

Revert or readjust?

Designing mobility for liveable and social cities

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JAKARTA

About this series

A lot of money has been spent on transport infrastructure and services worldwide in recent decades. The aim was to enable people to participate in social and economic life and to ensure the functioning of businesses. This has certainly contributed to the economic development visible in many regions. However, since many things necessary for daily life and economic activity were centralised, dependence on the mobility system increased at the same time. The resulting longer journeys place a temporal and economic burden on people, and the increase in passenger and freight transport is a burden on societies through more noise, exhaust fumes, CO₂ emissions, accidents, and more.

In view of its importance and the negative social, ecological and economic consequences, mobility must change, and much more quickly and comprehensively than before. Cities in particular can set good examples in this respect.

Friedrich-Ebert-Stiftung (FES) examined four cities in Asia to see the current state of each city, how they plan to shape mobility in the coming years, how this plan is to be assessed and what leads can be derived from this particular strategy for other cities. The central question is how can a mobility system be designed in such a way that all people can participate in social and economic life, economic development is supported and negative effects for the society and the climate can be eliminated?

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JAKARTA

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Designing mobility for liveable
and social cities

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List of Abbreviations

BRT	bus rapid transit	KCI	Kereta Commuter Indonesia (Indonesia Commuter Train Corporation)
BUMD	badan usaha milik daerah (provincial government-owned company)	KPPIP	Komite Percepatan Penyedia Infrastruktur Prioritas (Committee for Acceleration of Priority Infrastructure)
BUMN	badan usaha milik negara (state-owned company)	LRT	light rail transit
DKI	Daerah Khusus Ibukota (special capital region)	JICA	Japan International Cooperation Agency
GDP	gross domestic product	MRT	mass rapid transit
Jabodebek	Jakarta and its agglomerating cities: Bogor, Depok and Bekasi	UMR	upah minimum regional (regional minimum wage)

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Executive Summary

Jakarta is the capital of Indonesia and the second-most built-up urban area in the world. As one the world's most congested urban centres, Jakarta has many motorized dependencies. But cars and motorcycles drive the most significant mode share within its urban sprawl. Jakarta also bears signs of decongesting hope: According to TomTom Traffic Index, Jakarta had the biggest improvement among 403 cities from 56 countries surveyed in 2018. The "integration mantra" that the governor of Jakarta has

been pushing in the public transport system has led to an increase in users. The number of Transjakarta bus and commuter line train passengers has steadily increased over the past five years. Despite confusing planning systems and rigid methods for public participation, civil society groups in Jakarta are heavily involved in advocating for a better, more sustainable and more equitable city.

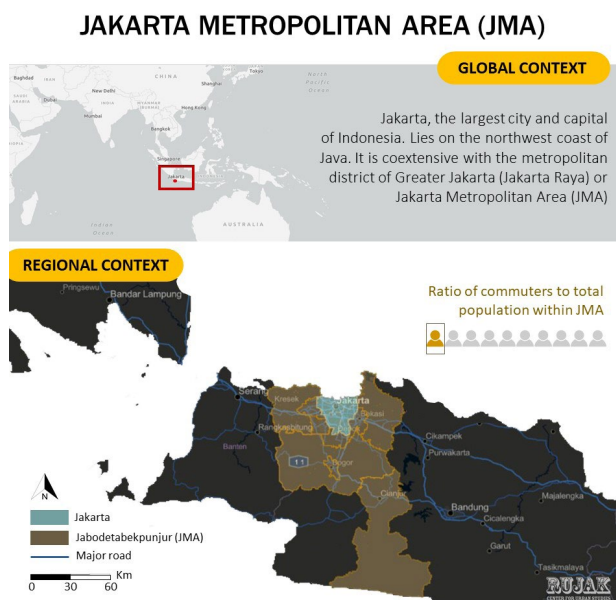
Introduction to Jakarta

Jakarta is the capital of Indonesia and a city-province with a 2020 population of 10.56 million persons. Jakarta has a total land area of nearly 662 square kilometres, including 6,977 square kilometres of inland seas. Located at the mouth of 13 rivers, Jakarta, as a delta city, struggles with frequent flooding and land subsidence threats in 40 per cent of its sprawl. Ninety per cent of Jakarta's land area is built up, with 60 per cent containing low-density buildings (Wahyu, 2021).

Jakarta is Indonesia's economic and financial centre. Annual economic growth averages 6 per cent per year (BPS, 2019), with a regional gross domestic product (GDP) of \$126 billion, or 11 per cent of the country's GDP (BPS, 2021). The top-four significant contributors to Jakarta's GDP are trades and automobile repair, manufacturing, financial and insurance activities and construction activities. Jakarta's 2021 provincial budget is \$5.97 billion (Haryanti, 2020), making it the largest provincial budget in Indonesia.

Figure 1: Jakarta and Jakarta Metropolitan Area, 2020

Source: DKI Jakarta provincial government, 2021.



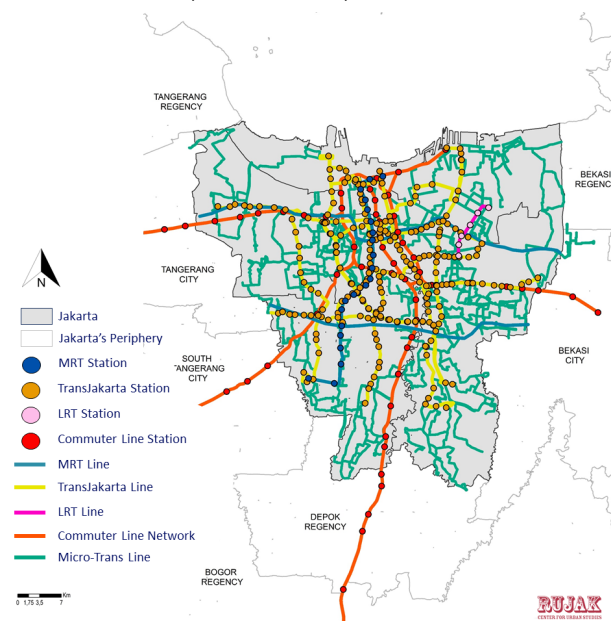
Jakarta is surrounded by eight cities and regencies and forms an agglomeration called Jabodetabekpunjur, or Jakarta Metropolitan Area. The metropolitan area's total 2020 population was 33.7 million people occupying approximately 6,343 square kilometres. During the days,

