Outcome report

Smart cities and communities

Thursday 8 July 2021 (15:00 – 16:00 CEST)

Moderator: Gwen Caras-Murphy CEO, Co-Founder, Athena Advisory and SCERTIFY

Speakers:

- Hotham Altwaijry, Assistant Director, Data and AI Authority (SDAIA)
- Souad Ben Abderrahim, Mayor of Tunis, Tunisia
- Hani Eskandar, Senior Coordinator – Digital, International Telecommunication Union
- Lacina Koné, CEO Smart Africa
- Tania Marcos, Vice Chairman of the U4SSC
- Davor Orlič, Chief Operation Officer at IRCAI

Session summary: in this session, panellists explored approaches to designing smart cities and communities based on people-centred innovation, technology and applications.

They discussed how the use of emerging digital technology and collected data can improve the quality of life for the citizens and resources efficiency. More specifically, they discussed the use of emerging technology to create people-centred smart cities and communities. They also discussed the global ecosystem of smart cities and communities, including technology, governance, and policies as well as the challenges and opportunities for creating sustainable smart cities and communities in LDCs, LLDCs and SIDs.

1. **Main outcomes highlighting the following:**

   - Tania Marcos presented the **United for Smart Sustainable Cities (U4SSC),** an initiative from the United Nations which is led by ITU, UN-Habitat and UNECE. U4SSC is helping cities to cope with the fundamental of digital transformation changes and enabling them to progress consistently along the path of achieving the Sustainable Development Goals, focusing specifically on the Sustainable Development Goal 11. The approach to enhancing smartness and sustainability, developed by U4SCC is people focused and is meant to be measurable and reportable. To this end, the initiative has developed a set of international key performance indicators (KPIs) for smart cities and communities to establish the criteria to evaluate the ICTs and the digital technologies contribution in making cities smarter, more sustainable and

provide cities with the means for self-assessment. These KPIs are based on Recommendation ITU-T Y.4903. The implementation of the report benchmark can elaborate the findings from the implementation of the U4SCC KPIs in the city and providing useful analysis and lessons learned and actionable recommendations and site for the city's smartness and sustainability.

- Hani Eskandar presented the Smart villages: A whole of government approach to digitally transform rural communities: The Smart Villages concept considers the community as a holistic unite and work across sectors in an inclusive way. It is a whole-of-government or whole of society approach with the objective to serve more than one SDG, with the same investment, scale up and cover the need rural communities. It provides an opportunity of saving for cost, efforts and mutualization of the digital investment.   ITU has published the Smart Village Blueprint with Smart Africa, the Government of Niger and many other partners and is building on the experience of a lot of similar initiatives. The blueprint gives a variety of tools and approaches to build a model based on the current context of country.

- Davor Orlič presented IRACI, the new UNESCO AI Center and an example of a Smart cities project, including a showcase of African machine learning communities and the idea of creating a World Network of AI Centers, solving SDGs with AI. Additionally, he introduced the idea of social impact bonds to support investments in AI startups for smart cities. IRCAI is looking for in the concept of social impact bonds that would attract impact investors and give citizens and consumers trust in the results that the technologies are delivering. IRCAI expect to fundraise and setup a Global Network of AI excellence centres in Sustainable Development and Artificial Intelligence across the world and facilitate their collaboration and networking. The objective of this Global Network is to develop a fast-paced research cooperation between excellence centres aiming at boosting the research capacity in AI and Sustainable Development, and making it attractive for scientists and new talents, investors, both social impact and venture capital, and policymakers. Creating such a network will contribute in the mid-long term create capacity for smart cities and building communities of practice.

- Souad Ben Abderrahim, presented the perspective and experiences of the cities, and particularly the city of Tunis Tunisia) on smart cities and communities. She said that a smart life must meet human rights, protect private data and the public must not be left behind. She said that in order to make the most of the richness of our diversity and to reach for innovation, we need to reach all with our determination and boldness. We must work with our partners in order to move forward.   Therefore, it is important to implement the necessary strategies, to ensure that the social integration is in place. She emphasized that it is important to work with international partners and local partners and in collaboration with sponsors and start-ups, to ensure the implementation of an infrastructure and adequate partnerships are in place.

- Hotham Altwaijry presented three major projects in Saudi Arabia, around sustainable Smart Cities, under vision 2030. The first project, Neom, is a new city that is being creating, envisioned to be the City of future, where the main

idea is to gather the greatest minds and talents around the world and to pioneer the smartest ideas to get implemented. The second project, is to establish a city, called The Line while trying to preserve 95% of the nature in that city with zero cars, zero streets, zero carbon emissions. The city will be powered by an "invisible" backbone underground that will facilitate all the needed infrastructure and utilities such as networking, electricity, utilities designed to be green and preserve the environment. The third city being created is envisioned to be a luxury destination being built around nature preserving the environment, in a sustainable manner. Data and AI will play a big role while digital identity and digital wallet will be implemented with cashless payment and touch-free experiences.

