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REPUBLIC OF KENYA

THE NATIONAL ASSEMBLY

TWELFTH PARLIAMENT - FOURTH SESSION

THE DEPARTMENTAL COMMITTEE ON COMMUNICATION, INFORMATION AND INNOVATION

REPORT ON THE 2019 SHENZHEN SMART CITY FORUM WITH INTERNATIONAL FRIENDSHIP CITIES HELD IN THE REPUBLIC OF CHINA FROM 14TH TO 15TH MAY, 2019

DIRECTORATE OF COMMITTEE SERVICES

CLERK'S CHAMBERS

PARLIAMENT BUILDINGS

NAIROBI-KENYA   MARCH, 2020

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ABBREVIATIONS AND ACRONYMS

1. UNDP - UNITED NATIONS DEVELOPMENT PROGRAMME
2. IOC - Indicators of compromise
3. SEZ - Special Economic Zone
4. AI - Artificial Intelligence
5. UIFPs - Urban Investment and Financing Platforms
6. DUCI - District Urban Construction and Investment Co., Ltd.
7. SAP - Systems applications and products
8. IOT - Internet of things
9. PPP - Point to point protocol

CHAIRPERSON'S FOREWORD

The 2019 Shenzhen Smart City Forum with International Friendship Cities" was held in Shenzhen, China from 14th to 15th May, 2019. The forum was attended by UNDP, UN-Habitat, city representatives, global experts and scholars with advanced experience and expertise in smart city, and representatives from high-tech enterprises as Huawei.

Today, more than half of the world's population, 3.5 billion people, live in urban areas, and by 2030 this will rise to 60%. Over the next decades there will be significant changes in the size and distribution of the world's population.[1] According to the United Nations (UN) close to half of the urban population live in cities of less than 500,000 people, but one in eight of us live in 28 mega cities – cities that have more than 10 million inhabitants, such as Tokyo, Delhi, Shanghai, Sao Paulo and London. The fastest growing cities have 500,000 to 1 million inhabitants and are located in Asia and Africa (UN, 2014).

Rapid urbanisation and unplanned growth pose significant challenges – greater demand for natural resources such as water and energy, increased pollution and impacts on biodiversity. The world's cities occupy just 2% of the Earth's land, but account for up to 80% of energy consumption and 75% of carbon dioxide emissions (UN, 2014).

Cities are major contributors to climate change but they're also heavily vulnerable to it: they're affected by rising sea levels, more frequent and stronger storms and cyclones, and more frequent extremes in heat and cold. These then impacts on urban infrastructure and quality of life. In many cities there's also a shortage of housing, pressure on healthcare systems, and issues with poverty and crime.

However, the concentration of people in cities can also bring benefits: if managed well population density allows increased access to jobs and cultural activities as well as to services such as healthcare, education and mobility, which could lead to longer life expectancy and poverty reduction.

Cities are dynamic places. They rely on the flow of people, ideas, resources and global connections. To thrive, cities need to meet the economic and social aspirations of the people who live there. They also need to manage their impacts on the environment in order to ensure that their growth is sustainable and that benefits are accessible to all.

The Committee wishes to register its appreciation to the offices of the Speaker and the Clerk of the National Assembly for the support accorded to the Committee in the execution of its mandate. The Committee also appreciates The Ministry of ICT, Huawei and The Chinese Government for their reception, hospitality, organizing and coordinating the Conference logistics.

It is my pleasant duty to present the report of delegation on the proceedings of the 2019 Shenzhen smart city forum with international friendship cities.