at least 1.5 million commuters work in Jakarta (BPS, 2019) (figure 1). Jakarta functions as a regional logistic hub via the main port of Tanjung Priok. Prior to the COVID-19 pandemic, the regional metropolitan train system and the Commuter Line served 1,057 trips and 90 loops daily (KCI, 2019).

Once ranking among the top-four congested cities globally (TomTom, 2017), Jakarta is known as having the most extended bus rapid transit (BRT) service in the world, at 251 kilometres. It is the only city in Indonesia with public transportation systems covering 80 per cent of its settlement areas (figure 2). In 2019, a 10.5-kilometre mass rapid transit (MRT) Jakarta and a 5.8-kilometre light rail transit (LRT) began operating. A 43.3-kilometre Greater Jakarta, or Jabodebek, LRT is expected to be operational by mid-2022 (Subekti, 2021).

Figure 2: Mass transportation network in Jakarta

Source: DKI Jakarta public works department, 2020.



Jakarta is a perfect example of endless contestation between motorized and non-motorized transit. Figure 3 depicts its road and pedestrian areas, ridership and the number of cars and public transit.

Looking back

– **20% road ratio** – This figure often appears in various planning documents from the Ministry of Public Works. It references the belief that a 20 per cent road ratio is adequate for developed countries (MPW, 2020). If Jakarta has a land area of nearly 662 square kilometres, it is expected to have 133 square kilometres of road. Currently, the road area of Jakarta is about 7 per cent of the land area. The Ministry of Public Works has concluded that the lack of road area in Jakarta is the cause of its infamous congestion, despite the induced demand fallacy. The Ministry of Public Works has never – and cannot explain – the origin of the 20 per cent road ratio.

The predict-and-provide planning approach exacerbates the affinity for this road ratio. Whenever there is an increase in population or housing and other facilities, both the central and city government respond by increasing road capacity

Figure 3: Current state of Jakarta's transportation and mobility

Source: DKI Jakarta provincial government, 2021.



and parking spaces. Even the provincial government once targeted construction of 1 million square metres of new road within five years (DKI Jakarta, 2014).

The urban planning model in Indonesia has influenced Jakarta's mobility and spatial planning policies. From Indonesia's independence in 1945 until 1998, the planning model was centralistic. Under 32 years of the President Suharto regime, the government focused on increasing economic growth through industrialization. In 1980, the central government formed a team to plan for the Jakarta Metropolitan Area to promote national economic growth. The team continues to manage regional land development and infrastructure planning, including transportation. One critical decision early on was using toll roads to create and finance road networks while increasing suburban connectivity to the core city and triggering additional suburban development. This toll road network was built and funded by a private company and coordinated by a state-owned company (Firman and Fahmi, 2017). Even now, some developers also have a toll road subsidiary within their company. This duet of suburbanization and massive construction of the toll road network has left a cacophony congestion and air pollution.

The regional toll road network multiplied from around 97 kilometres in 1984 to 405 kilometres in 2019. In comparison, the length of the regional train rail, which has been operating since 1930, is only 418 kilometres (Pradana, 2019). At the same time, there has been a massive decline in the quantity and quality of public transportation. The 1997 Asian financial crisis led to the deterioration of Jakarta's road-based public transport, such as buses. The crisis produced an austerity policy for which public transport entrepreneurs and drivers found maintaining their fleet and buying new spare parts challenging. After 1998, the condition of road-based public transportation and the number of users continued to decline, at least until 2018. In the early 1970s, around 70 per cent of Jakartans used public transit. That proportion slipped to 45 per cent in 2000. Even after the Transjakarta system launch in 2004, public transportation users in 2010 amounted to only 27 per cent of the city's population (RCUS, 2010).

Jakarta has embraced the gig economy, including the online transportation sector. The rise of Uber worldwide has given rise to similar businesses in Indonesia, especially Jakarta.

One of them is Gojek, founded in 2010 to take advantage of motorcycle taxis (ojeks).. The central government sees online transportation as easing its burden in providing jobs and even considers it a solution to congestion and the last mile and first mile needs.

Leaders sometimes see the problem of congestion as a good sign. For example, Vice President Jusuf Kalla has repeatedly stated that congestion is an indication of progress and prosperity of a nation. He measures the city's wealth through the ability of its citizens to buy a car or motorcycle. About 40 per cent of Jakarta's revenues are from vehicle and road taxes (Susanto, 2021).

