



Executive
Summary

in collaboration
with
Tara Climate
Foundation.

Just Transport Transition in Indonesia

Beyond Electrification
and Toward
Mobility Justice



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Just Transport Transition in Indonesia: Beyond Electrification and Toward Mobility Justice

Executive Summary

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Who We Are

The People
Behind This Study

This study is published jointly by ITDP Indonesia and
RUJAK Center for Urban Studies (RCUS).



ITDP Indonesia

What we do

ITDP Indonesia is the local office of the Institute for Transportation and Development Policy, a global nonprofit working to make cities more livable, equitable, and sustainable through better public transport, walking and cycling, transit-oriented development, and progressive urban policy. Since 2001, ITDP has supported sustainable transport development in Indonesia, from helping shape Transjakarta into Asia's first high-quality BRT system to advancing public transport, walking and cycling infrastructure, transport electrification, and inclusive urban planning across cities.

How we work

ITDP Indonesia works with national and local governments to strengthen the policies, institutions, governance, and technical capacity needed to turn sustainable mobility plans into lasting implementation, with equity embedded throughout the process.

Focus areas

- Bus rapid transit and public transport planning
- Transit-oriented development (TOD)
- Walking, cycling, and non-motorized transport
- Transport electrification and clean vehicle policy
- Gender-inclusive and participatory urban planning



RUJAK Center for Urban Studies

What we do

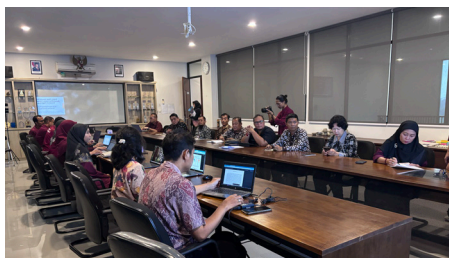
Rujak Center for Urban Studies (RCUS) is a think-act tank established in 2010 that connects research, community action, and public policy to advance more ecological, inclusive, and just cities. RCUS works with citizens, researchers, planners, artists, and communities to build shared urban knowledge and practices.

How we work

RCUS centers the co-production of knowledge, bringing citizens' lived experiences and local practices into research, policymaking, and public dialogue. RCUS views cities as complex social ecosystems shaped by both people and their environment. Its work addresses spatial inequality, displacement, gentrification, and environmental pressures while advancing more people- and nature-centered approaches to urban development.

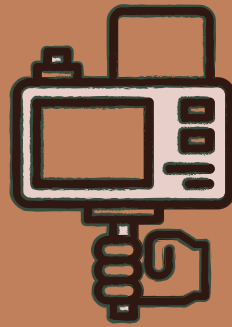
Focus areas

- Urban Sustainability & Ecological Transition
- Social Justice, Diversity & Equity
- Urban Mobility & Infrastructure
- Inclusive Spatial Planning & Community-Led Development
- Capacity Building, Co-Research & Policy Advocacy



Why This Study, Why Now:

Setting the Scene





The Global Transport Transition and Its Blind Spots

The current national framework for a cleaner transport sector relies on a **narrow technological substitution paradigm** – one that focuses on electric vehicle subsidies and tailpipe emissions while ignoring systemic mobility flaws.

Behind this technocratic focus lie critical blind spots: **high first-and-last-mile costs pushed onto precarious gig workers**, severe fiscal gaps that leave large and medium cities with **degraded or non-existent public transit**, and a **dirty supply chain where captive coal-powered nickel extraction burdens local communities for products** largely unlinked to green mobility.

Meanwhile, ambitious electrification targets fail because they attempt to clean systems that do not exist—from abandoned angkot routes to unserved industrial corridors.

Transitioning the transport system instead requires a comprehensive framework that moves beyond technology toward **structural change in city and transportation planning, traffic management**, and an inclusive framework that puts residents and users at the center.

This study's research approach reflects that correction: it applies a **justice lens across distributive, procedural, and restorative dimensions**, reads **vulnerability as an institutional failure** rather than an individual circumstance.

Indonesia's Climate Commitments and the Transport Sector

Indonesia's national climate strategy aims for **net zero emissions by 2060**, and the transport sector—which generates roughly **22% of the country's energy-related greenhouse gas emissions**—is heavily implicated. Despite an ambitious national target of **90% public transit electrification by 2030**, progress in 2026 remains stalled at a critical **2%**, due to inadequate institutional frameworks and uneven municipal readiness. Most Indonesian cities still lack formal public transport entirely, relying instead on unregulated private operators with substandard service levels.

The distance between that 90% ambition and the 2% reality **is not a technology gap**—it is the product of **fragmented responsibilities, weak incentive structures, and the absence of long-term mechanisms** capable of translating strategic ambition into sustained outcomes. The same institutional weaknesses run wider than electrification alone: **the absence of a public service obligation mandate for public transport**, for instance, leaves modal-shift targets similarly unmet, since there is no legal or fiscal basis to invest in, subsidize, or set minimum standards for the services that shift would depend on. Without that foundation,



even a fully electrified fleet would still be running on a system too thin to carry the national commitment

—the same institutional weaknesses this study traces through both its governance and its ground-level findings.



