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KENYA NATIONAL ASSEMBLY

ELEVENTH PARLIAMENT

2015

THIRD SESSION



THE DEPARTMENTAL COMMITTEE ON ENERGY, COMMUNICATION
AND INFORMATION

REPORT ON

THE WORLD CONGRESS ON INFORMATION TECHNOLOGY HELD IN
GUADALAJARA, MEXICO

FROM 29TH September - 1ST October 2014

Clerk's Chambers
Parliament Buildings
Nairobi

APRIL, 2015

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1.0 PREFACE

Hon. Speaker,

On behalf of the Members of the Departmental Committee on Energy, Communication and Information, and pursuant to the provisions of Standing Order No. 216, it is my pleasure to present to the House the Committee's Report of the 2014 World Congress on Information Technology held in Guadalajara, Mexico from 29th Sept -1st October 2014.

Committee Mandate

The Committee is established under *Standing Order 216 and* mandated pursuant to the *Standing Order 216 (5)* to:

- 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 their implementation;
- c) Study and review all the legislation referred to it;
- d) Study, access and analyze the relative success of the ministries and departments measured by the results obtained as compared with their stated objective;
- e) Investigate and inquire into all matters relating to the assigned ministries and departments as may be deemed necessary, and as may be referred to it by the House or a Cabinet Secretary;
- f) Vet and report on all appointments where the Constitution or any law requires the National Assembly to approve, except those under Standing Order No.204 (Committee on appointments); and,
- g) Make reports and recommendations to the House as often as possible, including recommendations of proposed legislation.

In accordance with Second Schedule of the Standing Orders, the Committee is mandated to oversee:-

- a) Fossil fuels exploration

- c) Production of energy
- d) Maintenance and regulation of energy
- e) Communication
- f) Information
- g) Broadcasting
- h) Information Communications Technology (ICT) development and management

Committee Membership

The Committee comprises of the following Members:

1. The Hon. Jamleck Kamau, EGH, MP.....Chairperson
2. The Hon. Jackson Kiptanui, MPVice –Chairperson
3. The Hon. Mohammed Elmi, EGH, MP
4. The Hon. (Eng.) Nicolas Gumbo, MP
5. The Hon. (Eng.)James Rege, MP
6. The Hon. Mithika Linturi, MP
7. The Hon. Mary N. Mbugua, HSC MP
8. The Hon. Aramat Lemanken, MP
9. The Hon. Athur Papa, MP
10. The Hon. Banticha Abdullahi, MP
11. The Hon. Daniel Kazungu, MP
12. The Hon. Esther Gathogo, MP
13. The Hon. Fathia Mahbub, MP
14. The Hon. James Lomenen, MP
15. The Hon. Aburi Mpuri, MP
16. The Hon. Joe Mutambu, MP
17. The Hon. Junet Sheikh, MP
18. The Hon. Kanini Kega, MP
19. The Hon. Mati Munuve, MP
20. The Hon. Zebedeo Opore, MP
21. The Hon. Nicholas Ngikor, MP
22. The Hon. Onesmus Njuki, MP
23. The Hon. Rachael Amolo, MP
24. The Hon. Roba Duba, MP
25. The Hon. Ndungu Gethenji, MP
26. The Hon. Vincent Musau, MP
27. The Hon. William Kisang, MP
28. The Hon. Richard Tongi, MP
29. The Hon. Moses Kuria, MP

The following Members were nominated to attend the Forum on behalf of the Committee:

- 1) Hon. Onesmus Muthomi Njuki, MP – Leader of Delegation
- 2) Hon. Nicholas Ngikor, MP
- 3) Mr. Abdiaziz M. Shobay – Delegation Secretary

Conclusion

In order to make the ICT sector responsive and effective, a comprehensive and robust ICT infrastructure must be put in place that will enable affordable connectivity, well defined standards, mechanisms for promoting security, and the ability to appropriately address cybercrime and privacy.

ICT infrastructure investments must be a top priority for developing and emerging economies as well as for developed and industrialized countries. ICT can only drive an economy and enable its industries and society provided there is an infrastructure with broadband network capacity in place, supported by extensive mobile services. Without these, developed and developing countries could lose out on the business opportunities and the socio-economic benefits of ICT.

A thriving ICT sector also requires a government that embraces the power of ICT to transform the public sector and the delivery of public services. The challenge for governments is how to implement these nascent opportunities to capture the benefits they offer citizens through better outcomes (“effectiveness”), and taxpayers through lower costs and reduced demand for scarce resources (“efficiency”). Public sector structures and processes can present barriers, and developing nations must avoid these effects by learning from the experience of developed nations.

Any long-term solutions for sustainable economic growth lie in building a knowledge-based economy through the development and adoption of ICT. This will help drive an economy towards transformative growth, and enhance industry efficiency and output as well as offer society greater access to opportunities for improving their quality of life, including knowledge and skills acquisition.

A thriving ICT sector also requires a focus on supporting small and medium sized enterprises (SMEs), startups and growth entrepreneurship. These are critical since large and more established companies often do not exhibit significant growth in mature markets. It is therefore important to offer new growth companies tax incentives, financing and to create generally favorable business conditions.

Equally, taxation regimes must recognize the costs and risks of research, development and innovation, and schools and education systems must prepare individuals with skills both to develop and effectively use ICT. Given the leverage of ICT, governments should consider funding base-infrastructures such as broadband and building progressive tax regimes which not only reduce costs but also encourage growth.

