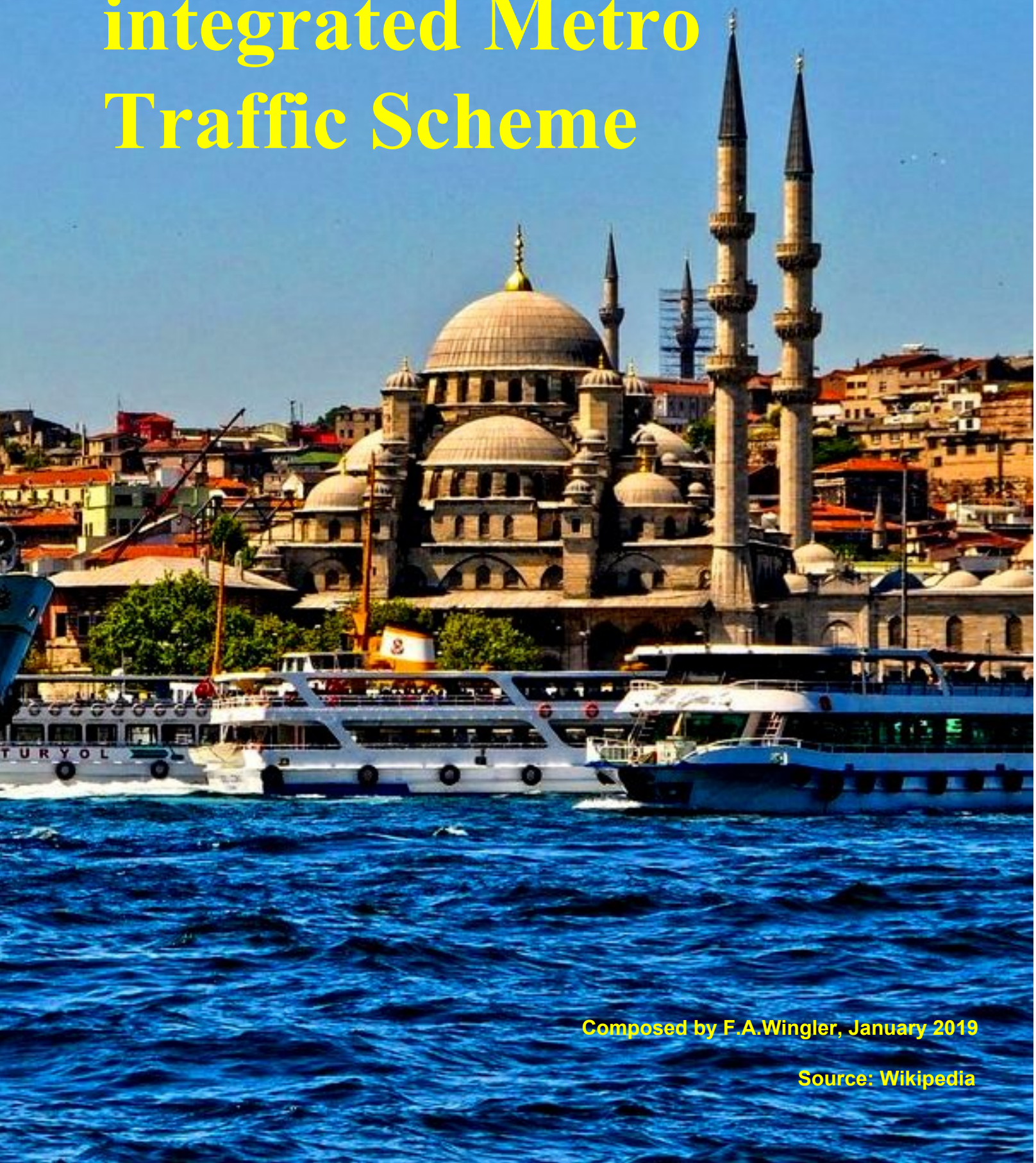


Istanbul metropolitan integrated Metro Traffic Scheme



Composed by F.A.Wingler, January 2019

Source: Wikipedia

Integrated multi-modal Public Metropolitan Transport in Istanbul

Public Transport in Istanbul is an integrated and interactive metropolitan transport service comprising bus network on dedicated lanes, various rail systems (tram, underground, railway), funiculars, gondolas and maritime-seaway (sea-bus) services to serve the more than 13 million inhabitants of the city spread over an area of 5712 km².

Transportation today

Metro

Main article: Istanbul Metro



Osmanbey Station of the Istanbul Metro

The first line (M1) began service on 3 September 1989 between Aksaray and Kartaltepe. The line was further developed step-by-step and reached Atatürk Airport on 20 December 2002. The line has 18 stations and is 19.6 kilometres (12.2 mi) long. As of 2012, daily ridership was 416 journey and 210,000 passengers. Even if its numbered as the first line, actually the line is a LRT system with many common characteristics with the T4 line, including the rolling stock. Though they are categorized differently by the operator.