HON. WILLIAM KISANG M.P. - CHAIRPERSON

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[1] *United Nations World Urbanization Prospects*

1.0 PREFACE

Establishment and Mandate of the Committee

1. The Departmental Committee on Communications, Information and Innovation is established under Standing Order 216 whose mandate pursuant to Standing Order 216 (5) is as follows:

   a. Investigate, inquire into, and report on all matters relating to the mandate, management, activities, administration, operations and estimates of the assigned Ministries and departments;

   b. Study the programme and policy objectives of Ministries and departments and the effectiveness of the implementation;

   c. Study and review all legislation referred to it;

   d. Study, assess and analyze the relative success of the Ministries and departments as measured by the results obtained as compared with their stated objectives;

   e. Investigate and inquire into all matters relating to the assigned Ministries and departments as they may deem necessary, and as may be referred to them by the House;

   f. To vet and report on all appointments where the Constitution or any law requires the National Assembly to approve, except those under Standing Order 204 (Committee on Appointments);

   g. examine treaties, agreements and conventions;

   h. make reports and recommendations to the House as often as possible, including recommendation of proposed legislation;

   i. make reports and recommendations to the House as often as possible, including recommendation of proposed legislation;

   j. consider reports of Commissions and Independent Offices submitted to the House pursuant to the provisions of Article 254 of the Constitution; and

   k. Examine any questions raised by Members on a matter within its mandate.

2. In accordance with Second Schedule of the Standing Orders, the Committee is mandated to oversee:- Communication, Information, media and broadcasting (except for broadcast of parliamentary proceedings), Information Communications Technology (ICT) development and advancement of technology and modernization of production strategies.

1.1 COMMITTEE MEMBERSHIP

2 The Departmental Committee on Communication, Information and Innovation was constituted by the House in December 2017 and comprises of the following Members-

Hon. Kisang William Kipkemoi, M.P **(Chairperson)**
MP for Marakwet West Constituency
Jubilee Party

Hon. George Macharia Kariuki **(Vice Chairperson)**
MP for Ndia Constituency
Jubilee Party

Hon. Liza, Chelule Chepkorir, MP
M.P for Nakuru County
Jubilee Party

Hon. Alfah O. Miruka, MP
M.P for Bomachoge Chache Constituency
Kenya National Congress

Hon. Annie Wanjiku Kibeh, MP
MP for Gatundu North Constituency
Jubilee Party

Hon. Joshua Kimilu, Kivinda, MP
MP for Kaiti Constituency
Wiper Democratic Party

Hon. Marwa Kitayama Maisori, MP
MP for Kuria East Constituency
Jubilee Party

Hon. Mwambu Mabongah, MP
MP for Bumula Constituency
Independent

Hon. Maritim Sylvanus, MP
MP for Ainamoi Constituency
Jubilee Party

Hon. Mwangaza Kawira, MP
MP for Meru County
Independent

Hon. Jonah Mburu, MP
MP for Lari Constituency
Jubilee Party

Hon. Gertrude Mbeyu Mwanyanje
MP for Kilifi County

Orange Democratic Party

Hon. Wamuchomba, Gathoni, MP
MP for Kiambu County
Jubilee Party

Hon. (Eng.) Mark Nyamita Ogola, MP
MP for Uriri Constituency
Orange Democratic Party

Hon. John Kiarie Waweru, MP
MP for Dagoretti South
Jubilee Party

Hon. Erastus Nzioka Kivasu, M.P.
MP for Mbooni
New Democrats Party

Hon. Innocent Momanyi Obiri, MP
Bobasi Constituency
People's Democratic Party

Hon. Godfrey Osotsi Atieno, MP
Nominated
African National Congress

Hon. Anthony, Tom Oluoch, MP
MP for Mathare Constituency
Orange   Democratic   Party

