UITP ADVANCING PUBLIC TRANSPORT

STATISTICS BRIEF

GLOBAL WATERBORNE FIGURES 2025

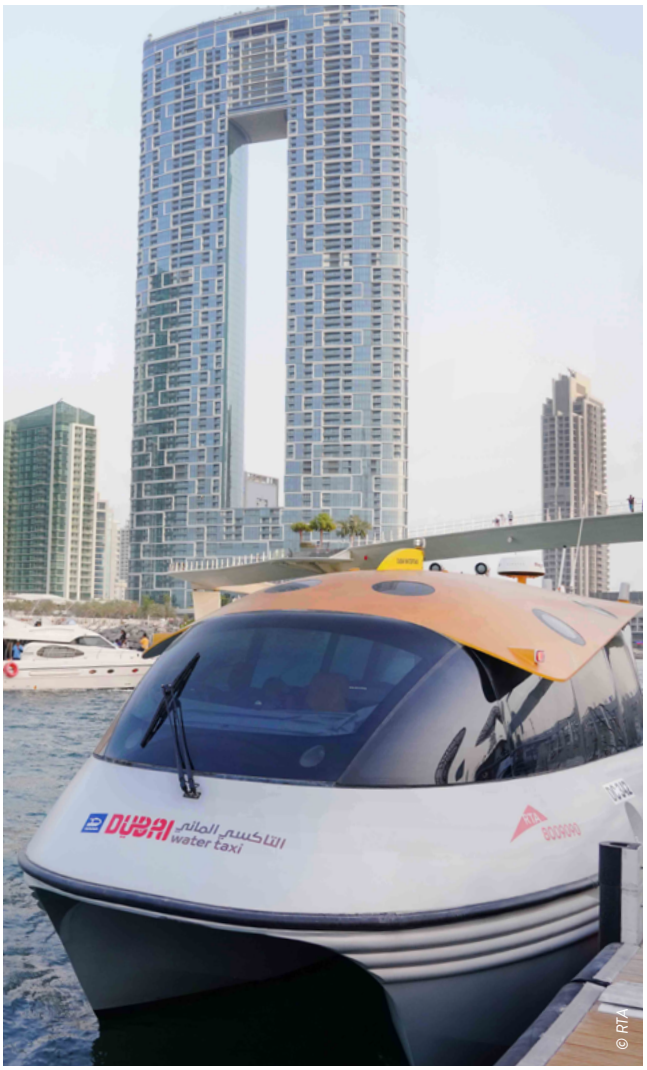
DECEMBER | 2025

INTRODUCTION

Waterborne public transport (WPT) plays a crucial role in urban and regional mobility, offering an efficient form of public transport for seamless transfers to road and rail transport. As cities expand and congestion intensifies, ferries, water taxis, and other maritime transit modes provide essential connectivity across rivers, lakes, and coastal areas. Globally, water transport networks vary in scale and purpose, from major ferry systems in megacities like New York City (NYC), United States of America (USA), Sydney, Australia, and Hong Kong to smaller, localised services in island communities. These systems contribute to reducing road congestion, lowering emissions, and enhancing multimodal integration.

As environmental concerns and urbanisation trends drive demand for sustainable transport, WPT is evolving, with innovations such as electric and clean fuel-powered vessels, digital ticketing systems, and enhanced service reliability.

As cities grapple with congestion and emissions, ferries, water taxis, and maritime transit systems provide viable complementary public transport, particularly in megacities like ***Hong Kong, Istanbul, Turkey and NYC,*** *where they serve* ***millions of passengers annually.***



Dubai, UAE

KEY INSIGHTS (2024)

- **Global ridership recovery:** Post-pandemic demand has rebounded, with some regions reaching **80–90% of pre-2019 coronavirus disease (COVID) levels.**
- **Electrification surge: 30% of European Union (EU) ferries** now use hybrid/electric propulsion, led by Oslo, Norway, Stockholm, Sweden, and Copenhagen, Denmark.
- **Growth potential:** WPT only accounts for **<5% of urban transit** globally but is growing in emerging markets like **Kochi, India,** and **Dubai, United Arab Emirates (UAE).**

By understanding the statistical landscape of WPT, policymakers, urban planners, and stakeholders can make informed decisions to improve efficiency, accessibility, and sustainability in this essential transport mode.