The Gap: Who Gets Left Behind When Transition Moves Too Fast — or Too Narrow

Sustainable mobility has still not been well received by the regional government: besides Jakarta as a megacity, **only Semarang has managed to reach a 4% budget allocation** for public transportation development, and the **national average sits at just 0.66%**. A critical equity gap also runs through the national electrification's roadmaps, which **presumes all citizens possess the financial and physical capacity to adopt electric vehicles**.

The current EV subsidy structure fails to capture the **ownership, financial, and infrastructure difficulty facing low-income families**

—directing national subsidies toward wealthy consumers while excluding high-mileage platform gig workers and captive transit users.



Addressing these systemic gaps, this study argues, is essential to ensure Indonesia's mobility transition delivers **genuine decarbonization rather than compounding historical urban inequalities**.

The Question This Study Asks

This study set out to

map the current landscape of Indonesia's urban transport interventions and roadmaps

—including existing studies, projects, national and city-level policies, and urban transport initiatives—and to **diagnose justice gaps, institutional barriers, and governance challenges**, with a focus on how current strategies overlook **distributive, procedural, and recognition or restorative justice**, as well as **GEDSI dimensions**.

Alongside this, it set out to **capture and elevate the lived experiences, needs, and coping strategies of marginalized groups**—especially women, youth, persons with disabilities, and informal workers—to ensure that national strategies for a just transport transition are **inclusive and context-sensitive**, and ultimately to **formulate strategic opportunities and intervention areas** to support a more just, inclusive, and sustainable transport transition.



How We Listened:

Approach and
Methodology



Two Lenses, One Picture

—Multi-scalar Approaches

The study adopts a multiscale approach to examine Indonesia's transport transition as the result of complex, dynamic, and cross-level interactions that can generate cascading effects. It considers both the structural systems shaping transport policy and implementation and the lived realities and impacts experienced across different urban contexts.



Three analytical lenses run throughout the study: a **justice lens**, covering distributive, procedural, and restorative justice; a **vulnerability lens**, examining how institutional structures and systems may fail to serve vulnerable groups or mitigate the impacts of policy change; and the **Avoid-Shift-Improve (ASI) framework**, used to assess transport interventions and transition pathways.

Operationally, the methodological focus is divided between the two organizations. **ITDP focused on the structural, regulatory, and governance dimensions of the transition**, examining the actors, institutions, policies, and financing arrangements that shape

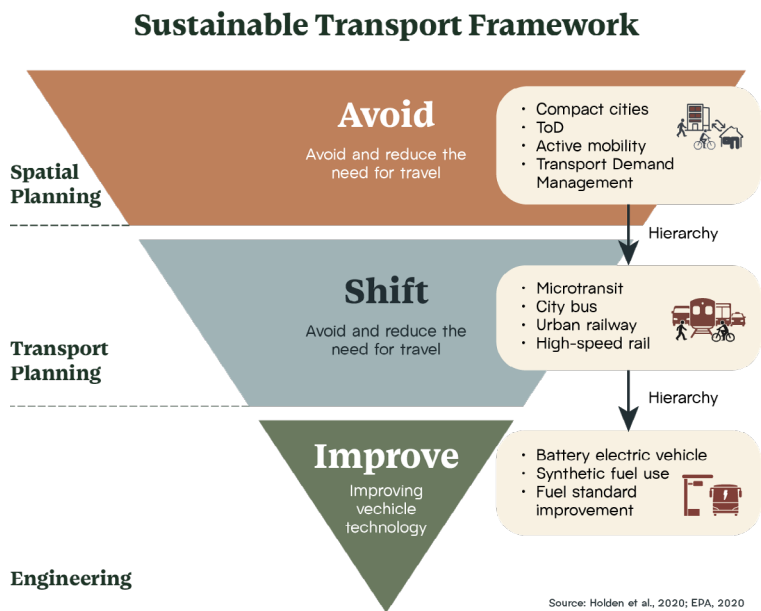
transport decisions and implementation. **RCUS examined grounded experiences and impacts**, drawing on local stakeholder perspectives and the lived realities of communities and vulnerable groups across different urban contexts.

Across both strands of analysis, impacts are read through four recurring domains: **environment, health, economic and social conditions, and work**. Together, these perspectives provide a broader understanding of how transport transitions are shaped institutionally, how their impacts are experienced on the ground, and where more context-sensitive policy and intervention strategies are needed.

ITDP's Approach: Stakeholder Interviews and Policy Landscape Analysis

ITDP's analysis started with a **regulatory study**, checking what existing policy already covers under the **Avoid-Shift-Improve framework** and where it falls short. This was paired with **interviews and literature review across five actor groups**: national and sub-national government, academia, donors and financiers, and delivery partners, surfacing gaps that cluster into **three recurring issues**: financing, institutions, and political priority.

