

# Understanding the mobility ground truth in Lima

Public transport insights from our work on the ground in Lima, Peru.



An aerial photograph of a coastal area in Lima, Peru. A major highway runs parallel to the ocean, with several lanes of traffic. To the left of the highway is a large, rocky cliff face. Below the highway, there is a paved walkway and some green spaces. The ocean is visible on the right, with white waves crashing against the shore. In the bottom left corner, there are some buildings and other roads.

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# Introduction



Lima is the second largest city in the Americas, home to over ten million people. Its economy has developed rapidly over the past two decades, and poverty has decreased from almost 60% in 2004 to 20.5% in 2018. Nonetheless, inequality is rife, and 35% of Lima's residents live in informal settlements while gated communities are common.

In Lima, over seven million people rely on public transport to get where they need to go. Every day, people spend an average of two hours on journeys that combine many of the city's transport modes, without any reliable information to help them along the way. Despite the size, scale, and importance of these mobility networks, they are effectively invisible, with no central source of route information or points of interest.

For commuters, this means every day poses an unpredictable and potentially

frustrating travel experience. For organisations, a lack of accurate and reliable data makes it challenging to understand the 'ground truth' of these markets, and the vast opportunities within them.

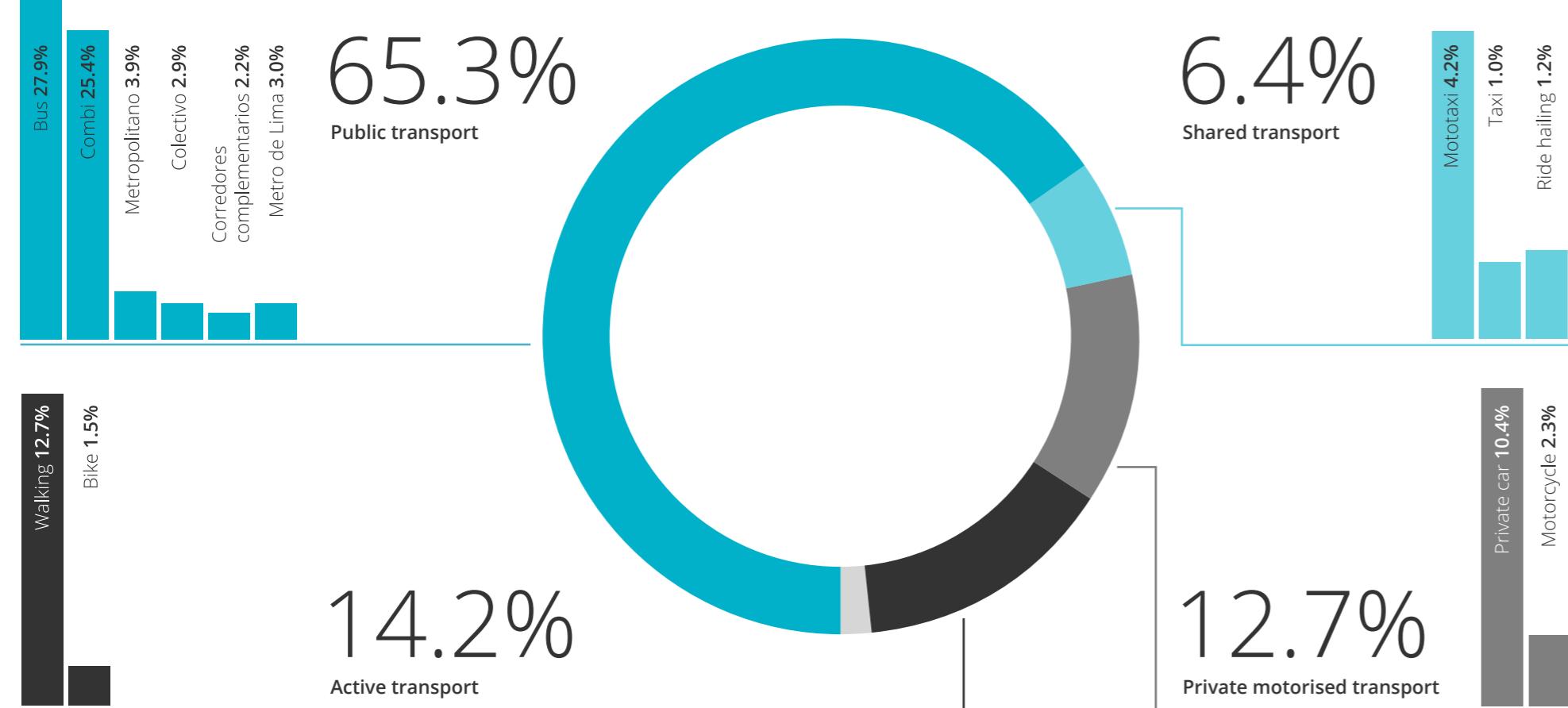
By digitalising public transport network information, WherelsMyTransport helps industry-leading organisations understand mobility and place in emerging-market megacities. Our data production methodology is informed by a comprehensive programme of ethnographic research into public transport use in emerging markets. In this white paper, we share insights on how people move, and the different public transport modes available in the city, developed while producing and maintaining accurate mobility data in Lima, Peru.