GLOBAL DEVELOPMENT OF WATERBORNE PUBLIC TRANSPORT: ELECTRIFICATION AND AUTOMATION TRENDS

WPT is evolving rapidly, driven by urban growth, environmental concerns, and technological advancements. Cities worldwide are investing in ferry networks to provide efficient, sustainable, and integrated transport solutions. In addition to expanding services, the latest trends focus on **electrification and automation** to reduce emissions and enhance operational efficiency.

ELECTRIFICATION IN WATERBORNE PUBLIC TRANSPORT

Many cities are adopting electric and hybrid ferries to cut carbon emissions and improve air quality.

- **Oslo** introduced the world's first fully electric car and passenger ferry, 'Ampere', in 2015, leading to a nationwide push for battery-powered vessels.
- **Stockholm** has deployed electric ferries within its public transport system, integrating them seamlessly with trains and buses.
- **Copenhagen** launched electric harbour buses to complement its metro system.
- **NYC** is investing in hybrid-electric ferries to replace older diesel-powered vessels.
- **Lisbon**'s Seixal – Cais do Sodré route is entirely operated by 100% electric vessels, with plans to progressively extend the green fleet to other TTSL river routes.

AUTOMATION AND AUTONOMOUS FERRIES

Automation is shaping the future of WPT, improving safety and efficiency through artificial intelligence (AI)-driven navigation and self-docking technologies.

- **Trondheim, Norway** launched the world's first autonomous passenger ferry, 'MilliAmpere', as a pilot for future self-operating fleets.
- **Helsinki, Finland** tested the 'Falco' autonomous ferry, which uses AI and sensors for precise navigation.
- **Singapore** is investing in self-driving water taxis to improve last-mile connectivity for its urban waterfront developments.

These innovations highlight how electrification and automation are transforming WPT, making it more eco-friendly, more efficient, and better integrated with other public transport modes. As more cities adopt these technologies, water transit will play an even greater role in sustainable urban mobility.

WATERBORNE PUBLIC TRANSPORT NETWORKS WORLDWIDE: KEY FIGURES (2024)

Waterborne public transport plays a vital role in urban mobility across the globe, with significant regional variations in scale and usage. In Europe, cities like Amsterdam, the Netherlands and Venice, Italy operate over **200 ferry routes** combined, serving **over 50 million passengers** annually. The EU leads in sustainability, with **30% of ferries** now hybrid or electric.

Asia dominates in ridership, with Hong Kong's Star Ferry alone transporting **26 million passengers** annually, while Istanbul's ferries handle **over 100 million trips** across the Bosphorus every year. Latin America's largest network, Barca RJ in Rio de Janeiro, Brazil, serves **8 million passengers,** but underinvestment limits growth.

In North America, the NYC Ferry had **7.4 million riders** in 2024, while the Staten Island Ferry had **16.7 million,** a total of **24.1 million riders** for the publicly funded ferries. The Middle East and North Africa (MENA) region is expanding, with Dubai's water taxis seeing **1.03 million trips,** driven by tourism and daily commuters. Despite its potential, WPT accounts for a relatively low share of global transport, representing **<5% of urban transit** in most cities. Future growth depends on electrification and better integration with rail and road networks.

INFRASTRUCTURE

Infrastructure forms the backbone of WPT systems, enabling safe, efficient, and reliable service delivery. Across global cities, the design, scale, and integration of WPT infrastructure vary significantly depending on geography, demand, and policy priorities. WPT infrastructure includes ferry terminals, piers, docking stations, maintenance yards, and charging facilities (for electric fleets). Modern infrastructure must accommodate diverse vessel types, peak passenger loads, and multimodal connections.

