SUSTAINABLE MOBILITY

TRAINING COURSE **OVERVIEW**

Training Centre
Seoul Human Resource Development Centre (SHRDC)

Location
Seou, Korea

Date
April 22-29, 2018

Participants

Metropolis members

Amman
Jakarta
Rio de Janeiro
Seoul
Shanghai

non-members

Cuenca
Prague
Singapore
Thimphu

OBJECTIVES

To assess good practices to tackle one of the most challenging issues facing world cities. Designed specifically around participants' needs, the sessions mainly focused on pedestrian friendly policies, people-oriented approaches and Intelligent Transportation Systems (ITS).

CASE STUDIES ANALYSIS

Amman

Amman has a high population growth rate – **by 2030 the city is expected to be home to 7 million people** – and relatively low household incomes. This, in addition to a heavy dependence on cars, has led to an increase in traffic levels – which accounted for **4.35 million daily trips in 2018** – making traditional road expansion ineffective to accommodate mobility needs. With this in mind, the **Transport and Mobility Master Plan** was established and saw the creation of a new transportation planning department and a comprehensive study of 10,000 families to determine transport needs. The city then called for the construction of a **Bus Rapid Transit (BRT)**, in different phases. The first phase of the BRT, within the city, saw the introduction of a fleet of 150 high-capacity buses, which shuttle as many as **7,000 passengers per hour**, or 200,000 passengers per day, through a 33 km network, 25 km of which are dedicated bus lanes. The bus network incorporates **traveller information, an electronic payment system and off-board payment stations.** A second BRT line is planned to link Amman with its metropolitan area and the city of Zarqa, located 22 km east of the capital.

Jakarta

Jakarta has the world's **longest BRT system**, Transjakarta, which is 230.9 km long. Nevertheless, the reality of the city was that **74.7% of the citizens used private vehicles** – with approximately 18 million private vehicles in the city as of 2016 – while only 25.3% used public transport. This resulted in a **45.2 trillion Indonesian Rp loss every year** due to fuel wastage, vehicle operation cost, pollution, and so on. Jakarta's Transportation Authority launched the **OK-Otrip programme** trial in 2018 as a measure to increase public transport use by reducing transport costs, which at the time were **30% of the minimum monthly wage**. The programme was planned as an **integrated transportation system**, integrating the management, service routes and payment systems all together. The result was that citizens could commute to the city with unlimited transfers (intermodal transport included) for a **maximum of 5,000 Rp** (0.29€ - 0.34$) for a single trip (3 hours maximum).

Rio de Janeiro

Rio de Janeiro discussed the improvements to public transportation made due to the organisation of the **Olympics in 2016**. The city council created a new network of modern transport options that better connected the more isolated, poorer areas with the city centre. For example, the construction of the **TransCarioca Bus Rapid Transit corridor**–120km long – connected the Barra da Tijuca neighbourhood, located in the western part of the city, to the Tom Jobim International Airport, located in the eastern side, and now carries **450,000 passengers per day**. This new corridor allows users to reduce travel time by an estimated 66% between Barra da Tijuca and the Tom Jobim Airport and integrates the western and eastern

districts of the city. Furthermore, a travel demand management system was established for large events that prioritised public transport and pedestrian routes, a "**no car strategy**". Its organisation involved interaction between several city hall departments, and a broad communication strategy that included the population through apps, news and messages.

Cuenca

Cuenca City Hall presented the project "**Cycle paths along Cuenca's rivers**" (Ciclovía de los Ríos de Cuenca). The project involved the construction of **bike paths from north to south along the riverbank**, the city's most important environmental axis. The key issues involved in implementing the plan related to safety, redesigning the public space to create **safer cycle routes**, redefining road lines to **prioritise bicycles and pedestrians over private vehicles**, installing signalling devices at all street intersections with cycle paths, and tackling a lack of respect for pedestrians and cyclists through **education**. On a technical level, the public bicycle network was implemented and promoted through social campaigns to raise awareness on the health and environmental benefits of cycling.

Prague

Prague is known for having one of the best public transport networks in the world, with 3 metro lines, 8 ferries, 33 trams, 153 buses and 42 trains in addition to regional buses, ferries and funiculars. In total, **42% of the population are public transport users, 2% use both and a 27% walk or cycle**. This means, only 31% are private users, in contrast to 71% of public transport users. The city centre is pedestrian only, there is a free bike-sharing facility in public transport, there are park and ride facilities and paid parking zones divided by target groups where **e-cars or car-shares enjoy free parking**.