The auto industry is also considered a key driver and sector. Some automotive companies have developed a business in the toll road sector, such as Astra Infra Group, which controls seven toll roads. Despite the pandemic conditions in early 2021, Astra Infra Group recorded a revenue increase of 8 per cent. The majority of revenue came from the Tangerang–Merak toll road, an essential link in the western part of the Jakarta Metropolitan Area. The toll road business is also lucrative for state-owned companies in the construction and

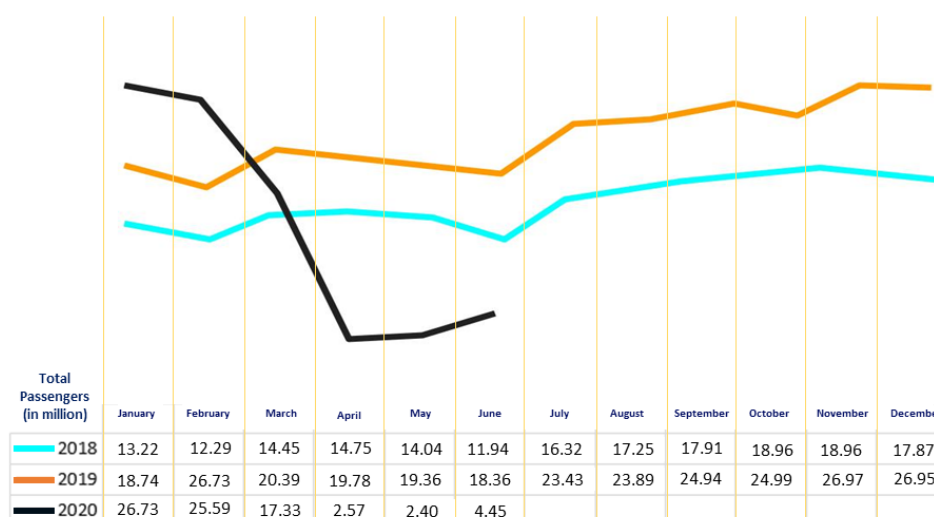
property sectors, both development and management. The toll road is a favourite project in the list of National Strategic Projects, with 19 projects located in the metropolitan area (KPPIP website, 2021).

Even though Jakarta seems trapped in a vicious circle of suburbanization and dependence on private vehicles, public transportation and non-motorcycle-based mobility, like walking and cycling, have managed to thrive since 2018. In January 2004, Jakarta launched the Transjakarta BRT system. Transjakarta became increasingly popular after the provincial government focus on integration in 2018. In March of that year, Transjakarta surpassed 500,000 passengers per day (Transjakarta, 2018). One month before the COVID-19 pandemic swept through Indonesia, Transjakarta's daily passengers topped the 1 million mark (Sutrisno, 2020) (figure 4).

The regional train, the Commuter Line, has made many improvements as of 2010. The reforms include payment systems, services, operating hours and the renovation of various stations in the Jakarta Metropolitan Area (Pranoto, 2015). Before the pandemic, the average daily Commuter

Figure 4: Monthly passenger volume on the Transjakarta BRT, January 2018 to June 2020

Source: DKI Jakarta provincial government, 2020.



Line passengers also passed the 1 million passenger milestone (Fajarta, 2019)

The COVID-19 pandemic has set back the use of mass transportation, especially due to the restrictions on transport capacity and reduced hours and operational routes. However, Transjakarta and the Commuter Line remain the transportation solution for commuters and locals.

The implementation of the work-from-home directive from April to June 2020 ushered in changes in mobility in some areas of Jakarta. Residents' mobility mainly centred

on residential areas previously (Google, 2019). Many small and medium-sized businesses, such as cafes and food stalls, have since sprung up in residential complexes. The local business has given rise to new habits: walking and increasing interest in cycling. Various train stations and public transport stops have set up provisions for bicycle parking. The bicycle trend has encouraged the government to expand the bike lane network.



Protected bike lane on a main road of Jakarta

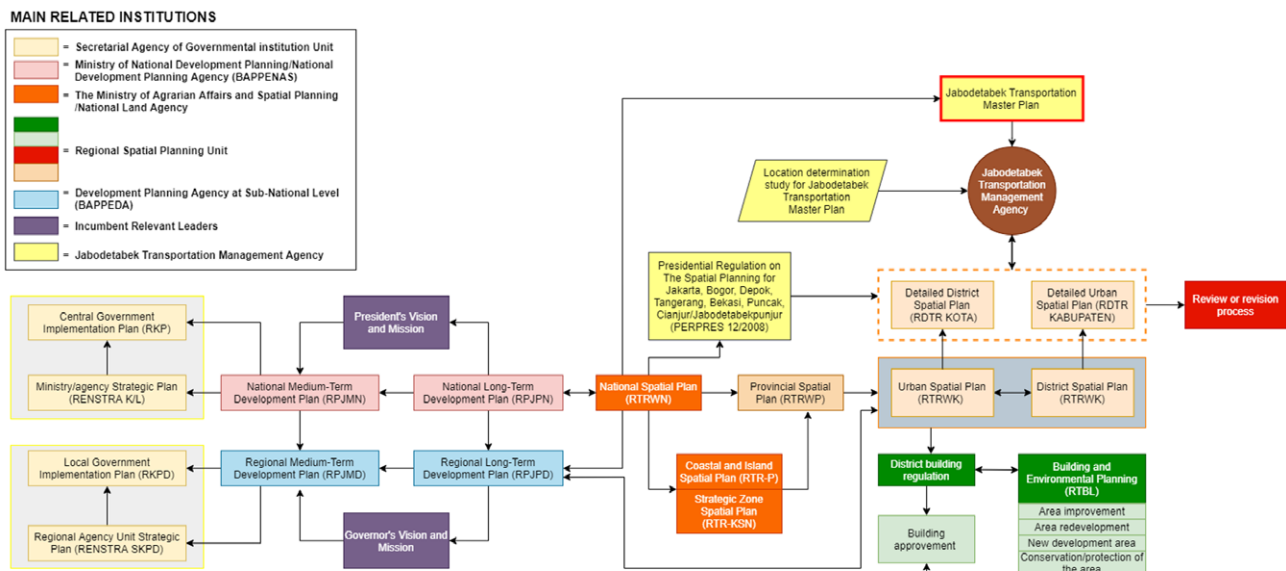
Visions for a liveable & social city

Traditionally, the Jakarta governor and the Provincial Legislative Council formulates the city's vision and ratifies the vision into a Provincial Regulation. But the reality is more complicated. At least three ministries take part in shaping Jakarta's growth, including its transportation policy. It involves complex and entangled relationships between development planning, spatial planning and transportation planning, as figure 5 illustrates.

system through an integration concept. Instead of proposing new megaprojects, Anies Baswedan pushed to merge the LRT, MRT and Transjakarta into an integrated mass transportation system called Jak Lingko. The term "lingko" refers to a pearl of local wisdom: only integrated irrigation can water a rice field. Lingko irrigation is practised in eastern Indonesia and can be interpreted as "link". Anies Baswedan won the election. And now, in Jak Lingko terms, the public transport system includes the integration of payments and

Figure 5: Ministries and agencies shaping the vision for Jakarta

Source: BAPPENAS, 2019; Ministry of Transportation, 2017.