Leading cities like Hong Kong, Istanbul, and Amsterdam have invested heavily in robust infrastructure with real-time passenger information, accessible platforms, and multimodal hubs. In contrast, emerging systems in cities like Kochi and Dubai are building from the ground up, with integrated planning and digital systems.

Electrification is driving the need for new port infrastructure, such as shore-charging stations and energy storage units. Cities like Oslo and Stockholm are installing these to support fully electric fleets. Automation requires advanced infrastructure too—docking systems with precision sensors, command centres for remote vessel operations, and AI-powered traffic control.

In many regions, existing infrastructure is aging or underutilised. Upgrades are essential to meet rising demand and environmental goals. Governments are increasingly prioritising WT in urban planning, allocating budgets for port modernisation and accessibility improvements.

Lisbon, Portugal

Hong Kong, Hong Kong SAR

7 LARGEST WATERBORNE PUBLIC TRANSPORT NETWORKS WORLDWIDE (2025)

As of 2025, the largest WPT networks worldwide, based on passenger volume and network size, include:

- **Hong Kong's Ferry Services:** The Star Ferry and other operators provide services on extensive routes across Victoria Harbour and outlying islands, serving millions of passengers annually.
- **Istanbul's Şehir Hatları:** Connecting the city's European and Asian sides, this network is vital for daily commuters and tourists, with numerous lines traversing the Bosphorus.
- **NYC Ferry:** Continuously expanding its routes, NYC Ferry offers extensive services across boroughs, which has significantly enhanced the city's public transport system.
- **Sydney Ferries:** Operating across Sydney Harbour and the Parramatta River, this network is integral to the city's transport, connecting central Sydney to various suburbs.
- **Venice's Vaporetto:** Serving as the primary mode of transport within Venice, the Vaporetto network navigates the city's intricate canal system, catering to both locals and tourists.
- **Bangkok, Thailand's Chao Phraya Express Boat:** Providing an alternative to road traffic, this service operates along the Chao Phraya River, connecting key areas of the city.
- **Kochi Water Metro:** Launched in 2023, India's first integrated water transport system connects Kochi's islands to the mainland, aiming to serve up to 150,000 passengers daily upon full operation.

These networks exemplify the growing importance of WPT.

NYC, USA

RIDERSHIP

WPT ridership has seen steady growth globally, driven by urban expansion, congestion reduction efforts, and environmental sustainability initiatives. Cities with natural waterways, such as Hong Kong, Istanbul, and New York, have expanded ferry networks to accommodate increasing demand.

Electrification and automation are enhancing service efficiency, attracting more passengers by offering cleaner and more reliable transport options. Integrated ticketing systems and seamless connectivity with buses and trains have further boosted ridership.

Post-pandemic recovery, rising tourism, and climate-conscious policies are also contributing to higher passenger volumes. As investments in infrastructure and technology continue to grow, WPT is expected to play an even greater role in global urban mobility.

REGIONAL RIDERSHIP CHANGE FROM 2023 TO 2024

In 2024, WPT systems worldwide experienced varied ridership changes compared to 2023, influenced by regional factors and post-pandemic recovery efforts.

United States: The United States saw a notable resurgence in public transit usage. By the end of 2023, ridership had reached 79% of pre-pandemic levels, with a 16% annual increase in trips. This upward trend continued in 2024, with 83% of operators expecting growth compared to 2023. Specifically, Amtrak reported a 15% increase in passenger trips, totalling a record 32.8 million in 2024.

Overall, the global trend indicates a steady recovery in public transport usage, with regional variations influenced by local policies, infrastructure investments, and shifts in commuter behaviour. As of 2025, comprehensive and up-to-date data on the top WPT systems worldwide, including exact ridership volumes and their percentage shares, is not readily available. Nevertheless, while specific WPT data is limited, the positive public transport outlook suggests continued recovery and potential growth in ferry and other WPT services.

