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## The United Nations Commission on Science and Technology for Development

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# Session: High-level session on Science, technology and innovation for sustainable urban development in a post-pandemic world.

#### **Speech Note**

#### Introduction

- Becoming a global issue in a short time since 2020, COVID-19 has caused numerous radical changes within the fields of health, economy, politics, international relations and socio-cultural life. Thus, within over 100 countries, approximately 4 billion people are subjected to full or partial quarantine procedures.
- There is an OECD report entitled as "Policy Responses of Cities" where the steps that the local governments take during the combat against COVID-19 are examined. In this report, works which are operated by the local governments are gathered under six main titles in line with the data collected from more than 40 countries, which also include Turkey: social distance and restraint; work-place implementations and commuting to work methods; measures taken for disadvantaged groups; local service delivery, especially sanitation and waste management; support for economic recovery, communication, digital tools and awareness raising.
- Today, governance of the cities, which hosts more than half of the global population, is more crucial than ever. Just as before, rapid change and transition in the fields of information and communication has a critical importance for sustainable urban development in both during the pandemic and afterwards. Working from home, distant education and new services presented in the digital platform, which were experimented for the first time during the shutdown period, could be redeemed as one of the most important indicators of the post-pandemic transition to the new normal.
- Urban planning
- As a result of the environmental problems, natural disasters, epidemics, irregular migration and other urban issues which are occurring in the recent times; there emerged urban approaches such as "Smart City", "15-minute City", "Resistant City", "Reserve City" and "Post-Pandemic City".
- Transportation
- In order not to miss the historical "opportunity" which the ongoing process provides for sustainable and smart urban solutions; within the field of urban transportation, alternative solutions that can be adapted to the norms of the new era stand out: pedestrian transportation, bicycle transportation and electric scooter.
- Innovation
- One of the most influential policy tools in today's world due to changes in technology and social area; innovation constitutes an immense importance for cities, which carry great significance for their ecological, economic and socio-cultural dimensions.
- Urban innovation is a driving force for cities and local governments to improve their citizens' life quality.

- Among the topic titles of urban innovation, there stands: good urban governance, urban economy and entrepreneurship, urban security, pandemic and health, industry, social services, social life, tourism, management systems and e-municipality.
- Urban innovation concept not only focuses on the public sector and administration procedures of a city, but also gives focus to turning a city into an innovation production centre.
- According to the World Bank's (2021) data, there is a global rate showing the fact that %80 of the domestic gross national product comes from the economic activities that occurs in cities. For this very reason, cities involve modifier and converter features in terms of economic growth and development. This situation requires cities to compete within both national and global compass. In this competence process, one of the major elements that leads to differentiation is innovation.

# **Statistical Data**

- According to International Data Corporation (IDC) report, information technology market reached 1.9 million in 2021 and there is a 6% growth expected in 2022.
- In the IDC report, the fields where Turkey needs innovation are determined as consumer services, retail and transportation.
- If we take a look at the future projection of Turkey's transportation, 3 different scenarios are predicted for 2030 in the McKinsey & Company report where 2030 scenarios are studies. In the scenario, in which no investments made for smart and public transportation; private car usage rate 26%, public transportation 7%, taxi %20 in 2030.
- In the scenario where investments are made in micro-mobility and public transportation and private vehicle incentives are removed, private vehicle use will increase by 8%, public transportation by 30%, and private micro-mobility by 50%.
- Shared vehicles will increase 10 times, while taxi usage will increase by 75%. In the last scenario, it is thought that all legislative restrictions on shared mobility have been lifted and the necessary investments have been made. In this scenario, private vehicle use decreases by 21%, while public transport increases by 78%. Also BCG (Boston Consulting Group); It is conducted a survey to learn how transportation modes will change in the post-pandemic period, and the participants stated that they would prefer to use vehicles such as bicycles and e-scooters more often.
- Gartner's Hype Cycles provide a glimpse into the innovations that cities will need to evolve in the years to come.
- When we examine the Artificial Intelligence Cycle, the concepts that are expected to emerge in more than 10 years in the research conducted in 2017 appear in 2021. Autonomous vehicles, chat-bots, artificial intelligence, augmented reality applications are now in production and will appear soon. Again, in the near future, we will keep different uses of digital ethics, digital human, metaverse, blockchain and artificial intelligence on our agenda.

## **Technological Development Cycle**

• Technologies that will transform the expectation into production and develop rapidly in 2021 have been determined as NFT and decentralized identity.

• While the trends in 2017 are smart robots, augmented reality, 3d printing, technologies such as the use of artificial intelligence and cloud technology in 2021.

• The concept of digital human, which is predicted to emerge more than 10 years later in 2021, has also emerged.

• It is also important to increase human capacity for sustainable urban development in cities. The talent gap in Turkey is at its highest level in the last 15 years. This shows that we need to develop our capacity for future competencies.