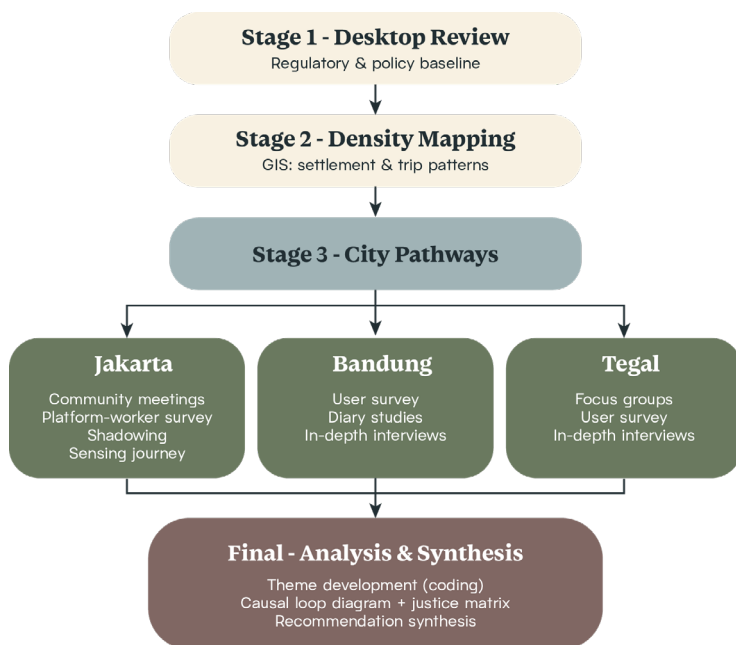
Interview data was **coded, clustered, and cross-analyzed** for contradictions and convergence across actors, then filtered through the ASI framework, with **GEDSI considered throughout**, to translate the findings into **concrete project themes and strategic activities**.

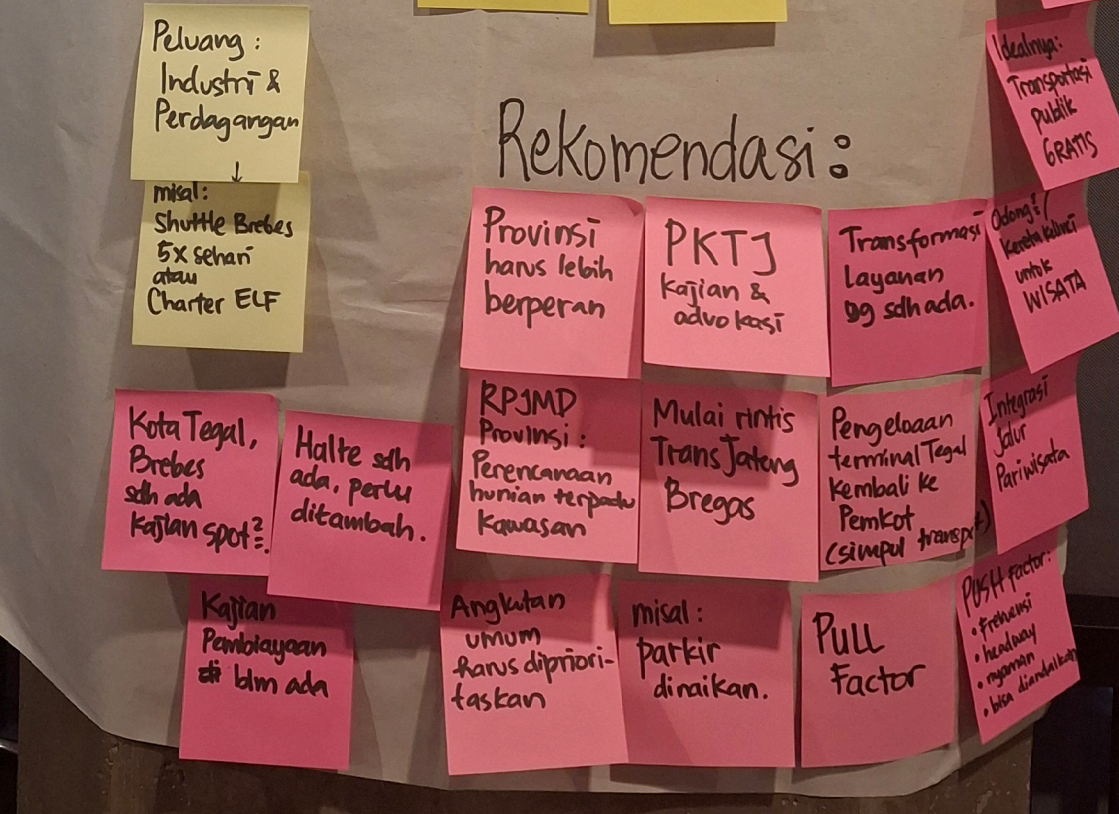


RUJAK's Approach: Living Experience and Socio-Dynamic Research

RCUS's grounded experience and impact scale approach is bottom-up. A desktop review of policy and regulation and GIS-based urbanization and density mapping establish the baseline, after which fieldwork is tailored to each city: community meetings, a driver survey and shadowing in Jakarta; a sensing journey, a public survey, diary studies and interviews in Bandung; focus group discussions, a survey and interviews in Tegal. RCUS worked with **Labtek Indie in Bandung**, and with the **Center for Coastal Urban Studies** at Universitas Harkat Negeri in Tegal.

The evidence from all three cities is then integrated through theme development, Causal Loop Diagrams, and a justice analysis matrix (Stage 4), before being translated into targeted recommendations (Stage 5). **The three cities were chosen deliberately: Jakarta as a megapolitan agglomeration, Bandung as a dense major city, and Tegal as a medium-city setting**, so that the fieldwork spans genuinely different stages of urban transport transition rather than one city standing in for all of Indonesia.