FLEET

The fleet is the operational core of any WPT system, comprising vessels tailored to local geography, passenger volumes, and environmental goals. Globally, fleets range from traditional wooden boats to state-of-the-art electric catamarans. Cities like Oslo and Stockholm are in the lead in terms of electric and hybrid vessel deployment to reduce emissions and noise. Istanbul and Hong Kong operate large, mixed fleets to manage high passenger volumes across varied routes.

Fleet modernisation is accelerating, with growing investments in low-emission and autonomous vessels. High-speed boats are used in intercity or long-distance routes, while smaller, low-speed vessels support dense urban networks. Operational efficiency depends on fleet capacity, maintenance standards, and energy sources. Smart technology integration in vessels is enhancing safety, tracking, and performance.

Dubai, UAE

CITY PROFILES AND ANALYSIS

ABU DHABI, UAE

Abu Dhabi's water transport network, operated by the Department of Municipalities and Transport, is a modern and growing system designed for both tourism and commuter travel, showcasing the city's coastline and connecting key destinations.

Key Statistics

METRIC	FERRY SERVICE	WATER TAXI SERVICE
TOTAL ROUTES	2	4
NETWORK LENGTH	51.85km	26.11km
TOTAL STOPS /STATIONS	4	9
TOTAL FLEET SIZE	4 ferries	6 water taxis
ANNUAL RIDERSHIP (2024)	113,426	48,044

Services & Fleet

- **Ferry Service:** Connects Dalma Island to Al Dhanna (40.74km) and Saadiyat Island to Al Aliah (11.11km).
- **Water Taxi Service:** Four scenic loops connecting key landmarks, including Marsa Mina, Louvre Abu Dhabi, Yas Bay, Yas Water's Edge, and Al Qana. The shortest route is 2.5km (Marsa Mina-Louvre Abu Dhabi).

Istanbul, Turkey

DUBAI, UAE

The Dubai Ferry system, operated by the RTA, is a modern network integrating commuter and tourist travel along Dubai's coastline, showcasing its iconic skyline.

Key Statistics

TOTAL ROUTES	16
TOTAL NETWORK LENGTH	158 kilometres (km)
TOTAL STATIONS	48
TOTAL FLEET SIZE	189 vessels
ZERO-EMISSION VESSELS	11
TOTAL FLEET CAPACITY	5,625 passengers

Services

- **Dubai Ferry:** 5 routes, 14 high-speed catamarans (100-150 pax each).
- **Water Bus:** 5 routes, 15 catamarans (40-50 pax each), 21 stations.
- **Abra:** 149 traditional + 11 electric abras, serving 6 cross-waterway routes.

GUANGZHOU, CHINA

Focused on leisure and tourism on the Pearl River, Guangzhou's services blend traditional ferry operations with modern sightseeing cruises and branded culinary experiences.

Key Statistics

TOTAL ROUTES	12 (6 ferry, 6 cruise)
TOTAL WHARVES	27
TOTAL FLEET SIZE	61 vessels
ZERO-EMISSION VESSELS	3
TOTAL FLEET CAPACITY	11,735 passengers

Operational Focus

- **Ferry Routes**: 3.6km total length, 15-30 min headways.
- **Sightseeing Cruises:** 9.3km main route, 30-60 min headways.

ISTANBUL, TURKEY

A historic and culturally iconic system, Istanbul's ferries are the lifeline of the Bosphorus, connecting the European and Asian sides of the city.

Key Statistics

TOTAL ROUTES	32
TOTAL NETWORK LENGTH	60km (est.)
TOTAL PIERS	53
TOTAL FLEET SIZE	133 vessels
ZERO/EMISSION VESSELS	5 (hybrid)
AVG. VESSEL CAPACITY	1,120 passengers

Fleet Composition

- **Traditional Ferries:** 30.
- **Sea Buses:** 9.
- **Sea Taxis:** 50 (incl. 5 hybrid).

KOCHI, INDIA

The Kochi Water Metro is one of the world's most ambitious integrated water transport projects, featuring a large fleet of modern hybrid ferries connecting islands in the Greater Kochi region.