The construction of the underground railway in Istanbul began in 1992. The *first line* (M2) between Taksim and 4th Levent went into service on September 16, 2000. This line is 8.5 km long and has 6 stations, which all look similar but are in different colors.

A northern extension from 4th Levent to Atatürk Oto Sanayi station in Maslak (Ayazağa) entered service in 2009, as well as a southern extension from^[5] Taksim to Şişhane station in Beyoğlu, near the northern entrance of Tünel. Last northern extension for short term, Hacı Osman was opened in 2011. The

rest of the southern section of the metro, which will run to Yenikapı, across the Golden Horn on a bridge and underground through the old city, is also under construction. The southern extension of M2 from Şişhane to Yenikapı over the new Golden Horn Bridge is opened in 2013 permitting the line to reach the Yenikapı Transfer Center. Finally the Airport (M1A) and Bağcılar (M1B) lines' eastern terminus was extended from Aksaray to this transfer center in 2014.

On the Asian side, 26.5 km (16.5 mi) long M4 line opened on 17 August 2012 up to Kartal. The line will have a total of 19 stations when the second section as far as Kaynarca opens. A connection to Sabiha Gökçen Airport is proposed.

Construction has also begun on the M5 which will link Üsküdar, Ümraniye and Çekmeköy on the Asian side.

Currently there are 124 Hyundai-Rotem (M2) and 120 CAF^[6] (M4) trains in service. A trip along the entire line takes 27 (M2) and 32 (M4) minutes.

All lines are operated by Metro İstanbul (the new name of İstanbul Ulaşım A.Ş.) which belongs to the Municipality of İstanbul.

Tram

Main article: [İstanbul Tram](#)



Nostalgic Tram and modern Tram **Systems of İstanbul**

İstanbul inaugurated horse trams in 1872 and these served the people of İstanbul until 1912. Following this date, electric trams were put in place and they were the main means for urban public transport until 1966. Many routes were built step by step, and it reached their most widespread network in 1956 with 108 million passengers in 270 shuttles in 56 lines. Tramcars were not modernized for many decades, and some of the 1911 electric cars were still running in the 1960s. At that time modern buses provided faster and

smoother journeys. Because of those negative issues, tram system closed in mid-1960s.

From the early 1970s, traffic congestion worsened. By the mid-1980s, Istanbulians realized that the uncontrolled extension of motorization & closure of the tram network had been a mistake. Other cities around the world, e.g. Tunis and Buenos Aires, also understood that error, and like them, Istanbul also planned the return of tramway.

As an experiment, Istanbul first opened a heritage tram at European side in 1990. Due to increasing popularity, they opened a modern tram system starting in 1992, also at European side. Now, the Asian side has a heritage tram system, whereas the European side has both a heritage tram and a modern tram system.

The modern tram consists of lines T1 and T4, initially operated with 55 low-floor Bombardier Flexity Swift and 32 Alstom Citadis.^[8] The other line (T4) was opened in 2007 between Edirnekapı and Mescid-i Selam. There are 22 stations and length is 15,3 km . Since March 2009, the line works between Topkapı and Hapibler Service is operated with LRT vehicles built by SGP in 1989. As of 2012, daily ridership was 380 journey and 100,000 passenger.

Commuter Rail

Main article: [Marmaray](#)

Starting from June 2013, suburban lines on both sides of the city (Istanbul suburban and Haydarpaşa suburban) were closed for rehabilitation works as well as for their fusion into a single line by the means of an undersea tunnel through the Bosphorus as part of the Marmaray project.

As of August 2016, only the underground parts of the Marmaray between Kazlıçeşme and Ayrılık Çeşmesi are operational, the rest of the line being still under re-construction.

Funicular

Main articles: [Kabataş–Taksim funicular](#) and [Tünel](#)



Operated by İETT, the *Tünel* (1875) in Istanbul was the first underground railway line in continental Europe, and the second subterranean railway line in the world after London's *Underground* (1863).

Istanbul is served by two underground funicular railways, of very different ages and styles.

The older of these lines is the *Tünel*. This line is the oldest underground metro line in continental Europe, and the second in the world after London. The *Tünel* is 573 m long with an altitude difference of 60 m and no intermediate stations between Karaköy and Tünel Square. It has been continuously in service since 1875. It was originally steam-powered with two wooden trains serving parallel tracks. It was modernized in 1971. Today the line is single-track with a passing loop, electrically powered and runs on rubber tyres with rebuilt ex-RATP MP 55 vehicles. A trip takes approximately 1.5 minutes. About 15,000 people use the line each day. Unlike the modern one below which runs at strictly five-minute intervals, this one has a less regular schedule.

