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**Submissions from entities in the United Nations system and elsewhere on
their efforts in 2018 to implement the outcome of the WSIS**

Submission by

United Nations Human Settlement Programme

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 22nd session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

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Contribution to Annual WSIS report UN HABITAT 2018

Executive Summary

UN-Habitat, as the UN programme for sustainable cities and human settlements, is seeing that digital technology, data and innovation is becoming increasingly important for sustainable urban development. Big data, the internet of things and sensor networks offer new ways for urban managers to make informed decisions and strategic choices. Digital platforms and applications are facilitating dialogue between citizens and decision-makers.

In line of this, and WSIS action line 4, UN-Habitat has launched its publication “ICT, Urban Governance and Youth”¹. Through this publication, UN-Habitat highlights the potential of ICT for youth. For example, processes related to use e-government solutions have been facilitated by UN-Habitat in line with a slum upgrading project and an innovation competition in Kenya, promoting participation of youth.

In Pakistan, UN-Habitat improved the access to technology by establishing two GIS laboratories to computerize land records and provided support in terms of troubleshooting and debugging of their IT systems. This improves digital literacy and job chances through training.

Under actions lines 3, 4, and 7 and in partnership with DigitalCivix, the UN-Habitat Regional Office of Latin America and the Caribbean, the Mexico Office and HQ engage citizens to solve urban issues through digital technologies, civic innovation and urban entrepreneurship, currently piloted by labs aiming at educating app development and digital fabrication with a focus on youth.

Through the City Prosperity Initiative (CPI) tool, UN-Habitat is offering to cities and local authorities a global monitoring framework for SDGs indicators and targets and of the New Urban Agenda. The CPI enhances monitoring capacities of cities and increases the prospects of higher accountability in the implementation of the 2030 development agenda.

UN-Habitat also worked on the enhancement of open and participatory data platforms through several initiatives such as the Disaster Shelter Database Japan² and the Sustainable Housing Design Tool Sherpa³

Through the Regional Office for Asia and the Pacific (ROAP), UN-Habitat has developed an electronic data collection tool for community surveys, ensuring a quick analysis of the data, accuracy and time-saving on data entry using the open-source software “Open Data Kit (ODK)”.

¹ <http://unhabitat.org/books/ict-urban-governance-and-youth/>

² http://www.fukuoka.unhabitat.org/kcap/activities/egm/2015/pdf/egm18_en.pdf

³ <http://www.drsteveburroughs.com.au/#!sustainable-housing-rating-tools/q4jm9>

This initiative shows how digital technology can help to make data collection more local and transparent.

UN-Habitat's Global Public Space Programme has been working in partnership with Mojang, the makers of the computer game *Minecraft*, on Block by Block, an innovative private-public partnership and financing model in which *Minecraft Game* is used as a community participation tool in the design of urban public spaces. UN-Habitat has taken on a lead in this field, by using a public private partnership to support local governments in their efforts to enhance transparent planning processes.

The Maji Wazi Project by UN-Habitat is a recently concluded project together with Ericsson and Nairobi City Water and Sewerage Company that developed a service enablement platform for collecting, analysing and sharing water distribution information in slum areas in Nairobi. The project builds on Internet of Things to better understand water distribution and to utilize shared local skills and the microeconomic ecosystem to allow people to contribute.

In Kenya, E-participation, informed the formulation of the Slum Upgrading and Prevention Policy and the formulation of a Bill and the implementation of participatory slum upgrading benefiting 50,000 people in the Kilifi County Government from 2014-2018;

Under action line 6, UN-Habitat in partnership with Rwanda, has developed the Smart Cities Kigali Master Plan in Rwanda.