Key Statistics

TOTAL ROUTES (PLANNED)	15
TOTAL NETWORK LENGTH	76km
TOTAL TERMINALS	38
TOTAL FLEET (PLANNED)	78 passenger vessels + 4 work boats
PROPULSION	Fully electric (with hybrid backup)
STANDARD VESSEL CAPACITY	100 passengers

Key Feature

A state-of-the-art operations control centre (OCC) manages all routing, scheduling, and safety, aiming for high-frequency service (12-15 min headways).

LAGOS, NIGERIA

Lagos features a vast and complex water transport network characterised by a large informal sector operating alongside a smaller, more modern state-owned fleet. The system is a critical, though often informal, component of urban mobility in the megacity.

Key Statistics

TOTAL ROUTES	57
TOTAL NETWORK LENGTH	1,227km (sum of all routes)
TOTAL TERMINALS/STOPS	107 (estimated unique stops)
TOTAL FLEET SIZE	729 vessels (708 informal, 21 state)
ZERO-EMISSION VESSELS	0 (transition to compressed natural gas (CNG) planned)
AVG. PASSENGER CAPACITY	17-60 pax (varies by vessel)

Fleet Composition

- **Informal Sector:** 708 mono-hull vessels, primarily petrol, aka Premium Motor Spirit (PMS), with capacities of 17-30 passengers.
- **State-Owned Fleet:** 21 vessels (mono and catamaran hulls), diesel-powered, with capacities of 20, 30, 45, 50, and 60 passengers.

Operational Focus

- **Primary Role:** Essential commuter service with extensive route coverage, including long-distance routes (e.g., Ebute Ero-Badagry, 65.1km).
- **Headways:** High-frequency service during peak periods (15-20 minute intervals on major routes).
- **Future Plans:** Ongoing efforts to transition from PMS to CNG for reduced emissions.

Stockholm, Sweden

LISBON, PORTUGAL

An essential commuter service across the Tagus River, Lisbon's ferries provide a critical link between the capital and its southern suburbs.

Key Statistics

TOTAL ROUTES	5
NETWORK LENGTH	100km (combined)
TOTAL TERMINALS	9
TOTAL FLEET SIZE	30 vessels
ZERO-EMISSION VESSELS	10 full electric
AVG. COMMERCIAL SPEED	29km/h

Fleet Mix

- **High-Speed Catamarans:** 8 vessels (700 pax).
- **Conventional Ferries:** 22 vessels (400-540 pax).

ROTTERDAM-DORDRECHT, NETHERLANDS

The Waterbus is a fully integrated part of the Dutch public transport network, offering efficient and scenic river transport for commuters and tourists, with bicycle-friendly vessels.

Key Statistics

TOTAL ROUTES	5
ROUTE LENGTH RANGE	0.5-25km
TOTAL TERMINALS	26
TOTAL FLEET SIZE	20 vessels
ZERO/EMISSION VESSELS	9 (3 electric, 6 hybrid)
PASSENGER CAPACITY	Up to 120 pax/vessel

Speed Profile

- **Waterbuses (High-Speed):** 40 km/h.
- **City Ferries (Low-Speed):** 12 km/h.

COMPARATIVE ANALYSIS: KEY INDICATORS

Table 1: Comparative Fleet Overview

CITY	FLEET SIZE	ZERO-EMISSION / HYBRID VESSELS	PASSENGER FLEET CAPACITY
DUBAI	189	11 / 0	5,625
ISTANBUL	133	5 (hybrid)	149,000 (est.)
GUANGZHOU	61	3 / 0	11,735
LISBON	30	10 / 0	13,000 (est.)
ROTTERDAM	20	3 / 6	2,400 (est.)
KOCHI	78 (planned)	78 (hybrid)	7,800 (est.)
LAGOS	729	0 (planned CNG transition)	16,000 (est.)
ABU DHABI	10	0	NA

