Light Rail Transit (LRT) and tramway systems are in operation in 388 cities, the majority of which in Europe (206) and Eurasia (93), followed by Asia (41) and North America (36). Germany and Russia alone feature 123 systems (31% of total). This represents 2,300 lines for a total of 15,600 km of track. Together, LRT carries approximately 13.6 billion passengers every year (45 million daily). Regions like the Middle East & North Africa (MENA) and Asia are developing new infrastructure at a fast pace, while Africa and South America are starting to consider LRT as suitable solution, complementary to metro and Bus Rapid Transit.
**WHAT IS LIGHT RAIL?**

Light Rail covers a wide range of mainly surface rail systems with enhanced service quality in terms of frequency, speed and reliability; pleasant design for stations and vehicles and advanced IT. Furthermore, given the higher capacity, Park and Ride facilities are used around stations. However, as opposed to fully fledged metros, LRTs are not entirely segregated from individual traffic.

With its broad definition and wide-ranging scope of performance, LRT is versatile and suited to carry out various functions in the mobility pattern of cities. It can work as classical (modernised) tramways with extensive street-running sections and priority measures, as a new largely segregated LRT, as quasi-metro rapid transit, or in specific cases as tram-train. LRT can form the public transport backbone in a city, but it can also serve as a feeder to higher capacity metros or commuter railways; it can provide radial access from outskirts to the Central Business District, or orbital connectivity between suburbs.

**A REMARKABLE RENAISSANCE**

While tramways were running in a large number of cities in the then developed world in the 1920s and 1930s, many systems were scrapped in the post-World War II period. Since the early 1980s there has been a revival with LRT systems opened in 42 cities between 1985 and 2000 and in another 78 since 2000. To date, 850 km of track infrastructure are under construction and another 2,350 at the planning stage.

The countries which reflect most this renaissance since 1985 are the USA (23 systems), France (22 systems), Spain (16 systems) and Turkey (8 systems).

A number of older systems have been closed down in the same period, mainly in the former Soviet Union (8 systems), Romania (4 systems) and Egypt (1 system).

**PATRONAGE**

With over 13.5 billion journeys per year (see map), LRT represents 3% of the number of public transport passengers worldwide.

The most used systems are found in Budapest (396 million passengers per year), Vienna (363 million), Bucharest (322 million), Prague (317 million) and Saint Petersburg (312 million).

**LRT SYSTEMS WITH THE HIGHEST NUMBER OF ANNUAL PASSENGERS (MILLIONS)**

The list of cities includes 26 of 250 new systems with over 100 million passengers per year. The countries which reflect most this renaissance since 1985 are the USA (23 systems), France (22 systems), Spain (16 systems) and Turkey (8 systems).

A number of older systems have been closed down in the same period, mainly in the former Soviet Union (8 systems), Romania (4 systems) and Egypt (1 system).

**NEW SYSTEMS IN OPERATION 1985-2015**

The list of cities includes 26 of 250 new systems with over 100 million passengers per year. The countries which reflect most this renaissance since 1985 are the USA (23 systems), France (22 systems), Spain (16 systems) and Turkey (8 systems).

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1 Note that two recently opened systems have been temporarily closed down due to the economic downturn and insufficient patronage.
INFRASTRUCTURE

In parallel to the increase in the number of systems, many cities have invested to expand their network. Today there are 15,618 km of track infrastructure and around 32,245 stations/stops. This translates into an average distance between stops of 484 m.

The longest systems are found in Melbourne (245 km), Saint Petersburg (240 km), Cologne (193 km), Berlin (192 km) and Katowice (183 km).

LONGEST LRT NETWORKS (KM OF TRACK)

On a continental scale, LRT networks can be characterised by their respective average line length and distance between stations, as shown below. This relates to typical geographical and urban shapes and layouts of human settlements in cities (housing, CBD, jobs, recreational etc.): the sprawling nature of American cities contrasts with the more compact nature of cities in Europe, Asia or Eurasia. The average distance between stations is typically half of that of metros and reflects a functionality of serving the territory more densely, particularly in the cases where most stations are at grade level.

The low average line length also require some explanation: the linear kilometres collected represent (physical) track length. However, as many lines share (part of) the alignment, the average length depicted below is lower than the actual distance between termini.

LRT NETWORK CHARACTERISTICS

If we compare LRT patronage to network size, we can identify the most intensely used networks (annual passengers per km of available infrastructure). The top 5 are: Hong Kong Tuen Mun, Istanbul, Tokyo, Sarajevo, and Zagreb.

BUSIEST LRT NETWORKS (THOUSANDS OF ANNUAL PASSENGERS PER KM OF TRACK)
The world fleet is slightly above 36,000 Light Rail Vehicles. The age structure of the fleet varies significantly between continents and countries. In Western Europe and North America, LRVs will on average be below 20 years, as systems were recently opened or major fleet renewal has taken place. Eastern Europe is in a transition phase, while Eurasia is the continent with the oldest average age and where investment in fleet renewal is the most needed.

If we assume a useful life of 35 years, it would mean that in excess of 1,000 tram and light rail vehicles need to be produced every year for mere fleet renewal. Analysis of production figures between 1987 and 2014 suggest that only around 400-450 LRVs and trams are rolled out each year. In addition there is the second hand market and the business of LRV refurbishment. Nevertheless, these statistics point out to a worrying ageing of assets, at least in some parts of the world.

Data collection: the data for this statistics brief was collected over a one year period, between summer 2014 and summer 2015. The figures presented reflect the latest year for which data was available.

Infrastructure: track refers to the rail infrastructure for LRT running in both directions.

Lines: Number of lines in the LRT network; branch lines are considered when the branch infrastructure is proportionately relevant with regards to the length of the full line.

Vehicle fleet: only motorised LR vehicles which cannot be decoupled were considered, using the following rules: rigid unarticulated short tram = 1 LRV; articulated tram = 1 LRV; a multi-articulated longer tram = 1 LRV; any unit operated in double traction = 2 LRVs.