1.2 COMMITTEE SECRETARIAT

2 The Committee is facilitated by the following secretariat:-

Ms. Hellen Kina
Clerk Assistant II/ Lead Clerk

Ms. Ella Kendi
Clerk Assistant II

Ms. Marlene Ayiro
Senior Legal Counsel

Mr. Gorod Abdirahaman
Fiscal Analyst II

Ms. Lorna Okatch
Research Officer III

1.3 COMPOSITION OF DELEGATION

3. The delegation comprised the following Members and a Parliamentary officer:-
    (1) Hon. Godfrey Osotsi, M.P   - **Leader of Delegation**
    (2) Hon. Kawira Mwangaza, M.P.
    (3) Hon. Amos Kimunya, M.P.
    (4) Hon. Thaddeus Nzambia, MP.
    (5) Hon. Eric Muchangi, MP.
    (6) Hon. Charles Kamuren, MP.
    (7) Ms. Lorna Atieno Okatch - **Research Officer III/Secretary to the Delegation**

2.0 BACKGROUND

4. The forum comes at a critical time and should help increase policymakers' awareness of the possibilities and challenges associated with smart cities. The downside is that it may encourage undue optimism, by giving short shift to the significant risks that smart cities poses to international development.

5. The rate of progress is surprising that even tech leaders, believe that future developments could bring massive increases in economic growth and human well-being, as well as cause widespread socioeconomic upheaval.

6. Cities are centres of innovation and creativity, but they also face great challenges such as rapid urbanisation, climate change and increased pressure on city services like transport and healthcare. To address the challenges and capitalise on the opportunities, cities are encouraged to become 'smart cities.

7. Smart cities are created, they don't simply exist or emerge, but there is no end point. Rather, becoming a smart city is a process by which cities use smart technologies and innovative approaches to address the challenges they face, helping them to become more resilient and liveable.

8. The Forum served as a platform for the cities committed to building smart city to share the latest development concepts, experience frontier technologies, and enhance international communication and cooperation. It was also a very good opportunity for cities to expand business cooperation network.

9. It was structured into plenary sessions, which also served as networking areas, where delegates established contacts in order to further their business objectives. The conference areas featured the welcoming speech by the Mayor of Shenzhen with an introduction of Shenzhen's strategy, policy, practices in building Smart City, followed by a speech by The Mayor of Shenzhen's Friendship Cities as representative of all foreign delegations, then keynote speeches by global industry leaders and professionals from Global Friendship Cities on the field of Smart City.

10. The keynote speakers at the Forum were prestigious professionals in smart city, including Juma Assiago, Urban Safety Expert with the UN-Habitat's Global Network on Safer Cities, and Ugo Valenti Vazquez, Director of Smart City Expo World Congress. The discussions were based on the development path of smart city, exchange ideas of the latest theoretical results, technology standards and application methods in creating global smart cities. Further internationally acclaimed speakers will be announced soon.

2.1 SUMMARY OF THE SUMMIT PROCEEDINGS

11. On the afternoon of 14th May, 2019 the Mayor of Shenzhen hosted The Mayors' Roundtable to further discuss each city's vision and strategy for Smart City. Every Mayor or Representative was invited to give a presentation, followed by a free discussion session. During this event, delegates exchanged ideas on building smart cities, shared successful cases, experiences and practices, and bolstered pragmatic cooperation.

2.2 VISIT TO HUAWEI CENTRE

12. The Kenyan delegates were treated to a tour at the Huawei Centre. They were taken through the various projects undertaken by the organization and was further informed that; -

13. Huawei was founded in 1987 and that Huawei offers end-to-end portfolio of products, solutions and services that are both competitive and secure. Huawei is a private company wholly owned by its employees. Through the Union of Huawei Investment & Holding Co., Ltd., we implement an Employee Shareholding Scheme that involves 96,768 employee shareholders. This scheme is limited to employees. No government agency or outside organization holds shares in Huawei.

14. Huawei has a sound and effective corporate governance system. Shareholding employees elect 115 representatives to form the Representatives' Commission. This Representatives' Commission elects the Chairman of the Board and the remaining 16 board directors. The Board of Directors elects four deputy chairs and three executive directors. Three deputy chairs take turns serving as the company's rotating chairman.