Add to that complexity the impact of regime change: After one political term ends, new leaders typically discard previous programmes. One example is the Jakarta Monorail project. Then-Governor Sutiyoso introduced the idea in 2003. He and then-President Megawati and Governor Sutiyoso inaugurated its construction the following year, although there was no clarity regarding financing (Ruqoyah, 2011). Governor Sutiyoso's successors have had different ideas about the project (figure 6), which was cancelled eventually in 2015 but did not disappear: Its structural beginnings have been left abandoned on major roads.

Not all political and campaign promises have as difficult a journey. In the 2017 election for Jakarta governor, Anies Baswedan promised to simplify the public transportation

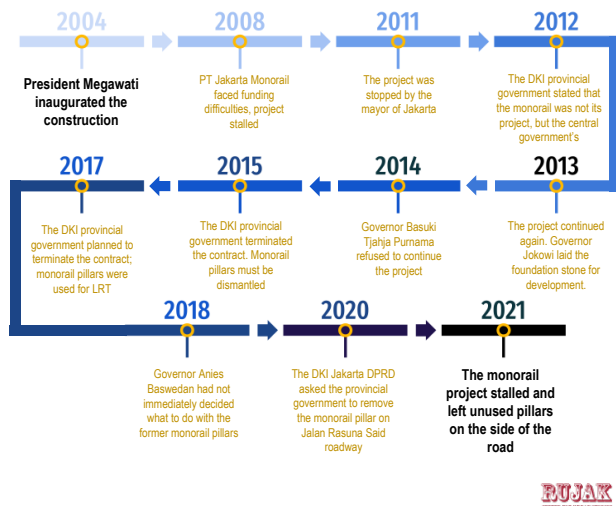
services to even the smallest residential area, or *kampung*. Through Jak Lingko, Transjakarta partners with hundreds of *angkot* (paratransit) entrepreneurs, such as Mikrolet and KWK. By the second year of Anies Baswedan's term, about 1,400 paratransit vehicles joined the Jak Lingko program, which eventually became Mikro Trans (Sari, 2019). The Mikro Trans vehicles connect dense settlements to the nearest Transjakarta bus stops and rail-based stations, such as the LRT, MRT and the train line. In 2019, there were 70 Mikro Trans routes that served nearly 50 million passengers in total.

Since 2018, #Integration has become the new buzzword of Jakarta's mobility strategy, with a promise from Governor Anies Baswedan for better coverage (Ul Haq, 2018).

Figure 6: Jakarta Monorail debacle

Source: *Tempo*, 2004; *Ruqoyah*, 2011; *Werdiningsih*, 2013; *Sihombing*, 2020; *Wijaya*, 2020; *Kosasih*, 2021.

TIMELINE OF JAKARTA'S MONORAIL DEVELOPMENT



Abandoned Jakarta monorail structures

The hashtag is used by all transport modes operated by the DKI Jakarta provincial government, both in public communications and on large posters at bus stops. Although the #Integration vision is significant, the governor is pushing for full implementation and realization of integration before his term of office ends.



Mikro Trans vehicle waiting to be deployed

Jakarta, however, does not have a mechanism for compiling a city vision that is common in major metropolises like London, New York and Paris. In 2017, Anies Baswedan aspired to create a collaborative city and City 4.0 urban plan through which the government is the collaborator and citizens are the creators. The formulation of the city's vision remains far from a collaboration. In addition to the vision formulation, the government considers the Jakarta spatial planning and transportation planning process a routine five-year activity and submits most of its work through a consultant tender process. In the end, the future of Jakarta is still decided by politicians.

And yet, there is something unique about how Jakartans are managing public intervention in city life and the process of developing visions and policies. The policymaking process often intersects with the hubbub of social media, especially Twitter. The provincial government is quite responsive to the sentiments that appear in public, especially for projects with a small or medium scale, such as the construction of sidewalks and protected bicycle lanes. Unfortunately, the excitement on social media is not channelled into everyday politics and has not transformed into activism in general.

Building a future pathway from the status quo

In mid-October 2015, five public transportation state-owned companies and one toll road developer who planned to start 16 mass transportation projects in Greater Jakarta, including six inner-city toll roads, came together in a coordination meeting. Only, they had no master plan. The developer proposed that all roads operate independently, or without a single directive, and the others agreed. As a result, many proposed routes overlapped. For example, a planned Greater Jakarta LRT route developed by PT Kereta Api Indonesia would coincide with the LRT Jakarta route developed by PT Jakarta Propetindo, a Jakarta provincial-owned enterprise. The meeting, which the Spatial Planning Agency requested, also revealed the plan for six sections of the 70 kilometres of inner-city toll road that would overlap with the existing commuter train route and a new Transjakarta route (Elyda, 2015).