Study Scope and Limitations

Fieldwork concentrated on three cities—Jakarta, Bandung, and Tegal—chosen as distinct pathways through urban transport transition, each drawing on a tailored mix of methods suited to its context, rather than a single method applied uniformly across the country.

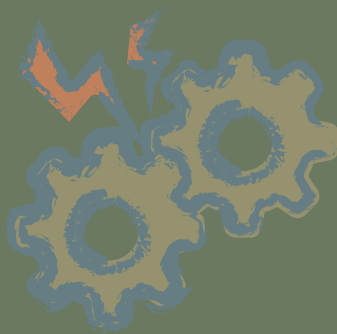
Alongside this, ITDP's study scope also draws on sub-national governments (pemda), derived from Master Plan Transportasi (Mastrans) documents and interviews with relevant actors across Medan, Jakarta, Surabaya, Jawa Timur, Batam, Padang, and DI Yogyakarta. This broader regulatory

and institutional coverage complements the three-city fieldwork, allowing the structural findings to reflect a wider range of governance contexts beyond the cities visited directly.

This is by design: the multiscale approach exists precisely because a megacity with mature transit, a large city with a stalled semi-formal system, and a mid-sized city are different problems that a single national-level method would flatten. What this study offers is therefore a diagnostic, cross-scale reading rather than an exhaustive city-by-city census.

The System That Isn't Working:

Findings from
ITDP Indonesia

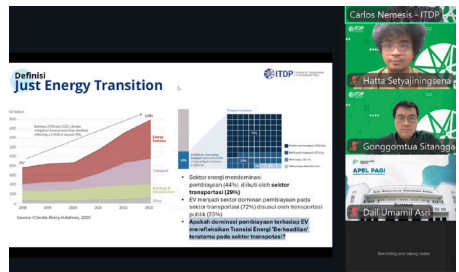


Overview: Five Pressure Points on Indonesia's Transport System

Indonesia's transport challenge is increasingly less about infrastructure provision alone, and more about establishing the institutional, governance, spatial, and financing mechanisms required to sustain integrated and inclusive transport systems.

While policy recognition and implementation initiatives have expanded significantly, many reforms remain constrained by fragmented responsibilities, weak incentive structures, limited implementation capacity, and the absence of long-term mechanisms capable of translating strategic ambitions into sustained outcomes.

Working through the Avoid-Shift-Improve framework, ITDP's cross-analysis of stakeholder perspectives surfaced key implementation gaps across every subsector it examined— from landuse and public transport to non-motorized transport, demand management, and vehicle electrification— each carrying its own environmental and socio-economic consequences.



Stakeholders Roles in Mobility Governance

Source: ITDP, 2026

Actor	Regulatory Reflection	Current Practice	Desired Governance
National Government	Regulations assign sector-specific mandates, with the Ministry of Transportation leading transport policies, while other ministries oversee land use, housing, public works, energy, finance, and regional development. Especially for Shift-Improve strategies.	Implementation remains largely sectoral. The Ministry of Transportation is expected to lead sustainable mobility but has limited authority over several policy instruments required to implement the full ASI framework. Coordination mechanisms exist but often depend on inter-ministerial commitment rather than institutional authority.	A stronger whole-of-government approach is needed, with a coordinating institution capable of aligning transport, land use, housing, climate, and fiscal policies. Given the cross-sectoral nature of ASI, the Coordinating Ministry for Infrastructure and Regional Development could play a stronger strategic coordination role, while the Ministry of Transportation remains the technical lead for mobility policies.
Local Government	Provincial and city-level governments are responsible for spatial planning, local transport services, road management, and project implementation.	Capacity and political commitment vary significantly across cities. Metropolitan services frequently cross administrative boundaries, while planning and budgeting remain jurisdiction-based.	Local governments should evolve from individual project implementers acknowledging the metropolitan settings, supported by institutional arrangements that enable joint planning, financing, and service delivery across urban regions. This may reflect current opportunities where Bappenas drafting upcoming regulation on Agglomeration Governance.
Academia	Academic institutions receive limited recognition within formal regulatory frameworks, primarily through research and education functions to support the regulation drafting process.	Universities frequently provide evidence, modelling, evaluations, and policy advice, although engagement is often project-based rather than institutionalized.	The roles of academia should be institutionalized and reflected along with the collaborative or participatory approach in the planning and regulation making process.
Donor Agencies/ Financiers	Development partners are not explicitly assigned implementation mandates, but existing regulations enable international cooperation, climate finance, and development assistance.	MDBs, bilateral agencies, and philanthropic organizations often catalyze policy reforms, finance pilot projects, and facilitate policy dialogue beyond traditional funding roles.	Clear mechanism to access bundled with the guidance and potential support on the project preparation (e.g. planning, design, and Full Business Case (FBC) document) should be mainstreamed with the existing mandatory planning documents. Open to all dedicative ASI strategies with continuous approach for sustainable financing from the planning, pilot, implementation, and monitoring and evaluation process.
Delivery Partner	NGOs, technical organizations, research institutes, and consulting firms receive limited formal recognition despite their implementation role.	Organizations such as ITDP Indonesia, RCUS, and other technical consultants frequently translate policies into implementation through technical assistance, project preparation, capacity building, and stakeholder engagement.	Delivery partners should be recognized as long-term partners that bridge national policies with local delivery, giving technical assistance to facilitate knowledge transfer, and strengthen institutional capacity across stakeholders.