15. They work with stakeholders including suppliers, partners, industry organizations, open source communities, standards organizations, universities, and research institutes all over the world to cultivate a broader ecosystem that thrives on shared success.

16. Cyber security and privacy protection is their top priorities since 2018 and over the past three decades, they have worked closely with our carrier customers to build over 1,500 networks in more than 170 countries and regions.

17. Huawei advocates openness, collaboration, and shared success. Through joint innovation with our customers and partners, they are expanding the value of ICT to develop a more robust and symbiotic industry ecosystem.

18. Huawei is an active member of more than 400 standards organizations, industry alliances, and open source communities, where they work with our peers to develop mainstream standards and lay the foundation for shared success.

2.3 VISIT TO SHENZHEN-THE SMART CITY

19. The Members were also taken for a tour to one of Chinas Smart City Model sites in Shenzhen Longang Smart City.

20. Longgang, a district of Shenzhen, China, is home to a large number of high-tech, advanced manufacturing, logistics, and financial firms. Longgang urgently needed a 'Smart City' solution to build an intelligent urban infrastructure and maximize its own advantages. The solution needed to provide more convenient, efficient, and cost-effective public services to enable intelligent, sophisticated city management that could organize a livable environment while promoting the development of 'smart' industries.

21. A variety of basic databases was built by Longgang to facilitate public sharing of information. This horizontal integration of data resources eliminated the data silos of traditional vertical agencies, forming a 'neural data network.' The neural network constantly improves data quality and exploits the full benefits of data resources.

22. The Smart City solution provides a single platform that combines and shares 2D, 3D, and live spatio-temporal information with citizens. With this platform, many special applications have been developed as part of unified planning for new buildings, industries, and increased security supervision. Scholars note that tools created for 'smart' cities enable planners and citizens to make decisions that are more closely synchronized with their environment.

23. Longgang has achieved great things in the fields of urban governance, efficient collaboration, and public services that benefit its population as a result of Huawei's Smart City Solution.

3.0 COMMITTEE OBSERVATIONS

The delegation made the following observations –

THAT;-

1. The key to becoming "smart" is combining open technology infrastructure with a unified platform that can keep up with the relentless supply of data from diverse subsystems and in various data formats.
2. Based on 30 years of ICT expertise, Huawei identifies cloud, full-stack, all-scenario AI portfolio, IoT, big data and wireless technology as its areas of strength to make a city "smart".
3. The impact of 'smart' cities, and specifically the IOC, is significant. In Shenzhen, the municipal government has access to a large amount of cameras, generating huge volumes of data, day in and day out. All these images can't be checked manually, so cloud-based intelligent video analytics becomes essential in supporting the city's management efficiency and daily operations
4. Huawei cooperates in an open ecosystem with more than 400 global partners – including SAP, Accenture, Schindler, General Electric, Honeywell, etc – with a presence across 700 cities across the globe.
5. While smart cities will not fix Africa's urbanization problems overnight, they are certainly a step toward both providing better living conditions and being able to compete with other cities around the world in the global economy.

4.0 COMMITTEE RECOMMENDATIONS

The Committee made the following recommendations –

1. The Ministry of ICT to ensure that Konza City being the Kenyan model of a Smart city should meet the below minimum standards:
   (i) Transform the city to people-oriented management
   (ii) Employ modern technologies to enhance urban safety
   (iii)Scientifically organize urban resources to relieve population stresses and promote equal access to basic public services among all urban districts
   (iv)Capitalize on new ICT — the Internet of Things (IoT), Big Data, cloud computing, and mobile Internet, etc. — to optimize the location of industries and promote economic development
2. The Ministry of ICT to;-
   (i) Steer enactment of required SEZ incentive packages suitable for attracting investors
   (ii) Allocate more resources towards research and development to make Konza the hub of technology, research and innovation.
   (iii)Allocate more financial resources to horizontal infrastructure to open up all Konza Phases in order to witness rapid private sector attraction.
   (iv)Consider collaborating with private sectors through models like PPPs as witnessed by Shenzhen's (Urban Investment and Financing Platforms) UIFPs.