- Lacina Koné presented use cases of smart cities and communities in the region. He presented the five manifestos of Smart Africa: 1) put ICT at the center of national and social economic development, 2) improve access to ICT, especially the broadband; 3) improve the accountability efficiency and openness through the use of ICT, 4) put the ICT at the private sector first and 5) leverage ICT to promote Sustainable Development in African communities. He also highlighted how the fast urbanization in Africa (70% of the African population or 2.5 billion people will live in the cities by 2050) will create new challenges such as more traffic, mobility, cars in the city, water loss, energy consumption. cost of the health and social services. He presented the approaches of Smart Africa to some of these challenges. He highlighted that the vision of Smart Africa in 20 years, is to see tangible and sustainable changes in all cities across the continent Smart Africa believes that Africans have the willingness and the abilities to transform their communities and create cities where life is enjoyable and sustainable. If we take a close look across the continent, the trend has started, and tangible results are achievable. Smart Africa is deploying all the efforts to ensure that 20 years from now, the majority of Africa Cities will be: Connected, Green, Clean, Safe, Resilient and Efficient.

2. **Main conclusions reached during the discussion:**

- Digital skills and Tools are essential for creating smart sustainable cities and communities.
- Smart Sustainable City should be global in its approach. Smart sustainable cities and communities must be participative with all the stakeholders; including Government, civil society, academia, private sector, etc.
- A smart life must meet human rights, protect private data and the public must not be left behind. Therefore, it is important to implement the necessary strategies, to ensure that the social integration is in place.
- Creating smart sustainable cities and communities should be done in an integrative and collaborative and participative manner.

3. **Panellists contributions to the outcome reports:**

- **In the use cases that you know, what are the challenges and opportunities of smart cities in LDCs, LLDCs and SIDS?**

  - Least Developed Countries (LDCs), Landlocked developed Countries (LLDCs) and Small Island developing States (SIDS) are faced with multiple challenges which form the base of greater opportunities. Each of what may be a challenge, is actually a great opportunity.
    - Mobility: Cities need to get better with transportation of people and goods toward and within communities
    - Connectivity Infrastructure: Cities need reliable and affordable broadband connectivity for their people
    - Environmental Management: Cities need to have efficient waste collection, waste management and waste recycling processes. Most of the produced waste can be recycled or re-purposed while reducing pollution.
    - Utilities Management: Cities need efficient and effective distribution and management of key resources like water and electricity
    - Safety and Security: Smart Cities need to be safe cities were security is granted and emergency services are responsive, fast and effective in serving the resident and the tourist.
  - Challenges and opportunities include the creation of research projects that have access to public data and can be implemented in real-life scenarios. They need to be driven bottom up by domain experts and data science specialists and enabled top down with favourable policies. Solving local problems with local technologies or at least a combination of local problems and international experts can take the idea of smart cities in LDCs, LLDCs and SIDS quite far.

- **What are the most important points/aspects of the emerging technology that should be considered in order to accelerate the digital transformation in in LDCs, LLDCs and SIDS?**
  -
  - Some key aspects to be considered and enhanced in order to accelerate the digital transformation on LDCs, LLDCs and SIDS in Africa are
    - The use and penetration of IoT Devices
    - Artificial Intelligence platforms
    - Mobile enabled applications and e-government services
    - Broadband connectivity
  - The most important aspect is probably not technology but putting in place an ecosystem, which is internationally supported or endorsed, to quantify the impact of the 17 SDG and the 169 targets; enable the use of data for transparency and social impact.
  - There are two elements to accelerate digital transformation: core infrastructure to systemic change (e.g., data), and applications for social investment.

- Regardless of the size of the city or its geographical location, each city should carry out an initial diagnosis to design its own planning and transformation strategy.

- **In what way and usages could intelligent connectivity, applications and services (AI, IoT, etc.) and smart cities/communities help accelerate the digital transformation of LDCs, LLDCs and SIDs?**
    - In the journey of Digital Transformation, the best approach is to bring the initiatives to the people and ensure they are involved and supportive from end to end. Digital transformation requires Mindset transformation, and this is achieved through education and capacity building activities. We need to implement initiatives that meet the pressing needs of the people like e-government services, Smart waste management, Mobility applications, etc. We need to educate our people and help them realize the hidden potential offered by well-though digital transformation initiatives.
    - Another way to accelerate digital transformation is to implement research projects that are addressing and solving real-life problems with the potential to become start-ups. The NAIADES project is an example of real-life research project which is actively building AI technologies for digitisation of urban water sector to promote innovative water management solutions to improve services for homes and public buildings. It collects real-time data from buildings to provide information about the maintenance of operations.

- **What is your vision on smart cities in the next 20 years and why?**
- *Takeaway: please provide one key word and one sentence that most fit the session topic*
    - Partnerships: Partnerships are essential to drive positive results and U4SSC is a great example
    - If we work together, we can transform African Cities into Smart Sustainable Cities and Smart Sustainable Communities
    - Innovate and move forward towards the future.

    - In order to make the most of the richness of the diversity and to reach for innovation, we need to reach all with our determination and boldness.