Findings

AVOID
the need to travel

SHIFT
to sustainable modes

IMPROVE
technology efficiency

Under Avoid, telecommuting remains only partially implemented, with its full impact on trip generation still unmeasured, while transit-oriented development is stalled by an unclear regulatory and governance framework, under-used land-based financing instruments, **a lack of comprehensive planning KPIs**, fragmented land ownership, exclusive development, and **unreliable transit that undermines every basis TOD depends on**.

Across the three pillars, a consistent pattern emerges under Shift in particular: interventions that **pull** people toward public transport, walking, and cycling are far more developed than the measures that would **push** them away from private vehicle use. Pull strategies dominate the conversation among stakeholders: road-based public transport, rail operators such as PT MRT Jakarta, LRT Jakarta, and PT KCI, and

multimodal integration all receive sustained attention, even where execution still falls short. Road-based transport struggles with low political interest and tight budgets, rail runs without integration and carries heavy debt, and multimodal integration is undercut by diverging local priorities, notable given that **roughly 40% of regional mobility around Jakarta originates in car-dependent satellite cities**.

Push strategies, the ones that make driving less convenient, are left far behind. Electronic Road Pricing, Low Emission Zones, and parking management remain isolated or confined to a single city, an imbalance that runs from the regulatory framework itself through to the level of political appetite to intervene. The gap here is **political more than technical**. Walking, cycling, and bike-sharing infrastructure fares no better, still fragmented and untreated as a statutory obligation.

Without push moving at the same pace as pull, Shift can't fully work.

Under Improve, EV incentive mechanisms remain unclear for private four- and two-wheelers, with unfavorable contractual schemes burdening logistics and ride-hailing drivers. Public EV bus adoption is limited less by battery cost than by institutional capacity: **cities that can barely operate a conventional bus fleet are being asked to run an electric one**, and national emission standards remain stuck between two ministries. Sources are compounded by fuel quality that still exceeds allowable sulfur limits.



Key Implementation Gap

AVOID

Telecommuting



Unclear Impact of Telecommuting.

Integrated and Compact Land Use (i.e. TOD, compact city)



Unclear Implementation Framework

- Regulatory framework
- Multi-level governance
- Land-Based Financing
- Planning metrics

Land Management Challenges

- Fragmented ownership
- Exclusive development
- Unreliable transit

SHIFT

Road Based Public Transportation



Political and Financing Difficulties

- Low interest and political constraints
- Lack of evidence-based policy
- Budget ceilings caps, prompting local leaders to prioritize short-term improvements over long-term solutions.

Limited Capacity in Delivering Services

- Capacity limitations
- Implementation challenges

Rail Based Public Transportation



Political and Financing Difficulties

- Diverging orientation
- Multiple operators without integration
- Minimal fiscal capacity
- Limited production capacity

Multimodal and Multigovernmental Integration



Fragmented Governance for Multimodal Services

- Diverging objectives
- Uneven burden sharing
- Disintegrated services
- Siloed authority

Walking and Cycling



Network Continuity and Accessibility Challenges

- Disconnected network planning
- Limited implementation guidance
- Incomplete universal design implementation

Low Emission Zone



Lack of System Integration

- Lack of planning and implementation guidelines
- Weak enforcement mechanisms
- Diverging agency objectives
- Standalone strategy

Negative Perception

The LEZ is seen as a restrictive policy, although the public generally agrees with its objectives.

Parking Management



Conflicting Objectives and Stagnant Regulations

- Conventional parking management strategy
- Enforcement challenges for parking violations
- Conflicting perceptions of parking management

Electronic Road Pricing



Regulatory and Institutional Gap

- Regulatory gaps at the local level
- Lack of institutional capacity
- Duality of retribution prerequisites

Negative Perception
Unpopular policy that carries a negative perception among both the legislature and the general public.

Bike sharing



Lack of System Integration

- Limited regulatory framework
- No standard governance model
- Differing policy priorities

Operational and Integration Challenges

- Uncertain operating model
- Incomplete cycling infrastructure
- Limited commercial viability

IMPROVE

Private E4W & Private E2W



Regulatory Gap

- Unclear incentive mechanisms
- Lack of Supply-Side Regulations (SSR)

Implementation Challenges

- Unfavorable contractual schemes for EV adoption
- Unclear home charging infrastructure strategies

Public EV



Regulatory and Institutional Capacity Limitation

- Lack of an adoption framework
- Low institutional capacity
- Limited conceptual scope for EV adoption

Financing Challenges

The deployment of electric transit fleets is constrained by significant capital costs, despite a Total Cost of Ownership (TCO) that remains lower than that of conventional internal combustion engine (ICE) fleets.

Emission Standard



Fragmented Institution Visions and Implementing Capacity

- Lack of institutional coordination
- Strong public opposition
- Untapped green financing schemes
- Substandard fuel quality

Strategic Entry Points:

Where Intervention
Matters Most

The clearest entry points sit in **mandating public transport as an essential public service** backed by minimum funding, establishing **cross-jurisdictional governance for metropolitan transit**, institutionalizing **TOD and active-mobility guidelines** into long-term development plans, and building a **legally binding earmarking mechanism** so demand-management revenue is reinvested into public transport, followed by a supportive, integrated regulatory framework for cleaner vehicles.

