Saturday 9 October, 11:45am–1pm CET

Closing Plenary

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Panel: Science as a Booster for the Future of Cities

Abstract

Cities are at the forefront of people's concrete concerns, for example in terms of climate change or digitalization. Scientific and technological advances are already being used by some cities to innovate in this area. Others have already initiated complex modelling processes or are working on the implementation of digital democracy and are asking their inhabitants to collect data in order to better understand how they live in the city. Overall, how can science help cities and their leaders to address concrete concerns for their residents?

Participants

Moderated by:

Niniane Paeffgen, Managing Director, Swiss Digital Initiative, Switzerland

With:

Sami Kanaan, President, Geneva Cities Hub; President, Swiss Youth Commission, Switzerland

Maimunah Mohd Sharif, Executive Director, UN-Habitat, Malaysia

Discussion

The world's gradual shift from rural to urban areas – particularly in China, India and Nigeria – is expected to accelerate in the 21st century. By 2050, some 68% are projected to live in and around cities, up from 55% today, adding to pressure for scientific and technological advances that can help cities deliver clean energy, education, health care, housing, jobs, transportation and other basic services. Many of the United Nations 17 Sustainable Development Goals for 2030 may depend largely on how well cities innovate. As a result, UN-Habitat, the United Nations agency focused on improving quality of life in an "urbanizing world", supported urban policy development that addresses inequalities in nations such as Brazil, China and South Africa. That included sharing best practices and advice on how to involve more citizens in urban planning. Cities are not only an engine of growth, said Maimunah Mohd Sharif, an urban planner and former mayor who heads the agency, they also are an innovation hub in areas like arts, culture, heritage and sciences. Introducing more "hardware" – digital equipment and facilities – helps cities innovate, she said, "but the software is the people in the cities" who put knowledge and science to use. "Without the knowledge at the local level, we don't have the capacity to absorb, to analyse, to implement, to manage and to maintain," she said. "Then science will be nothing."

As the size of our planetary footprint swells to nearly ten billion people by mid-century, as many as 2.5 billion more are expected to be urban dwellers by then with 90% of that increase occurring in Asia and Africa, according to UN projections. "Cities without digitalization, without Internet, without the technology, suffer in terms of revenue," said Sharif. Things changed dramatically since she grew up in a Malaysian village with no running water or electricity, and no telephone of any kind in the 1960s, she recalled. Even with the modernization of sanitation, power grids, and telecommunications, just "half of the world is offline" and developing countries need help, according to Sharif. "Science data is one thing, but it's the implementation and bringing the technology to the cities," she said. "It's very important to look into the engagement of the people to show where the data and where digitalization is in the complex environment of cities, for people, for housing, for mobility, for education, for industry, agriculture, tourism and culture, you name it."

Since the pandemic began, cities had higher COVID-19 transmission rates. Groups and communities that experience discrimination and exclusion have been vulnerable. The pandemic has "shown our weaknesses", said Sharif, but those insights are valuable because "COVID-19 gave us an opportunity to look into the new design, new way of thinking, new way of looking at the function and form of cities. And also, a new way of looking at the leaders. So that the leaders have to walk their talk." By the end of this decade, the world is projected to have 43 megacities – each hosting at least ten million inhabitants. At present, Tokyo, the world's largest city, is more than three and a half times that size; New Delhi has about triple that amount and Mexico City, São Paulo, and Shanghai each have well more than double that. Not far behind in size are Beijing, Cairo, Dhaka, and Mumbai. However, about half of the

world's population lives in cities of less than 500,000 people.

The concept of "smart cities" has become a buzzword for intelligent growth; it signifies urban areas where digital technologies have made its services more attractive, energy efficient and environmentally friendly. Data-driven smart sustainable cities is a new area of research that is still in its infancy, however, as urban planners strive to fulfil one of the United Nations 2030 goals to make cities inclusive, resilient, safe and sustainable. Even in wealthy Geneva, where Sami Kanaan works to connect its longstanding international traditions with those of other cities globally, "we also have people who are not connected, or who do not understand how to deal with that", he said. "And so, we don't have to add a digital divide to the social divide or economic divide. It's an opportunity if we make it very inclusive and with a very transparent and ethical tool." Kanaan, a local politician and city official who has a background in physics and political science, described GESDA's mission of promoting anticipatory science diplomacy and boosting multilateralism in Geneva, and the GESDA Science Breakthrough Radar®, which is identifying anticipated advances in the next five, 10 and 25 years, as valuable tools for the city. "Science can help us bring more understanding, more mutual understanding, more awareness, as long as we take all people together," he said. "We need definitely more and more local democracy."

Takeaway Messages

Cities are not only an engine of growth; they also are an innovation hub.

If digital equipment and facilities are the hardware to help cities innovate, people are the software who put knowledge and science to use.

Cities without digitalization or internet suffer from lack of revenue.

Science data is important; more meaningful is its implementation and bringing technology to cities.

The pandemic gave us an opportunity to look into new designs, functions and forms of cities.

Digitalizing cities is an opportunity if it does not exacerbate social and economic divides.

GESDA's mission and Science Breakthrough Radar® can provide valuable lessons for urban planners and help democratize the future of cities.

More information

Session recording on YouTube

Tweets related to the session