Opened in June 2006, a second modern funicular line, the Kabataş-Taksim Funicular, is operated by Ulaşım A.Ş.¹ and connects the Seabus port and tram stop of Kabataş with the metro station at Taksim Square. It is about 600 meters long and climbs approximately 60 meters in 110 seconds.

Bus Rapid Transit (BRT)

Main article: [Metrobus \(Istanbul\)](#)



"Metrobüs" BRT in Istanbul

The bus rapid transit (BRT) system in Istanbul is called ***Metrobüs***. The construction of the **Metrobüs BRT** line began in 2005. The first line runs

between Avcılar and Söğütlüçeşme. This line is 41.5 km long and has 35 stations, which are located on Istanbul's Main Highway, called the D 100. It is currently operated with Mercedes Capacity, Mercedes-Benz Citaro, and some Phileas buses. Daily ridership is 715.000 passenger.

An extension to Beylikdüzü opened in 2012.

Ferryboats

Main article: [Ferries in Istanbul](#)



The commuter Ferry *Emin Kul*

Ferryboats sail on 15 lines serving 27 seaports on the shores of Bosphorus and Sea of Marmara. The 20 older ferryboats carry 61 million passengers yearly.^[1] In the 1980s 150 million people were transported.

Today, there are 3 types of ferry in İstanbul; Sea Busses (İDO), Vapur's (traditional name for commuter ferries) and private motorboats.

The first steam ferries appeared on the Bosphorus in 1837 and were operated by private sector companies. On 1. January 1851, the *Şirket-i Hayriye* (literally *The Goodwill Company*, as the Istanbul Ferry Company was originally called) was established by the Ottoman state. The *Şirket-i Hayriye* continued to operate the city's landmark commuter ferries until the early years of the Republican period; when they went under the direction of *Türkiye Denizcilik İşletmeleri* (*Turkish State Maritime Lines*). Since March 2006, Istanbul's traditional commuter ferries have been operated by municipality.

The current design of the Istanbul ferries, as we know them today, was largely created by the Fairfield Shipbuilders of Glasgow, Scotland, which also

built the largest amount of Istanbul ferries since 1851. The companies which designed and built the traditional commuter ferries of Istanbul include the White Shipbuilders of East Cowes, England (models of 1854-1860); the M. Wigram Shipbuilders of London, England (models of 1863-1869); Maudslay & Sons of London, England (models of 1870-1872); R. & H. Green Shipbuilders of London, England (models of 1872-1890 and 1894–1896); J. W. Thames of London, England (models of 1890-1893); Napier, Shanks & Bell of Glasgow, Scotland (models of 1893-1894); Fairfield Shipbuilders of Glasgow, Scotland (models of 1903-1906, 1910–1911, 1914–1929, and 1938–1962); Armstrong Shipbuilders in Newcastle and Glasgow, United Kingdom (models of 1905-1907); Atl. & Chantiers de France in Dunkerque, France (models of 1907-1911); Hawthorn Leslie and Company in Newcastle, England (models of 1911); Kinderdijk L. Smith & Zoon Ltd, Holland (models of 1951); Cantieri Navali di Taranto SPA, Taranto, Italy (models of 1952); and Hasköy, Camialtı, and İstinye Shipyards in Istanbul (models of 1929-1938 and 1962–1989).

Seabus

Main article: [İDO](#)

On 16 April 1987 the Municipality of Istanbul established a company to provide fast sea transport with catamaran-type *seabuses*. With the first ten vessels purchased from Norway, modernization of sea transportation was achieved. Today, the company İDO serves 29 terminals with a fleet of 28 catamarans, including six fast car ferries.

Aerial Lift



Maçka Gondola Tandem Cabins at Taşkişla Terminal

Main articles: [Maçka Gondola](#) and [Eyüp Gondola](#)

There is a short gondola lift line above the Democracy Park in the valley between Taksim and Maçka, the Maçka Gondola (Turkish: *Maçka-Taşkişla Teleferiği*), built in 1993. It connects the hotels Hilton Istanbul Bosphorus on one side with Parksa Hilton and Swissotel The Bosphorus on the other side.

The cable line is 333 m (1,093 ft) long and transports in two cabins with six seats each around 1,000 passengers daily. The trip takes three minutes.

A second aerial lift line, the Eyüp Gondola (Turkish: *Eyüp-Piyerloti Teleferiği*) was opened in 2005 between the historical district of Eyüp and the Pierre Loti Hill. The gondola lift, built by the Italian Leitner Ropeways Co. of Leitner Group was the most expensive cable car line in Turkey costing 5 million Euros.