Opportunities for Action:

Policy, Finance, and Collaboration

Regulatory and institutional preparedness for public transport reform proposes a technical policy proposal, draft legal statutes, cost-benefit analysis, and capacity-building workshops, aiming for **mandated public transport service provision and secured, dedicated transit funding in at least three priority cities.** **Integrated metropolitan transport services** proposes a strategic institutional framework and an active multi-tier stakeholder coordination platform across national, provincial, and municipal governments, aiming for **cross-jurisdictional governance**, standardized KPIs, and data-driven planning.

Comprehensive TOD governance and integrated walking and cycling improvement proposes an institutional capacity assessment, an LVC implementation playbook, and NMT masterplans and design guidelines, aiming for **institutionalized TOD and NMT guidelines formally adopted in at least three cities of different typologies.** A **comprehensive TDM strategy framework** proposes regulatory policy briefs and a dedicated earmarking mechanism, aiming for TDM measures adopted in at least two **cities with a legally binding national earmarking mechanism.** **And a supportive regulatory framework for cleaner vehicles** proposes an integrated electrification roadmap and incentive-disincentive mechanism, aiming for **adoption of cleaner vehicle initiatives at the national level.**

Why it matters?

AVOID

Telecommuting



Environmental

- Reduces trips, fuel use, GHG emissions, and air pollution.

Socio-economic

- Supports remote work, lowering transport costs and congestion while improving productivity.

Integrated and Compact Land Use (i.e. TOD, compact city)



Environmental

- Fragmented governance delays TOD, increasing urban sprawl, VKT, land conversion, and carbon emissions.

Socio-economic

- Poorly aligned LBF limits public revenue and inclusive development, increasing travel costs, reducing transit ridership, and lowering urban productivity.

SHIFT

Road Based Public Transportation



Environmental

Weak regulations and limited budgets stall route expansion, reinforcing private vehicle use and increasing air pollution.

Socio-economic

Longer travel times and higher transport costs reduce mobility efficiency and regional economic productivity.

Rail Based Public Transportation



Environmental

- Poor rail integration increases private vehicle use and carbon emissions.

Socio-economic

- Weak integration raises travel costs, while fragmented investments threaten financial sustainability.

Multimodal and Multigovernmental Integration



Environmental

- Weak cross-boundary integration increases private vehicle use and emissions.

Socio-economic

- Fragmented systems increase travel costs and reduce spending efficiency.

Walking and Cycling



Environmental

- Low NMT prioritization sustains motorized trips and local emissions.

Socio-economic

- Fragmented investment and poor universal design reduce accessibility for vulnerable groups and limit property values around transit stations.

Low Emission Zone



Environmental

Weak LEZ guidelines and enforcement limit air quality improvements.

Socio-economic

Uncoordinated implementation reduces resource efficiency, increases health risks, and raises healthcare costs.

Parking Management



Environmental

Revenue-driven parking policies encourage private vehicle use, increasing congestion and emissions.

Socio-economic

Underpriced parking reduces land value and limits opportunities to repurpose space for public facilities or housing.

Electronic Road Pricing



Environmental

Regulatory delays and public resistance sustain private vehicle use and transport emissions.

Socio-economic

Without congestion charging, cities lose revenue for public transit and continue to incur productivity losses from traffic.

Bike sharing



Environmental

Weak governance and cycling infrastructure limit bike-sharing, sustaining reliance on motorized transport.

Socio-economic

Unclear operations and unsustainable business models deter investment and limit cost-effective mass transit feeder services.

IMPROVE

Private E4W & Private E2W



Environmental

Delayed regulations slow EV adoption, prolonging ICE vehicle use and emissions.

Socio-economic

Unclear policies deter EV adoption and charging investments, while unfair transition schemes burden drivers.

Public EV



Environmental

High procurement costs and limited transit reform slow bus electrification, prolonging diesel emissions.

Socio-economic

Weak institutional reform and overlooked TCO benefits increase maintenance and fuel costs.

Emission Standard



Environmental

Delayed emission standards prolong harmful vehicle pollution, especially from heavy-duty vehicles.

Socio-economic

Poor fuel standards increase health costs, while untapped green financing delays clean fuel investment.



The People the System Leaves Behind:

Findings from
RUJAK Center
for Urban Studies



Overview: Three Cities, Three Stages of Transition

Across Jakarta, Bandung, and Tegal, popular transport networks such as angkot —long serving students, women, the elderly, and informal workers—are widely regarded as outdated, their potential as essential public services largely unrecognized. Yet, as platform-based ride-hailing penetrates all three urban scales, these three cities reflect distinctly different stages of transport system maturity and, consequently, divergent responses to the transition:

- **Tegal (Medium City)**
Demonstrates severe transport degradation, where once-vital angkot networks are collapsing, leaving a public transport vacuum filled almost entirely by private motorization.
- **Bandung (Large City)**
Faces a sharp decline in public transport patronage driven by severe gridlock, long headways, and fragmented service, pushing commuters toward individual ride-hailing.
- **Jakarta (Megapolitan Agglomeration)**
Features the country's most developed public transit system, yet reveals a different structural vulnerability: platform workers bear a heavy, disproportionate transition burden as they bridge the mature first-and-last-mile connectivity gap.