Singapore

Singapore is a **small and densely populated city-state** with approximately 5.6 million inhabitants as of 2018. Population growth has made the use of private cars inefficient, encouraging the government to push commuters away from private transport. Over the past 8 years, Singapore has increased its rail capacity and bus fleet, in line with its **Bus Service Enhancement Programme.**

The **Sustainable Singapore Blueprint 2014** was set out in collaboration with various land-use agencies and led by Singapore's Land Transport Authority (LTA). It pushes for active modes of transport and establishes a simple, practical and universal design for all the stops **across the islands to build linkways**.

In line with this, the **Walk, Cycle, Ride Campaign (WCR)** was launched as a framework to **encourage non-motorised means of transport.** The **Walk2Ride Programme** (worth $330 million) within the **Land Transport Masterplan** (2013) aimed at **providing all housing areas with cycling networks by 2030** (700 km of cycle paths). It also featured the construction of 200 km of sheltered linkways to connect transport nodes with public amenities and residential developments; the **redesign of highways** to include cycling and bus lanes and finally, a **tender for bike-sharing facilities that resulted in oBike, Mobike and Ofo** (all privately funded). The measures implemented also had some negative outcomes. For example, bike-sharing facilities resulted in irresponsible parking dynamics. This was handled with the establishment of **penalties** on the one hand, and the construction of parking spaces in **high-density parking locations** (MRT stations, bus stops, residential and office areas) on the other, after a thorough study. Furthermore, as personal mobility devices became more popular, the number of accidents increased, leading to the public calling for more safety measures for vulnerable users. The LTA responded by conducting **free safe riding courses** for the public and requiring registration to ride power-assisted bikes and e-scooters. This case study exposes how transportation, while evolving in a positive direction, can be disruptive, and how new policies give way to unexpected side effects that must be tackled. In addition to the above, in 2017 the **Singapore Parliament passed the Active Mobility Act**, demonstrating the government's resolve to encourage active modes of transport and empowering policy enforcers to make decisions accordingly.

Thimphu

Thimphu City Council discussed their plan to make Norzin Lam street, **one of the busiest and most congested streets** in the capital in the main commercial district, into a **pedestrian zone**. However, this plan was met by a **strong opposition** from businesspeople and residents, which demonstrates the need to include the public and to **change the paradigm within the public.**

CONCLUSIONS

Rapid population growth, together with **obsolete car-oriented urban planning**, are at the heart of the challenges faced by cities: an increase in the number of private cars, traffic congestion, pollution, and in time and energy consumption. Among the great range of cases presented, it was possible to identify common ground and agreed on conclusions once a common goal was set. The goal in question was to push commuters away from inefficient and polluting private means of transport–i.e. cars, motorbikes–and **towards more sustainable means of transport such as public transport or e-sharing facilities.**

1. Metropolitan authorities and a long-term vision

The **role of metropolitan authorities** will be crucial in solving one of the most challenging issues facing world cities. Not only current governments, but those to come, emphasising the **need to continue public policies regardless of changes in government.**

2. Intelligent systems and people-oriented approaches
Intelligent systems, together with people-oriented approaches, are key to reach **effective and sustainable transportation solutions.**

3. Transversal collaboration
A **common goal** is necessary to consolidate a strong collaboration between **governmental agencies and/or private-public collaboration**, which are both essential.

4. Transit-Oriented Development (TOD)
TOD should become **a must in urban planning** as it maximises the amount of leisure, residential and commercial space within **walking distance of public transport**, making the use of public transport efficient and preferable.

5. "Mass Transit can go so far"
To encourage the public to make public transport their first choice, governments must strive to make it more convenient, though mass transit **falls short in covering individualised transport needs**. Initiatives such as **e-sharing or Park** and **Ride facilities** then become a good option to make up for the shortfall.

6. The transport scene will continue to evolve and be disruptive
New policies give way to **unexpected side-effects** that must be tackled. Governments must learn to become **proactive, anticipate and be responsive to the new challenges** brought by new technologies and transport trends.

7. Work to change an obsolete paradigm
Social and education campaigns must be carried out to change the current paradigm from prioritising cars to putting the **pedestrian** and other more sustainable means of transport at the centre. Besides promoting public transport, it also serves to **raise respect for more vulnerable users and promote safety measures.**

8. Empower by creating frameworks for action
Launching governmental campaigns, creating programmes, and passing acts to create frameworks for action, all serves to **empower policy enforcers to make decision**s and show the government's resolve to lead the change to a **more equal and sustainable society.**