# How do people move in Lima?

The majority of people in Lima depend on motorised transport to get around the city. Every day, commuters choose between government-run modes that follow fixed routes across Lima's central districts, and flexible-route services that dominate the region. However, the lack of reliable and complete network information from

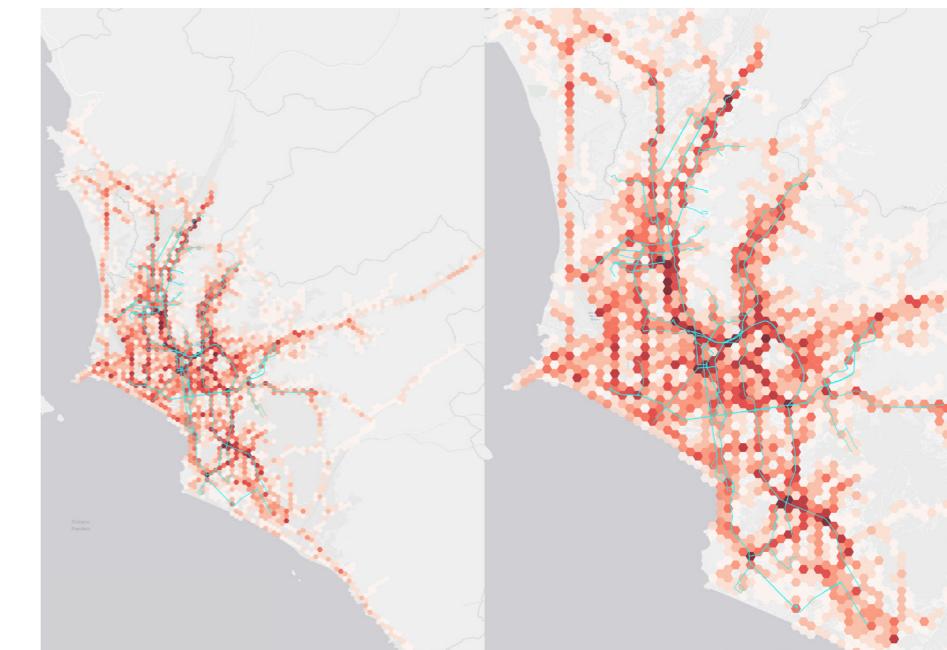
every mode prevents commuters from making informed decisions.

This uncertainty, added to the unsafe conditions passengers may experience, makes public transport one of the biggest issues affecting quality of life in Lima.



Source: [Lima y Callao según sus ciudadanos](#)

# The experience on the road



Microbuses, buses, combis, and mototaxis make up the majority of public transport routes. Drivers compete for passengers across Lima's main roads and avenues, taking them to areas that are not serviced by their fixed-route counterparts.

Demand for public transport continues to increase in these regions of the city, which has led to a growth in vehicular volumes, particularly for informal mode agencies. This increase is a significant contributor to Lima's traffic issues.

The Peruvian capital is currently ranked as the [15th most congested city in the world](#). On average, people spend over

two hours a day on the road, and the city's rush hours have nearly doubled, going from five hours of congestion a day to nine in the last ten years.

With so much at stake, finding insights that reflect the reality on the ground is essential for anyone looking to make informed decisions. But, with most data providers offering outdated information that covers only 5% of the public transport network, reliable data is scarce. Locals end up depending on word of mouth to get around the city, and organisations looking to understand mobility and place in Lima are left in the dark.

# Public transport modes in Lima: An intersecting web of modes and transport networks



In Lima, people alternate between government-run and privately owned modes of transport to get where they need to go. The former are prevalent in the capital's central districts, often benefiting from dedicated lanes that travel across main avenues. The latter offer greater flexibility, with room for detours and on-demand stops, and routes that reach remote areas of the city.

Against this range of options, commuters make transport decisions based on their immediate needs, with speed, cost, and access being the main factors.

# Metropolitano



The Metropolitano is a government-owned Bus Rapid Transit (BRT) system, which was launched in 2010. It is run by Lima's Autoridad de Transporte Urbano (ATU)—the specialised technical body of the Ministry of Transport and Communications.

The network is composed of two types of services: Trunk and Feeder Routes—locally known as troncal and alimentadoras respectively—which cover 35 stops across the city.

Trunk routes are served by articulated buses travelling on an exclusive lane that connects 12 of the city's districts.

These routes start from the Comas district, in the North, going all the way to Chorrillos, in the South. People can choose between four regular services and 11 express ones, which cover only a fraction of the stops.

Feeder routes travel on non-exclusive lanes, connecting people to the troncal route's terminal stations: Naranjal and Martellini. There are 17 northern routes and four southern ones.

Between both route types, the Metropolitano covers 18 of Lima and Callao's 50 districts, making over 700,000 trips every day.





## Combis and microbuses

Combis and micros—the word used in common-day Peruvian Spanish as an abbreviation for microbuses—are flexible modes that can be flagged down on most streets in Lima. They are cheap and easily accessible, with set routes across all areas of the city, including sectors where Metropolitano buses and the Metro are not available.