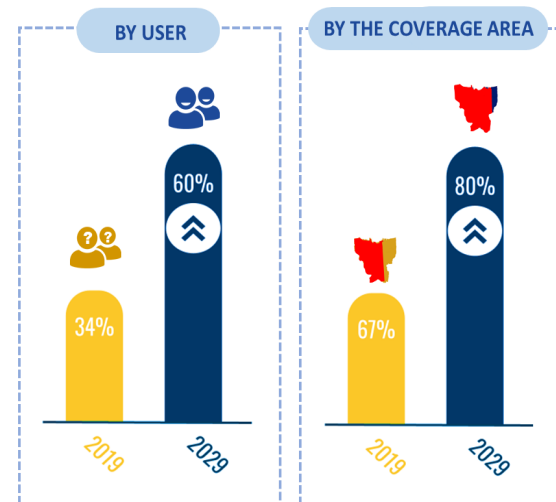
What happened that day was nothing new. On paper, Jakarta seems to have a comprehensive spatial plan product at the subdistrict, city, provincial and regional levels. But this plan has never been the real captain in the development of Jakarta. Projects such as the Jakarta–Bandung High-Speed Rail Train, the LRT Jakarta and the Greater Jakarta LRT were not included in the first few spatial plans. These projects were born separately through political decisions of the country's president or the Jakarta's governor.

Jakarta's status as the capital city has created a dualism in leadership. In some instances, the governor may cooperate with neighbouring cities and regencies through the Jabodetabek Transportation Management Agency's facilitation. For example, Transjakarta also provides certain



The new low-emission zone in Kotatua historic district, 2021

Figure 7: Current and targeted levels of public transport users and coverage



Source: 2030 Rencana Tata Ruang Wilayah DKI Jakarta (regional planning document), 2012; Jabodetabek Masterplan, 2018

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services to the neighbouring cities of South Tangerang, Depok and Bekasi. And certain operations are under the national Ministry of Public Works, such as toll roads. Significant events typically become the impetus for mega central government transportation projects. For example, the 2018 Asian Games was the impetus for constructing the LRT Jakarta project (Savitri, 2015).

The provincial and central governments' plans could have different targets, but both also underperform, especially in mode share and public transportation coverage (figure 7).

Foreign institutions also have shaped Jakarta's transportation policies, such as the Japan International Cooperation Agency (JICA), the Asian Development Bank and the World Bank. For example, over nearly four decades, JICA produced at least 15 transportation projects and studies in the Jakarta Metropolitan Area. Many of these studies directed policy and development of transportation, including in the preparation of legal products.

The current policy of limiting the use of motorized vehicles is not popular in Jakarta. Road users have negatively greeted the implementation of the low-emission zone

in the historic district. Parking entrepreneurs have flatly rejected pedestrianization plans in a well-known culinary district. Drivers blame sidewalk widening as the cause of traffic jams. And not infrequently, the new and wide sidewalks are even occupied by motorbikes, car parking and street vendors.

Civil society should be helping to influence the vision, formulate policies and provide input into the planning of the city's transport development. This access is sometimes limited and bureaucratic. To date, no mechanism allows for the creation of a collective vision.

The 2030 Jakarta Spatial Plan outlines the Transportation Demand Management Strategy, including various policies to limit vehicles, electronic road pricing and parking restrictions. Unfortunately, its implementation often goes sideways. For example, electronic road pricing was launched in 2013, but it remains operating only on a trial basis.

Over the past three years, the Jakarta governor talked of a plan to increase parking rates and apply a maximum parking policy in areas with public transportation. Both plans have not been implemented yet. As a result, the only mechanism for limiting private vehicles in Jakarta is the odd-even policy on 25 roads (vehicles drive on alternating days based on the last digit of the license plate).

Jakarta planning involves transit-oriented development, but it is not purely driven by the desire to change urban mobility patterns to one based on mass transportation, walking and cycling. Instead, the transit-oriented development concept applied in Jakarta is a mere branding for real estate projects. Transit-oriented development design is still business as usual, for example, imposing minimum parking and not opening direct access to transit stop stations.

The Jakarta government drives financing and land optimization through the transit-oriented development concept by giving direct authority to the state-owned company (BUMN) or the provincial government-owned company (BUMD) for transportation. They are the managers and planners of the transit-oriented development areas at certain stations, up to a radius of 500 metres (Anwar, 2020). Through various regulations, BUMN and BUMD can transfer management of a floor area to each other and add floors to new buildings in a transit-oriented development area.

But “transit-orient developmentwashing”, similar to greenwashing,* has become a way to capitalize on non-urban land in the Jakarta Metropolitan Area, such as the Greater Jakarta LRT and the Jakarta–Bandung high-speed rail project. Funding for the two projects comes from foreign debt, and most of the works are carried out by state-owned companies or a consortium of state-owned



Electronic road pricing on a trial basis in 2014

and foreign companies (Shatkin, 2019). Both are included in the National Strategic Projects and are eligible for faster

permits and land acquisition. Both projects develop new cities and new superblocks that are integrated with transit

Figure 8: Mapping of the planned Jakarta–Bandung high-speed rail route and the location of stations and large

Source: BAPPENAS, 2019; Ministry of Transportation, 2017.

