Harvesting the benefits of digitalization for urban mobility – A perspective by UN-Habitat

Global Drivers of Digitalization in the Transport Sector

**Trends in Digitalization of Urban Transport**
- New players with disruptive technologies are emerging incl. ICT-enabled web, mobile and big data applications;
- New models are blurring traditional demarcations between public transport and private mobility;
- Example Mobility-as-a-Service (MaaS): multimodal transport; transition from “owning” to “using”;

**Opportunities in Digitalization**
- Efficient Demand Management - Better utilization of underused assets (fleets and infrastructure); public transport efficiency;
- Contribution to the needed de-carbonization of the transport sector; reduce congestion and improve accessibility (door-to-door);
- Intermodal travel chains enhance attractiveness of mobility system (first / last mile connectivity);
- Sustainable land use through sharing of infrastructure and gain of public space;
- Modal shift through new technologies, big data and real time info on demand and supply, i.e. dynamic pricing of road use and parking, incentives, ticketing;

**Risks in Digitalization of Urban Transport**
- Improved “image” of individual travel through automation or electrification provides easier access and counteracts positive trends toward public transport and active travel modes;
- Digital divide: Exclusion of particular groups of society (elderly, urban poor);
- Data privacy issues

**Project Examples**

1. **EMPOWER – Rewarding Change**
   - EMPOWER substantially reduces conventionally fuelled vehicles by changing the mobility behaviour through positive incentives.

2. **Urban Electric Mobility Initiative**
   - UEMI provides assistance on Electric Mobility Readiness Assessments, City Partnerships, Pilot Projects, Capacity Building, Implementation and Policy support.

3. **URBAN PATHWAYS**

4. **Journey Planning for Cyclists**
   - Journey Planning for Cyclists by collecting data on stress levels and air pollution during World Urban Forum 9 in Kuala Lumpur.

5. **TUMI Mobility Accelerator**
   - Startup Incubation in the field of Sustainable Urban Mobility at University of Nairobi, Kenya.

**Recommendations**
- Prioritize public transport, walking and cycling in urban areas and link it with new mobility services;
- Avoid stand-alone sectoral solutions but promote digital combination of different modes for optimal use >> “one stop shop” platform / MaaS;
- Identify homegrown local solutions;
- Enhance support to early-stage, growth-driven mobility innovations through education, mentorship, international exchange and financing;
- Improve funding to “impact projects” addressing real life challenges;
- Facilitate multi-stakeholder partnerships encourage open access to data collected by companies and public entities - so that users, cities, third party apps, operators, developers and innovators can access it;
- Promote interoperability through development of technical standards for communication and devices;
- Develop the capacity of municipalities to collect, maintain and analyze data – and to manage integrated transport systems and infrastructure

**African scenario – The case of Kenya**
- Affinity to technology / digital youth culture;
- Leapfrogging potential;
- High mobile phone penetration (>90%) / Internet on smartphones (83%);
- Digital divide for certain group (elderly, urban poor);
- Trust in digitalization and limited fear of data privacy concerns;
- Low barriers to entry facilitate innovation;
- Cities are poorly equipped to handle traffic; urbanization, infrastructure gap;
- Emergence of a middle class >> individualized mobility;
- Limited regulatory frameworks for public-private cooperation;
- Lacking collaboration between stakeholders;
- Limited support and funding of innovations in mobility sector;
- High unemployment rates might slow down some technologies;
- Inadequate electricity supply and dependence of fossil fuels slows e-mobility