Table 2: Network Scale & Operation

CITY	NUMBER OF ROUTES	TOTAL STATIONS/ PIERS	AVG. COMMERCIAL SPEED (KM/H)
DUBAI	16	48	11.4
ISTANBUL	32	53	22-28
GUANGZHOU	12	27	N/A
LISBON	5	9	29
ROTTERDAM	5	26	12-40
KOCHI	15	38	15-19 (8-10 knots)
LAGOS	57	107	35-70 (knots)
ABU DHABI	6	13	N/A

The data from these eight cities highlights several key global trends in urban water transport:

- **Diversification of Services:** Cities operate mixed fleets tailored to different purposes (high-speed commuter catamarans, high-capacity ferries, traditional cultural experiences, and leisure cruises).
- **Drive Towards Sustainability:** There is a clear movement towards integrating zero-emission and hybrid vessels to reduce the environmental footprint, with Kochi serving as a benchmark for large-scale electrification.
- **Role in Urban Mobility:** Beyond tourism, these systems provide essential, reliable commuter services that alleviate road congestion and offer resilient transport corridors.

As urban areas continue to grow and seek sustainable mobility solutions, the strategic importance of waterborne public transport is likely to increase globally.

THE FUTURE OF WATERBORNE PUBLIC TRANSPORT

Waterborne public transport has emerged as a critical component of sustainable urban mobility, offering efficient, low-emission alternatives to congested road and rail networks. As highlighted in this report, global trends underscore the accelerating adoption of **electrification and automation,** driven by environmental imperatives and technological advancements.

KEY TAKEAWAYS

- **Electrification Leads the Way:**
  - Cities like Oslo, Stockholm, and Copenhagen have pioneered electric and hybrid ferries, reducing emissions and setting benchmarks for clean maritime transit.
  - The EU leads the sector globally, with **30% of ferries** now using hybrid/electric propulsion.
- **Automation Promises to Enhance Efficiency:**
  - Autonomous ferry pilots (e.g., Norway's MilliAmpere and Singapore's water taxis) demonstrate the potential for safer, cost-effective operations.
- **Ridership Recovery and Growth:**
  - Post-pandemic demand has rebounded to **80–90% of pre-COVID levels** in key markets, with Asia (e.g., Hong Kong and Istanbul) dominating ridership volumes.
  - Integrated ticketing and multimodal connectivity are boosting passenger numbers.
- **Untapped Potential:**
  - Despite growth, WPT only accounts for <5% of urban transit globally, signalling opportunities for expansion in emerging markets (e.g., Kochi and Dubai).
- **Infrastructure Expansion:**
  - Megacities like New York, Sydney, and Hong Kong are continuing to invest in expansive networks, while newer systems (e.g., Kochi Water Metro) are highlighting the role of WPT in addressing urban mobility gaps.

THE PATH FORWARD

To fully realise the potential of waterborne transport, stakeholders must prioritise:

- ***Policy Support:*** *Incentivise green vessel adoption and fund infrastructure upgrades.*
- ***Multimodal Integration:*** *Seamlessly connect WPT with rail, metro, and bus networks.*
- ***Technology Investment:*** *Scale automation and renewable energy solutions (e.g., hydrogen fuel cells).*
- ***Global Collaboration:*** *Share best practices across regions to accelerate innovation.*
- ***Research:*** *Research and development (R&D) for clean alternative fuels for high-speed crafts (HSCs), and knowledge sharing through technology and research results.*

As cities grapple with climate change and urbanisation, waterborne public transport is poised to play a pivotal role in shaping resilient, equitable, and sustainable mobility systems worldwide. By leveraging data-driven strategies and cutting-edge technologies, the sector can transition from a niche service to a backbone of urban mobility—connecting communities, reducing emissions, and redefining the future of public transport.

Lagos, Nigeria

This is an official Statistics Brief of UITP, the International Association of Public Transport. UITP represents the interests of key players in the public transport sector. Its membership includes transport authorities, operators, both private and public, in all modes of collective passenger transport, and the industry. UITP addresses the economic, technical, organisation and management aspects of passenger transport, as well as the development of policy for mobility and public transport worldwide.

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