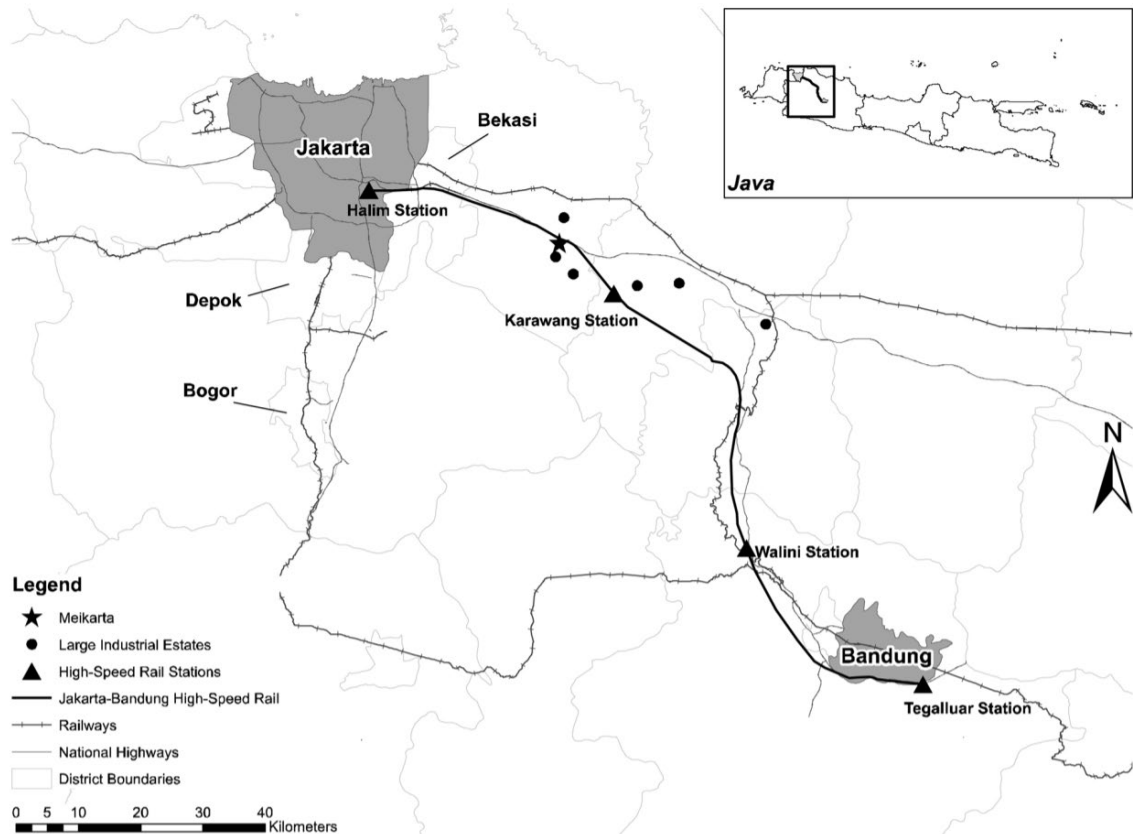


Fig. 1. Approximate Jakarta-Bandung High Speed Rail Proposal Route⁷.
(Sources: Open Street Map, Google Maps, Negara and Suryadinata, 2018)

Affordability, availability & inclusivity

points. For example, a new town with the transit-oriented development concept in the Jakarta–Bandung high-speed rail project takes up nearly 3,000 hectares. Ironically, the infrastructure that aims to make the city compact has paved the way for more suburbanization and sprawling (figure 8).

At the end of 2016, the 9.4-kilometre Transjakarta Corridor 13 (a flyover) entered the finishing stage. The flyover connects South Tangerang City with South Jakarta. One of its bus stops, CSW, is located 24 metres high, or the equivalent of a seven-story building. The CSW bus stop attracted public attention after someone publicized their counting the number of steps in the arduous stairways, which became a social media meme and object of ridicule.



The many stairways and steps to the CSW bus stop in 2016, located at the equivalent of seven storeys high

Until it was renovated in 2021 due to the controversy, the bus stop had no provision for persons with disabilities or older persons. The redesign includes an escalator and

elevator to the bus stop at the flyover. And the bus stop now connects to the nearby MRT stop.



New integration facility at the CSW stop in 2021, with broken balls already

The CSW bus stop is adjacent to the ASEAN MRT station and another Transjakarta Corridor 1 bus stop. There is no plan to integrate them. Thus, there is no connectivity between two transport lines only 150 metres apart. In 2019, Transjakarta and the provincial government organized a design competition for CSW integration that led to the construction of the escalator and elevator. Taxpayers will cover the additional 30 billion rupiah (\$2.2 million) it will require and which is to begin serving the public at the end of 2021.

The CSW bus stop is a small example (at least until the forced redesign) of public transport planning with no integration and no prioritizing of riders who live with disabilities, are elderly, children or pregnant. Most of the Transjakarta bus stops use a pedestrian bridge and ramp. The ramps do not meet universal standards, so it is difficult for wheelchair users and visually impaired people to access these stops.

Nevertheless, Transjakarta remains a popular public transportation option for people, especially for middle- and low-income households. The Mikro Trans vehicles can fit through narrow urban village roads and has become a first mile and last mile solution and a link to the Transjakarta bus stops and other modes of transport. The Mikro Trans service is also free of charge, and users are only required to purchase a Jak Lingko card.

Three modes of public transportation in Jakarta receive subsidies from the government. Transjakarta, the MRT Jakarta and the LRT Jakarta receive annual subsidies from the DKI Jakarta provincial government to implement public service obligations. The total subsidy given by the DKI provincial government to the three modes in 2020 was more than 5 trillion rupiah (\$350 million) (Defianti, 2019).

Transjakarta also provides free services for specific welfare subsidy recipients, such as factory workers, older persons and students from low-income families. At least 20 per cent of Transjakarta users come from subsidy-recipient groups. For example, under the Elderly Card Program from the provincial government, older persons can ride the Transjakarta buses for free.

Transjakarta's regular fare is relatively cheap, at 3,500 rupiah (\$0.25), and has not increased since its first day of operating. As a result, commuters using Transjakarta or the Commuter Line spend only 4–5 per cent of the monthly minimum wage for Jakarta (at 4,416,186 rupiah in 2021 (Idris, 2021)). The Jak Lingko integration system allows passengers to change modes at a fixed rate of 5,000 rupiah (\$0.40) for three hours. This fixed-rate helps reduce the expenditure of working women and highly mobile homemakers and informal workers. Around 52.2 per cent of Transjakarta users are women (Yunianto, 2019).