Across all three urban scales, ride-hailing fills structural voids left by formal networks; however, in Jakarta—where its feeder role has matured—it creates new vulnerabilities that fall directly on the drivers themselves.

The experience across Tegal, Bandung, and Jakarta demonstrates, addressing the transport transition requires interventions tailored to each city's specific stage of systemic transition rather than a single standardized formula.

Findings

Jakarta, Bandung, and Tegal reveals that despite differences in urban scale and transit maturity, ground-level observations and lived experiences show that systemic vulnerabilities in Indonesia’s transport transition center on three core thematic areas

Structural Market Failure and Equity Risks in Paratransit

The absence of a public service obligation mandate leaves popular transport to a structurally failing market, with no financial support, fair transition schemes, or tariff subsidies to sustain traditional paratransit operators– and no fleet safety, emissions, or service quality standards, enabling a vicious cycle of quality decline, ridership loss, and uncontrolled emissions that hits peripheral, low-income areas hardest. Formalization and modernization efforts lacks participation and equity safeguards risk displacing operators, pricing out low-income riders, and overriding existing route rights (trayek) without resolution, stranding those who cannot motorize rather than redirecting them.

Platform and Delivery Workers Transition Challenges

Platform delivery workers navigate a binary employee-or-independent-contractor framework that compounds the challenge of worker representation, with limited direct input into the algorithmic management systems and transition planning built around

them; they alone bear the full weights of asset costs, depreciation, and income volatility. Macro-level climate and energy policies largely overlook their operational realities– excluding commercial gig drivers from individual-focused purchase subsidies and offering no tailored charging tariffs– while EV rental and rent-to-own schemes offer little flexibility during health-related downtime. As outdoor workers, they also face escalating climate risk: 83% of two-wheeled drivers report extreme heat as disruptive to their work, with sheltering through peak midday hours removing working hours and coping costs absorbed directly by drivers.

Forced Motorization and Spatial Isolation

Where no dependable transport system exists, households are forced into private motorcycle ownership, draining income, accumulating debt, and deepening mobility poverty, while people who cannot motorize– persons with disabilities, the elderly, children, and safety-constrained women – are stranded when shared transport fails, not redirected, facing complete spatial isolation from jobs, education, and healthcare.

71%

of EV 2W-riders still keep or want a petrol motorcycle, mainly for long-distance trips beyond the swap network

10%

of ICE 2W-riders tried an EV and went back; daily instalments and dud batteries were the top reasons

Fixed daily rental against volatile income is the top-cited obstacle for conversion from ICE to EV

(59% in 2W/
53% in 4W)

Ground Experience Mobility Justice Matrix

Vulnerable Groups		Distributive (Distribution of Benefits & Burdens)	Procedural (Meaningful Voice & Process)	Recognitional/ Restorative (Historical Harm & Restoration)
JAKARTA	Platform Workers	- High opex, volatile income, & unpaid heat delays - EV subsidies bypass platform drivers.	- Unilateral tariff/ commission changes by platforms. - Commercial terms set without co-design	- Rebalance risks via portable social security - Build shaded rest hubs & fix renting EV subsidies
	Women, Elderly and Disabled Platform Workers	- Earning loss from customer bias/ cancellations. - Physical heat strain vs caregiving flexibility	- Algorithms penalize caregiving leave. - Lack of accessible app interfaces/support.	- Subsidize inclusive EV access. - Provide sign-language support & accommodate care work
BANDUNG	Paratransit User (Elderly, women with child, pregnant women, disability group, students)	- Mobility poverty & severe travel delays from gridlock. - Forced private motorization	- Master plans favor core corridors, ignoring local trips. - User trust in public transit erased	- Reclassify public transit as mandatory basic service - Modernize networks & cap tariffs to rebuild trust
	Paratransit Driver	Revenue loss from gridlock under predatory setoran market	Paratransit framed as "urban nuisance" instead of policy failure	Shift from setoran to Buy-The-Service (BTS) contracts
TEGAL	Paratransit User (Elderly, women with child, pregnant women, disability group, students, women labor)	- "Transit deserts" (50% dead routes) & spatial isolation. - Unsafe night commuting and limited option lead to forced motorization	- No public budget or facilitation for safe and reliable public transport service	- Reactivate routes with green public micro-fleets - Build industrial transit corridors with safe stops for factory worker
	Remaining Paratransit Drivers	Vanishing passenger base & capital deficit to electrify	Local agencies lack budget/capacity to co-design transition.	- Provide fleet upgrade funds/ cooperatives - Integrate drivers into state-managed transit jobs

Strategic Entry Points:

What Just Transition Looks Like on the Ground

A just transition on the ground means a safe, equitable pathway for paratransit built with its operators rather than around them; decent-work standards and collective protections for platform and delivery workers, moving past the rigid employee-versus-contractor choice; and mobility options that reach those who cannot motorize, rather than policy that assumes everyone can simply switch to a private vehicle.

Opportunities for Action:

Community, Policy, and Investment

For paratransit

To build a safe, equitable paratransit pathway, action must pair evidence-based route planning—such as mode-share baselines and “Angkot Day” experiments—with physical modernization, including upgraded stops and peripheral EV charging networks. Supported by worker capacity building, these steps drive advocacy for local regulations, national guidance, and dedicated funding to establish a formal transport authority that modernizes fleets while guaranteeing decent-work social protections (health, accident, and pension coverage) for operators.