UN-Habitat has also collaborated with ITU-T Study Group 20 (SG20) on standardization work for smart sustainable cities, as well as ITU-T Study Group 5 (SG4) on circular economies and is currently working to integrate the CPI sustainable urbanization indicators into the smart city indicators (i.e. the Key Performance Indicators for Smart Sustainable Cities) as proposed by ITU-T SG20's experts and stakeholders. Current collaboration with ITU and UNECE is underway to test smart city indicators in the context of sustainable urban development and regeneration, particularly in the Central and Eastern European region. Together with the ITU-initiated United For Smart Sustainable Cities (U4SSC) group, UN-Habitat is preparing global concept reports on Impacts of Frontier Technologies (i.e. Artificial Intelligence, Internet of Things and Data Processing) on Cities and identifying risks and opportunities of such deployments for cities. UN-Habitat is also working to improve municipal e-waste programmes through the e-waste coalition managed by the UN Environmental Management Group and through collaboration with ITU-D.

However, funding ICT initiatives, boosting technical expertise in frontier technologies, and measuring the impact of ICT on development still need to be addressed. The first two includes the mobilizing and strengthening partnerships towards WSIS commitments. Measuring impact includes identifying variables and indicators that can measure the causal impact of specific ICT implementations, lack of municipal data and consideration of issues such as uncertainties and so called rebound effects.

Analytical Review

UN-Habitat is the lead agency for the implementation of the New Urban Agenda (NUA) which stressed the need of using existing and new technologies, ICT-assisted approaches, and open data to improve city management.

NUA recommendations widely recognize the potential role of technology in enhancing cooperation and financing mechanisms and within bringing about the paradigm shift of the Sustainable Development Goals (SDGs) especially on Goal 11– make cities and human settlements inclusive, safe, resilient and sustainable, Goal 5 on gender, Goal 6 on clean water and sanitation, Goal 7 on affordable and clean energy, Goal 9 on infrastructure, Goal 17 on technology, Goal 3, target 3.6 on reducing global deaths and injuries from road traffic accidents and Municipal and SDG 12, target 12.5 on the management of municipal waste, among others.

UN-Habitat, in partnership with information and communication technology (ICT) companies, universities and other research institutions, is harnessing the potential of ICTs to support the achievement of the 2030 Agenda for Sustainable Development and other internationally agreed development goals

As the use of urban digital technology is maturing, a base of methods, standards, software, platforms, and other technology tools is available. Yet often we see scarce resources being invested to develop new tools when instead existing tools could be adapted and improved. Ways that can lead to higher quality resources include: using, modifying and extending existing tools, platforms, and frameworks when possible and developing in modular ways favouring approaches that are interoperable over those that are monolithic by design.

Moreover, with such a digital transformation, comes digital risk. Such risks should be eliminated when using digital technology to deliver WSIS outcomes. Security, privacy and digital ethics cannot be reverse engineered around the agencies technological outputs; instead, they must be integral to the development process from the outset. Stakeholders, also, in collaboration with its partners in the IT sector need to consider the financial side of digital technology, including data trading and software licenses.

Elimination of the need for human labour is another risk of digitization, but depends on the job-creating potential of certain solutions. This is especially true for developing countries as the proportion of jobs threatened through automation is much greater due to skill requirements beings lower and “less capital [is] tied up in old ways of doing things”.⁴

Further actions

In working towards becoming a digitally mature enterprise, UN-Habitat will be better placed to achieve its mandate of socially and environmentally sustainable towns and cities with the goal of providing adequate housing for all. The organization will pursue innovative high-tech and low-tech digital solution and establish private and public partnerships to place itself able to

⁴ Technology at Work v2.0: The Future is Not What It Used to Be. Oxford Martin School and Citigroup.

effectively implement the SDGs, adopted in the Agenda 2030 that focuses action on people, planet, prosperity, peace and partnerships.

UN-Habitat will continue to pursue solutions-oriented approaches to rapidly evolving challenges and scenarios and mainstream a human-centered approach to urban digital technology and ICT. It will also strengthen its relationship with implementing partners of ICT and carry out partnership development and resource mobilization.

Additionally, in line with the International Telecommunication Union (ITU)'s Focus Group on Smart Sustainable Cities (FG-SSC), the normative and practical work of UN-Habitat is able to make urban digitization accessible and beneficial for all urban inhabitants.