Because the Jak Lingko system now reaches 80 per cent of the Jakarta area, Jak Lingko has become the connecting

pulse between impoverished neighbourhoods and the city's economic and business centres. Migrants and recent labour force entrants who have difficulty finding affordable residential accommodation near the business centre can live in cheaper areas and connect with their job through the Jak Lingko system.

The informal sector also depends on the Commuter Line and the Transjakarta buses, such as small vendors. Both systems link satellite cities to large wholesale centres, such as Tanah Abang in central Jakarta. The flexibility of routes offered by Transjakarta allows the addition of new routes in a short time. Unfortunately, the public cannot directly propose new routes.

And yet, the Commuter Line faces obstacles in adding rails and opening new services. For example, the Manggarai–Cikarang Double-Double Track Project, which started in 2013, remains ongoing. Its completion is projected for 2022 (Desfika, 2020). The project aims to separate the main long-distance train line and the Commuter Line to eliminate delays while increasing passenger capacity from 1 million to 1.2 million passengers per day (Sari, 2015).

The public transportation system in Jakarta now functions as a tool to increase economic and social mobility. And its bus stops and stations have become meeting places and a melting pot of various passengers with their varied economic, social and cultural backgrounds.

Safety & reliability

Sunday morning is a favourite time for some Jakarta residents to walk, exercise and cycle, especially in the Sudirman–Thamrin Car-Free Day area. But the morning of 22 January 2012 became a bloody Sunday for Rochmari and his family. After enjoying the walk in the Monas Park, Rochmari and his family waited for a taxi at a bus stop outside the car-free zone. Suddenly, a car careened towards them at high speed, losing control. The car hit 12 people at the bus stop. Nine of them died, and the others were left injured. Rochmari lost four family members, including his daughter, who was pregnant at the time (Putsanra, 2021).

The driver was drunk. The case led to public anger at both the driver and the provincial government. Between 2007 and 2011, there was no construction or addition of sidewalks across Jakarta (BPS, 2012; BPS, 2008). The central government designated the tragedy with a National Pedestrian Day (Putsanra, 2021). It is only a ceremonial designation because similar incidents have continued to occur, and not only in Jakarta but also in its satellite cities, such as Depok City. Throughout 2011, for instance, 115 pedestrians were victims of accidents. Eleven of them died (Hidayat, 2012). In general, Jakarta does not have a good reputation for road safety. In 2020, there were 5,308 traffic accidents in which 354 people died (BPS, 2021).

Each road type has a speed limit, but the signs and information are never clearly displayed on arterial roads or main roads. There is no clear monitoring and enforcement mechanism for speed limit violations. The police department has installed an electronic traffic law enforcement system with CCTVs on several main roads. But the technology has been ineffective in managing speed limit violations.

Local neighbourhoods independently regulate the speed of motorized vehicles on roads and small alleys in settlements, such as making speed bumps. Alleys and narrow streets in kampungs are often used as shared or activity spaces. Certain kampungs have prohibited motorized vehicles at certain hours. For middle- and upper-income settlements, the reliance on portals and gates have helped to regulate traffic and direct congestion. Although speed bumps, portals and gates need government approval, no data reflect any permit granted for these three types of traffic arrangements,

reflecting the reality that frustrated neighbourhoods have taken traffic control into their own hands.

Jakarta's public transportation users also face security and safety risks. Sexual harassment and rape repeatedly occur in the various transport modes, whether in the paratransit vehicles (angkots), at a Transjakarta bus stop or on the Commuter Line. Two prominent cases in 2011 involved the rape of a student and an office worker in angkots. Instead of trying to make improvements to make angkots safe, the Jakarta governor at that time issued a statement telling women not to wear miniskirts (Kristanti, 2011).

Transjakarta and the Commuter Line have several policies that prioritize the safety and comfort of women. For example, there must be a particular section or car for women in every bus and train. Women-only carriages are available on the MRT Jakarta at certain hours. This does not guarantee women's safety and comfort, however. For example, sexual harassment occurs inside Transjakarta bus stops and is even perpetrated by Transjakarta officers, such as a rape case in January 2014 (Soares, 2014).

Harassment also occurs on pedestrian bridges to Transjakarta bus stops, which is the only accessway in most areas. This location isolates riders from the public eye. No bus stop or transport station in Jakarta has a panic button.

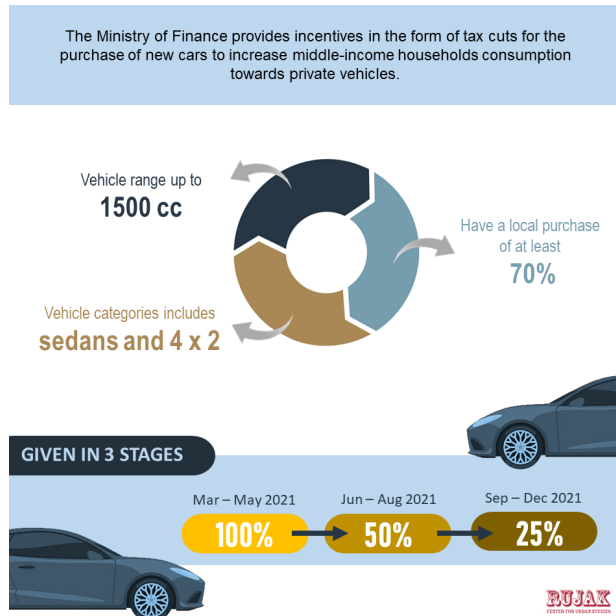
Congestion is a significant issue for private vehicle users but also for Transjakarta users. Of the 267 Transjakarta routes, around 40 per cent are non-dedicated bus lane routes or hybrid routes (Interview with PT Transportasi Jakarta, 2021)

At the city level, Jakarta only has one policy to reduce the use of motorized vehicles. At the national level, the government encourages consumption, especially the purchase of motorized vehicles. Even after onset of the COVID-19 pandemic, the Ministry of Finance relaxed the taxation on certain cars (figure 9).