SIGNED..DATE...03|03|2020

HON. WILLIAM KISANG, M.P. - CHAIRPERSON
DEPARTMENTAL COMMITTEE ON COMMUNICATION, INFORMATION AND INNOVATION

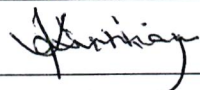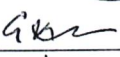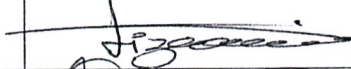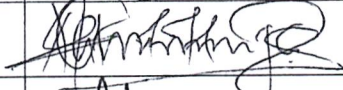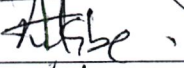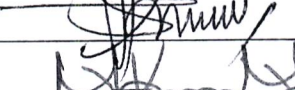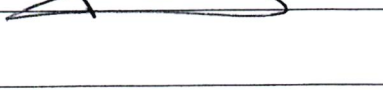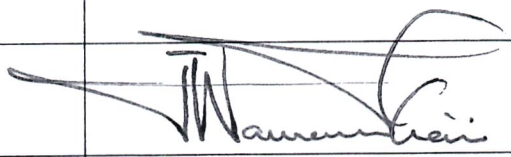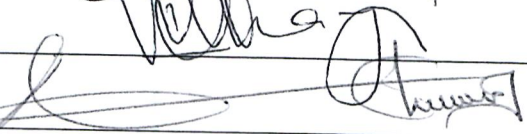# THE DEPARTMENTAL COMMITTEE ON COMMUNICATION, INFORMATION AND INNOVATION

ADOPTION LIST

Adoption of the reports on:-

i.) Sixth Forum on Internet Freedom in Africa, 2019 held in Addis Ababa, Ethiopia from 23rd to 26th September, 2019

ii.) 2019 Shenzen Smart City Forum with International Friendship Cities on 14th to 15th May, 2019 in the Republic of China

iii.) ITU Regional Week on Emerging Technologies for Sustainable Development and Digital Transformation 26th to 30th August, 2019 in Dubai United Arab Emirates

iv.) Internet Forum (IGF), 2019 held in Berlin, Germany from 25th to 29th November, 2019

DATE 3/3/2020. TIME 11:30am VENUE 11th Floor Protection House.

NO.	NAME	SIGNATURE
1.	Hon. Kisang, William Kipkemoi, M.P - **Chairperson**	*signature*
2.	Hon.George, Macharia Kariuki, M.P - **Vice – Chairperson**	*signature*
3.	Hon.Liza, Chelule Chepkorir, M.P.	*signature*
4.	Hon.Alfah, O. Miruka, M.P.	*signature*
5.	Hon. Annie Wanjiku Kibeh, M.P.	*signature*
6.	Hon. Joshua Kimilu, Kivinda, M.P.	*signature*
7.	Hon.Marwa Kitayama Maisori, M.P.	*signature*
8.	Hon.Mwambu Mabongah, M.P.	*signature*
9.	Hon.Maritim Sylvanus, M.P.	*signature*
10.	Hon.Mwangaza Kawira, M.P.	*signature*
11.	Hon. Jonah Mburu, M.P.	
12.	Hon. Gertrude Mbeyu Mwanyanje,M.P	
13.	Hon.Wamuchomba, Gathoni, M.P.	
14.	Hon.(Eng).Mark Nyamita Ogola,M.P	
15.	Hon. John Kiarie Waweru, M.P.	*signature*

16.	Hon. Erastus Nzioka Kivasu, M.P.	
17.	Hon. Godfrey Osotsi, Atieno , M.P.	
18.	Hon. Innocent Momanyi, Obiri, M.P.	
19.	Hon.Anthony, Tom Oluoch, M.P.	