Combis are minibuses with a single door, with a 15-24 passenger capacity. Slightly bigger than a combi, microbuses have a capacity of 37-50 passengers.

Commuters have different ways to identify which route a vehicle covers. In addition to the coloured lines painted on the sides, combis and microbuses display route numbers and terminal stations on a sign. Some also have the name of their

agency painted on the front. Over the years, this has led to people informally naming some routes after the companies that cover them.

Both combis and micros are synonymous with speed and reckless driving, with drivers racing each other to get to potential passengers first. However, even with this associated risk, commuters on a tight schedule favour combis due to their convenience and accessibility, as they are the only public transport mode that is available into the later hours of the night.

Combis and micros are owned by private companies, operating multiple routes and agencies across the city.

# Corredores complementarios



Inaugurated in 2014, corredores complementarios are buses designed to integrate with and complement other government-run modes of transport. The service is provided and regulated by the Municipality of Lima.

Currently, there are four corredores complementarios serving people in Lima: Blue, Red, Purple, and Yellow. The Blue corredor runs from El Rimac to Surco, the Red goes from San Miguel to Ate, the Purple connects San

Juan de Lurigancho to San Isidro and Magdalena, and the Yellow runs from San Martín de Porres to Surco.

Just like Metropolitano buses, corredores run on dedicated lanes across the city's main avenues, with some covering exclusive routes. However, due to a shortage of vehicles, waiting times can be between 10 and 15 minutes, making them one of the slower modes of transportation in the city.



# Omnibuses

Omnibuses are privately owned buses that follow fixed routes across Lima. They cover long distances from one end of the city to the other, and can serve as last mile connections to Metropolitano or Metro stations, particularly for people carrying luggage.

They are safer and more comfortable than micros and combis, and more easily available than government-run modes, which makes them the preferred choice for the majority of the population.



# Colectivos

Colectivos are minivans and cars that operate as shared taxis. Some of them have a taxi permit, but many operate informally. They travel through fixed routes across Lima's major avenues, offering passengers the flexibility to request stops on demand. These vehicles cover the same areas that corredores do, but can get there faster as they don't have to serve as many passengers along the way. Their fares are higher than most public transport modes, but still cheaper than private taxis.

Travelling by colectivo is perceived as unsafe. Robberies can often occur, and there is no way for people to know if they can trust the driver ahead of boarding. However, due to their convenience and speed, commuters in a rush are willing to take the risk.

# Metro de Lima

Commonly referred to as tren—the Spanish word for train—the Metro is a rapid transit system serving the Lima metropolitan area. Similar to Metropolitano buses, the Metro is also owned by the government, and administered by the ATU.

It currently has one operational line, known as Line 1, with five additional lines planned. Line 1 has 26 stations and serves 10 of the city's districts, from the northeast to the south of Lima. The line starts at Villa El Salvador and finishes with Bayóvar, in the San Juan de Lurigancho district. Lines 2 and 4 are currently under construction, and will connect the city from east to west.

Due to limited coverage of the system, ridership currently remains low, with only 3% of the population using the Metro.



# Mototaxis

Mototaxis—also known locally as motos—are vehicles that take people on short journeys for a low fee. They serve passengers on demand, and can usually be found in areas of the city where other public transport modes are not available. People take motos as first and last mile connections, mainly to get to markets, transport hubs, and Metropolitano stations.

Similar to colectivos, mototaxi trips can be perceived as unsafe due to risk of robberies, so people tend to prefer motos with doors.



# What this means for organisations looking to understand the opportunities in Lima

In order to develop meaningful and effective solutions, organisations need to understand the mobility ground truth in Lima. With high-quality mobility and location data, companies can identify not only where and how people move, but the opportunities presented by these trends. Accurate and reliable data makes it possible to develop smarter solutions and enrich existing ones, empowered by an understanding of mobility in the city.

Whether you are aiming to localise existing services, make data-driven decisions, or inform upcoming projects, accessing complete, accurate, and reliable mobility data will be vital to deliver meaningful solutions in cities where public transport plays such an essential role in the dynamics of the city.

Generate new insights: Augment your evaluations and make data-driven decisions, leveraging unrivalled information on urban mobility networks, across every public transport mode.

Solve real-world problems: Shape urban and transport planning projects informed by an understanding of the mobility ground truth, and responding to growth trends.

Understand impact and opportunity: Evaluate movement, place, and opportunity, supported by comprehensive and reliable insights into a city's mobility network.

Identify economic trends: Combine high frequency mobility data with demographic data and other demand proxies, broadening your analysis to better identify economic impact and opportunity in emerging-market megacities.

Contact us to learn more about how we can help you deliver smarter solutions with unrivalled mobility data from emerging-market megacities.



A trusted source of mobility data and solutions for emerging markets



WhereIsMyTransport is a leading mobility technology company and central source of complete public transport data for emerging-market megacities. Working on the ground in Africa, Latin America, Southeast Europe, and South and Southeast Asia, we digitalise network information from all modes of public transport and maintain data accuracy as these dynamic systems change. Our products and data services improve the public transport experience, and inform industry-leading clients.

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