On a promising note, the pandemic has resulted in protected bicycle lanes. Over the past three administrations of Jakarta government, bicycle lanes have appeared, disappeared and transformed. In the 2010–2015 period, the bicycle lane was only a road-painting project that ultimately became a

Figure 9: Tax Incentives for new cars during pandemic time

Source: Pratama, 2021.



parking space for cars and motorbikes. The construction of new protected bicycle lanes began in 2020 by taking advantage of the pandemic crisis. A 11.2-kilometre bike lane connects South and Central Jakarta. It is considered a success and used by various groups, ranging from workers and homemakers to traveling coffee traders. But due to the need for speed riding, its existence is not favourable to the road-cycling community as well as private motor vehicle users. In June 2021, a politician proposed dismantling the bicycle lane to the National Police Chief, who agreed. Ironically, the politician is the founder of the road bike club while the Police Chief is chairman of the Indonesian Bicycle Sports Association (Abri, 2021).

Ecological sustainability, internalization of external costs & traffic avoidance

On a cloudy December morning in 2018, cyclists gathered and then rode together towards the State Palace and Jakarta City Hall. Their purpose was to file a citizen's lawsuit regarding the state of air pollution in Jakarta. They represented 32 people suing the country's president, the Minister of the Environment, the Minister of Home Affairs, the Minister of Health and the governors of DKI Jakarta, West Java and Banten. Among their demands, they wanted change in air quality standards—to follow international standards. For example, the current lower limit for PM2.5 is 65 ug per cubic metre (1999), while the World Health Organization's lower limit is 25 ug per cubic metre (Nathania and Fadhilah, 2020).

After nearly three years, a court declared that the city authorities had been negligent in failing to establish proper standards on air pollution, thus ruling in favour of the plaintiffs (Aqil, 2021). This is the first time that the general public has filed a lawsuit related to air pollution and demanded various levels of government, including ministries and local governments, make changes to policies associated with air pollution, including policies related to mobility and transportation.

Environmental sustainability is rarely a top priority in the development and planning of Jakarta, be it the central or provincial government. The central government and the House of Representatives passed the Job Creation Act, often referred to as the Omnibus Law. It is to facilitate investment in various fields by revising 79 other laws, including the Law on Spatial Planning and environmental laws. The Omnibus Law eliminates various feasibility tests related to the environment, one of which is environmental impact analysis. This law instantly whipped up protests from multiple groups, including environmental organizations, human rights organizations, labour organizations, students and academics. The law also designates the regional government with authority to prepare and implement spatial plans.

Public losses due to air pollution are estimated at tens of trillions of rupiah each year (BBC Indonesia, 2019). This is rarely factored into calculations in transportation planning. The Audit Agency runs an environmental audit

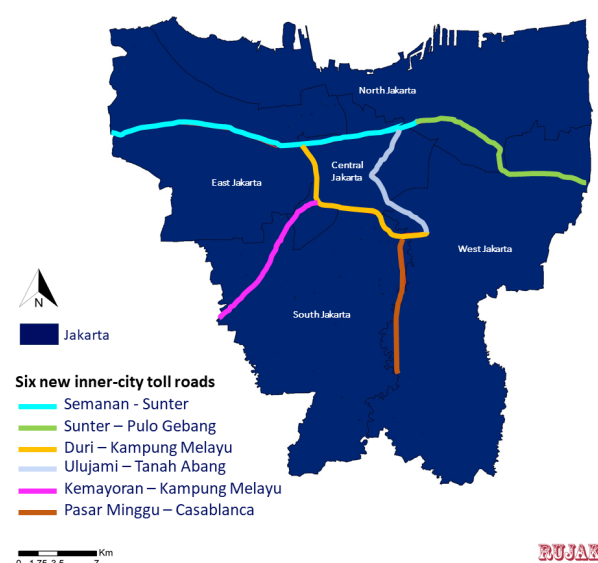
programme to calculate externalities and negative impacts. But these audit activities only occur in specific programmes related to environmental programmes. There has been no environmental audit on the use of the budget and transportation policy.

The Ledaded Gasoline Executive Committee declared in 2017 that Jakarta's economic losses due to air pollution reached a value of 51.2 trillion rupiah, with the largest source of air pollution deriving from the transportation sector. An app by Greenpeace Southeast Asia and AirIQ estimated that at least 6,100 deaths occurred prematurely in Jakarta in 2020 due to air pollution (Greenpeace Indonesia Press Release, 2020). Although Indonesia still uses the old quality standards, Jakarta's air quality seems fine in the eyes of the State (Silaban, 2019).

The plan to build six inner-city toll roads that would penetrate the heart of Jakarta has become highly contentious (figure 10). The plan was initiated in 2007 and met with public resistance, especially from environmental groups. When he was campaigning for Jakarta governor in 2012, Joko Widodo, now the country's president, promised

Figure 10: Controversial plan for six new inner toll roads, 2016

Source: Ministry of Housing and Public Works, 2016.



to cancel the development plan. After he was elected, the cancellation never transpired. Instead, the deputy governor insisted on continuing the toll-road project and now two state-owned companies are included in the toll-road construction consortium.

Jakarta Governor Anies Baswedan has more interest in global issues than his predecessors. Under his leadership, Jakarta joined the 1000 Cities Adapt Now programme in January 2021 and thus committed to tackling the impacts of climate change and disaster mitigation in the post-

COVID-19-crisis recovery process within 10 years. DKI Jakarta now prioritizes actions to mitigate the effects of climate change as a regional strategic activity. The governor is also committed to expanding the MRT, the BRT and the LRT, revitalizing sidewalks, increasing the integration of various modes of transit and developing special bicycle lanes throughout the city.

The current governor's ambition should be appreciated and supported. But should he not win re-election, will his successor have the same vision and hopes?

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