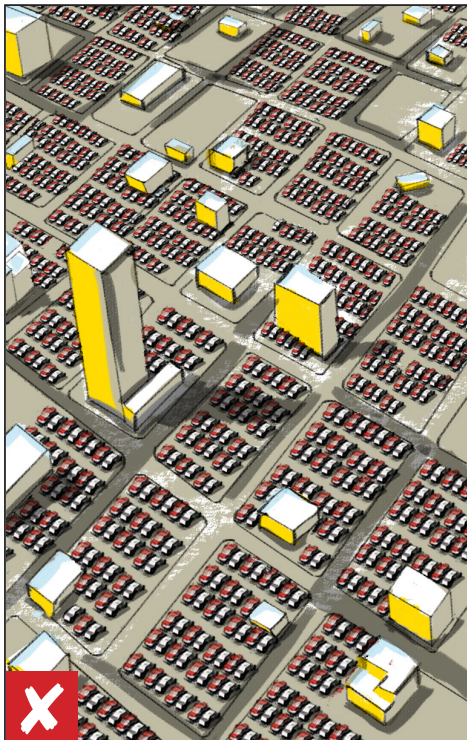
# 1

## Restrict the supply of parking

Rather than creating parking in a fixed ratio to built space, limit the supply of off-street parking and charge separately for it.

### ► Remove parking minimums

Modify building regulations to remove minimum parking requirements. Allow developers to assess parking demand before creating parking.





## ► Charge for off-street parking

Count parking created as part of FAR. Tax parking spaces at a rate equal or higher than property tax rates for built-up space.

## ► Rent parking spaces separately from built space

When users pay separately for parking, they demand significantly less of it. Do not automatically include the price of parking spaces in the cost of residential, commercial, or other built spaces.

## ► Cap parking but allow density

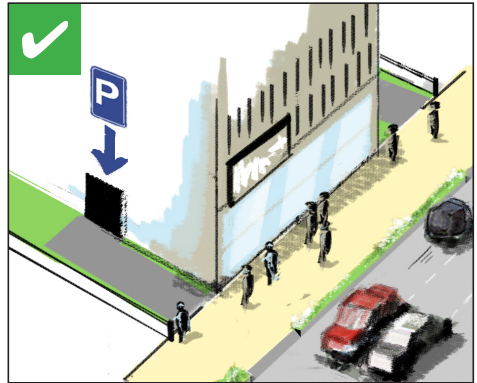
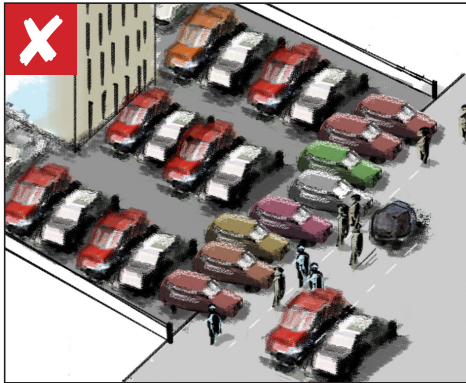
Restrict parking space to 35% of plot area. Allow higher built density in areas with good rapid transit access.



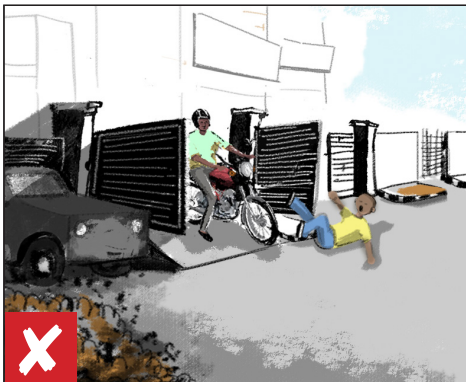
# 2 Adopt building design guidelines

Minimize pedestrian-vehicle conflicts by adopting design guidelines that support street life.

## ▶ Eliminate parking setbacks



## ▶ Limit property entrances to create continuous walking space





# 3 Improve access to transit

Don't build park-and-ride facilities in urban centres. Instead, improve transit access by creating a dense network of walking, cycling, and feeder service routes.




Create convenient bays for auto/taxi drop-off.

Locate feeder stops close to rapid transit stations.

Provide cycle parking near rapid transit stations.

Create a dense network of streets and paths, with blocks smaller than a hectare.





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for people!

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