For platform workers

To ensure a just transition for platform workers, action must simultaneously advance worker protections, equitable EV access, and climate resilience. This requires establishing decent-work baselines to support worker cooperatives with collective BPJS Ketenagakerjaan enrollment, redesigning EV incentives and tiered financing (for 2W/4W renting and rent-to-own drivers) with peripheral battery-swap infrastructure, and mitigating climate risks by mapping pollution, heat, and flooding hotspots to pilot shaded rest points with early alert systems.

And for forced motorization

To mitigate forced motorization and mobility poverty, actions should focus on conducting diagnostic studies of low-income transport expenditures and benchmarking accessibility thresholds to co-design and pilot targeted, affordable public transit routes that directly reduce household transport costs and reconnect isolated communities to economic opportunities

Ground-Level Gaps: Why It Matters

A Safe Equitable Pathway for Paratransit/Popular Transit

No PSO Mandate

Lack of legal/fiscal mandate leaves paratransit to market failure

Environmental

- Unregulated, aging fleets worsen urban air pollution (PM 2.5 and NOx) exposing roadside users to respiratory risks

Socio-economic

- Accelerates route loss, creating "transit deserts" that sever peripheral low-income groups from jobs/healthcare



No Fleet/Service Standards

Unregulated quality triggers service collapse

Socio-economic

- High travel costs force transport-dependent users to spend a large share of income on commuting.



Unsafeguarded Modernization

Top-down reform displaces informal operators and overrides route rights (trayek)

Socio-economic

- Strands non-motorized groups (elderly, disabled, women), **Livelihood loss for informal operators.**



Platform and Delivery Workers Transition Challenges

Rigid Binary Status

Binary classification (employee vs. partner) limits worker representation & bargaining power

Environmental

- Failed EV conversions cause drivers to revert to petrol bikes, keeping aging fleets operating in high-density corridors

Socio-economic

- Single accident/illness risks pushing gig households into debt due to missing safety nets



Asset Risk & Unreached Subsidies

Drivers bear full asset/depreciation risks; EV subsidies bypass renting drivers

Socio-economic

- Commercial EV rental models impose continuous payments during health downtime



Unmitigated Climate Exposure

Outdoor workers lack protection from heat, pollution, and floods

Socio-economic

- Midday heat sheltering causes lost orders, while coping (water/drinks) adds daily expense



Forced Motorization & Mobility Poverty

Absent Shared Transit

Lack of viable public transit forces households into private motorcycle reliance

Environmental

- Accelerates carbon lock-in, worsens urban congestion, and increases localized air pollution (PM 2.5 and NOx)

Socio-economic

- Locks low-income households into high-interest vehicle debt and recurring fuel/maintenance costs



Presumption of Motorization

Policy falsely presumes all citizens can motorize, ignoring captive groups.

Environmental

- Deprioritizes pedestrian/active mobility infrastructure.

Socio-economic

- Non-motorized groups (elderly, children, disabled, safety-constrained women) face complete spatial isolation



Toward Mobility Justice:

A Shared Agenda





What Both Studies Tell Us Together

ITDP's structural findings and RCUS's grounded findings describe one transition: a system where **policy recognition has expanded, but institutional, governance, and financing mechanisms have not kept pace**, and where the burden of that gap falls hardest on the transport-dependent: **low-income riders, informal and platform workers, and those who cannot motorize at all.**

The pattern repeats at every scale examined in this study: **a technology, a concept, or a policy commitment exists somewhere in Indonesia, but the regulation, the coordination, or the financing mechanism needed to scale and sustain it does not, from the 90% electrification target sitting alongside 2% real progress to public transport recognized as essential in practice but unmandated in policy.**

The Non-Negotiables: Principles for a Just Transport Transition in Indonesia

This study is anchored in three interrelated dimensions of justice, **distributive, procedural, and restorative**, alongside a vulnerability lens that recognizes how institutional gaps make certain social groups even more vulnerable to policy shocks. Applied through the **Avoid-Shift-Improve hierarchy**, in that order of priority rather than as interchangeable options, these lenses read every finding against four domains of impact: **environment, health, economic and social conditions, and work.**



Priority Recommendations for Policymakers, Donors, and Civil Society

Across both organizations findings, the recommended activities converge on seven fronts:

Integrated public transport reformation, mandating transit as an essential service with dedicated funding;



TOD and active mobility improvement, institutionalizing guidelines into long-term development plans;



A comprehensive traffic management strategy with a national earmarking mechanism;



Cleaner vehicle emission initiatives adopted at the national level;



A safe, equitable pathway for paratransit and popular transit built with a public service obligation mandate;



Support for platform and delivery workers transition, anchored in decent-work standards;



A policy base to break the cycle of forced motorization and mobility poverty for those who cannot motorized.



What Comes Next?

The Case for a Full Study

This booklet distills the Indonesia Transport Scoping Study.

A first, structured look across governance and lived experience.

Its own research approach and method point to what should follow: sustained capacity building, piloting to scale, monitoring and evaluation, and knowledge transfer as the recommended activities move from pilot to scale in priority cities identified through this scoping process.

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