OBJECTIVES
Assess good practices to face one of the most challenging issues among the world cities. Designed specifically on the participants’ needs, the sessions were mainly focused on pedestrian friendly policies, people-oriented approaches and Intelligent Transportation Systems (ITS) programs.

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, jointly with a great dependence on cars has consequently led to an increase in traffic levels which accounted for 4.35 million daily trips in 2018 - making traditional road expansion inefficient 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 to 10.000 families to determine transport needs. The city then called for the construction of a Bus Rapid Transit (BRT), in distinctive phases. The first phase of the BRT, within the city, saw a fleet of 150 high-capacity buses, shuttling as many as 7000 passengers per hour, 200,000 passengers daily through a 33-km network, 25 km of which are dedicated bus lanes. They incorporated too traveler information, an electronic payment system and off-board payment stations. The second BRT line was planned to link Amman with its metropolitan area, and the city of Zarqa, located 22 km east of the capital.

Jakarta
Jakarta counts with the world’s longest BRT system, Transjakarta, with a length of 230.9km. Nevertheless, the reality of the city was that 74.7% of the citizens used private vehicles – with approximately 18 million private vehicles accounted for in the city as of 2016 – while only 25.3% used public transport. This resulted in a calculated 45.2 Trillion Rp Indonesian loss each year due to wastage of fuel, vehicle operation cost, pollution...
Jakarta’s Transportation Authority launched the OK-Otrip program trial in 2018 as a measure to increase public transport users by reducing transport costs, at the time 30% of minimum monthly average income. The program was thought out as an integrated transportation system, integrating the management, service (routes) and payment systems all together. The result was citizens could commute in the city with unlimited transfers (intermode included) for a maximum of 5.000RP Indonesian (0.29€ - 0.34$) for a single trip (3 hours maximum).

Rio de Janeiro
Rio de Janeiro exposed the case of the improvements in public transportation due to the organization 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 downtown. For example, the construction of the TransCarioca Bus Rapid Transit corridor – 120km long – allowed the connection of the Barra da Tijuca neighborhood, located in the western part of the city, to the Tom Jobim International Airport, located in the eastern part, and carries 450,000 passengers per day. This new corridor permits to
reduce time spent traveling by an estimated 66% between Barra da Tijuca and the Tom Jobim Airport and integrates the West and the East Zone. Furthermore, they established a travel demand management for large events that prioritized public transport and pedestrian routes under a “no car strategy”. Its governance implied the interaction between several city hall departments and a broad communication strategy to include the population through apps, news and signal messages.

Cuenca
Cuenca’s City Hall presented the project “Bikeways along the Cuenca’s Rivers” (Ciclovía de los Ríos de Cuenca), It featured the construction of bike paths from North to South next to the river bank, the city's most important environmental axes. The key issues for its implementation had to do with safety, which implied redesigning the public space to create safe cycle routes, redefining road lines to prioritize bicycles and pedestrians over private vehicles, installing signaling devices at all street intersections with cycle ways and tackling a lack of respect for pedestrians and cyclist with education. On a technical level a bicycle public system had to be implemented and promotion done through the launching of social campaigns to raise awareness over the health and environmental benefits of cycling.

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

Singapore
Singapore is a small and densely populated city-state with approximately 5.6 Million inhabitants as of 2018. This population growth makes inefficient the use of private cars, encouraging the government to push commuters away from private transport.

In 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 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 shelters across the islands to build linkways.

In line with this, the Walk, Cycle, Ride Campaign (WCR) was launched as a framework to encourage non-motorized transport modes. The Walk2Ride Program (worth $330M) within the Land Transport Masterplan (2013) foreshaw all housing towns having cycling networks by 2030 (700km cycling paths). It also featured the construction of 200km 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 gave birth to oBike, mobike and ofo bike (all privately funded).

The measures implemented also gave way to 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 at high-density parking location (MRT stations, bus stops, residential and office areas) after a thorough study on the other. Furthermore, as personal mobility devices became more popular, the number of accidents increased too, leading to the public calling for more safety measures for more vulnerable users. LTA responded by conducting free safe riding courses for the public and requiring registration to ride power-assisted bikes and e-scooters. This case exposes how the transport scene 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 Singapore’s Parliament passed the Active Mobility Act, demonstrating the government’s resolve to encourage active modes of transport and empowering enforcers to make decisions accordingly.

Thimphu
The City Hall of Thimpu city exposed their plan of making Norzin Lam Street, one of the busiest and congested streets in the capital within the main commercial district, into a pedestrian zone only. However, this was met with a strong opposition amongst business people and residents, which demonstrates the need of including the public and the need of a change of paradigm within the public.

CONCLUSIONS

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

1. Metropolitan authorities and long-term vision
The role of metropolitan authorities will be crucial in solving one of the most challenging issues among the world cities. Not only at present, but those to come, emphasizing the need to continue public policies regardless of government management changes.
2. Intelligent systems and people-oriented approaches
Intelligent systems jointly 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, both essential.

4. Transit-Oriented Development (TOD)
TOD should become a must in urban planning as it maximizes 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 and mass transit fall short to cover individualized transport needs. Initiatives such as e-sharing or Park and Ride facilities become then a good option to provide for these.

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

7. Work to change an obsolete paradigm
Social and Education campaigns must be carried out to change the current paradigm from prioritizing cars to putting the pedestrian and other more sustainable means of transport at the center. Besides promoting them, this also serves to raise respect for more vulnerable users and promote safety measures.

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