Trade rules must take into account the constantly evolving and inherently international nature of digital commerce and business, and any changes should be implemented only after a thorough discussion with all stakeholders and governments should support business-led rules development where possible. Nations benefit the most where there is an ecosystem that encourages entrepreneurship, innovation and protection of intellectual property.

Economic reforms will succeed there is a commitment to free market principles, including the rule of law, respect for private property, open trade and investment, competitive markets, and efficient and effectively regulated financial systems. These principles are essential to economic growth and prosperity and have lifted millions out of poverty while significantly raising the global living standards. WITSA advocates free market principles and open trade and investment regimes as central components of sustainable global growth, employment and poverty reduction.

Whenever government regulation is necessary, it must be internationally coordinated. Incompatible national laws create a fragmented global market with significant

uncertainty as to the rules that apply. Uncertainty means risk, and risk defeats investment and innovation.

In addition, extra-territorial application of a country's laws - and claims for far-reaching application of a country's regulatory schemes - poses a significant problem to business, citizens and consumers and threatens global commerce. Therefore, it is crucial that regulatory schemes affecting global commerce (e.g., financial industry including capital and securities markets, financial services, insurance and banking, transport, advertising, consumer protection schemes, taxes) are non-discriminatory. Jurisdiction, choice of law agreements and enforcement issues must be dealt with in an open, transparent and responsible manner and with full consultation.

Acknowledgment

The delegation is grateful to the Honourable Speaker and the Energy, Information and Communication Committee for authorizing the visit, as well as the office of the Clerk for providing the necessary logistical and technical support. The delegation also wishes to express its appreciation to the Ministry of Foreign Affairs; the staff of the Kenya Consulate in Mexico for all the support given before and during the visit.

The Committee also acknowledges the Communication Authority of Kenya and the Ministry of Information, Communication and Technology for working in close partnership with the Committee to enhance knowledge and the digital agenda of the country.

HON. SPEAKER,

It is my pleasant duty and privilege, on behalf of the Committee to table this report pursuant to provisions of the National Assembly Standing Order 199 (6).

Signed:

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THE HON. JAMLECK KAMAU, EGH, MP
Chairperson, Departmental Committee on Energy, Communication and
Information

Date

.....22/4/15.....

2.0 INTRODUCTION

❖ World Congress on Information Technology (WCIT)

The World Congress on Information Technology (WCIT) often referred to as the “Olympics” of the ICT Industry, is the biennial flagship event organized since 1978 by the World Information Technology and Services Alliance (WITSA), the leading consortium of the ICT industry.

This year, Mexico hosted the event for the first time in Latin America in alliance with the Federal and State Government of the country and with the IT Industry. Under the theme “Building the Digital Age Together”, this international, high-level congress brought together more than 100 speakers, 2,000 delegates from over 60 countries, representing over 90% of the ICT industry and more than 50 world-class exhibitors.

❖ Building the Digital Age Together

ICT is fast becoming ubiquitous in our daily lives. The potential of innovations goes beyond incremental improvements in the efficiency of existing products and services.

The ICT revolution is making the tools and services we depend upon smarter. They are drastically transforming how services are provided, requiring new business models to replace traditional ways of doing things. But the sector must still do more: setting more consistent goals and pioneering the smart solutions it can offer to all.

The WCIT is intended to serve as the proper platform for the industry, policy makers and academy to show their peers, how ICT innovations are helping them to create new alternatives for a challenging world.

❖ Participants

The WCIT 2014 global conversation brought together the following category of participants:

- ICT senior executives
- CIOs from a variety of sectors: Healthcare, Education, Transportation, Government,
- Media, Arts & Culture, Telecom, Financial Services, and Natural Resources & Energy.
- Entrepreneurs and business leaders
- Policymakers and public servants
- Members of the academic community
- Staff and members of associations that are active in major sectors
- Spokespersons from NGOs
- Community leaders
- Civil society
- ICT senior executives
- CEOs from a variety of sectors
- Policymakers and public servants

Among these were 2,500 delegates 50 exhibitors' More than 60 countries, representing more than 70% of the global market in the ICT sector and 300 foreign companies as well as over 500 national companies.

❖ Speakers and Contributors

The key note speakers and contributors on the various thematic areas were:

- Fred Matiang'i - Minister of Information, Communication and Technology-Kenya
- Andrew Stott - Creator of "data.gov.uk" -Member UK Transparency Board
- Ildefonso Guajardo Villarreal - Minister of Economy Mexico
- Amb. Daniel Sepulveda - Deputy Assistant Secretary and Coordinator for International Communications and Information Policy U.S. Department of State

- Diego Molano Vega - Minister of Information Technologies and Communications Colombia Omobola Johnson -Minister of Communication Technology Nigeria
- Andrew W. Wyckoff - Director OECD Directorate for Science, Technology and Industry
- Beñat Bilbao-Osorio - Associate Director and Senior Economist, Centre for Global Competitiveness and Performance World Economic Forum
- Alan Marcus - Head of IT and Telecommunications Industries World Economic Forum Speakers International Organizations
- John Higgins -Director General Digital Europe
- John Wilson - Lead Economist, International Trade The World Bank
- Miguel A. Porrúa - e-Government Lead Specialist, Institutions for Development Sector Department (IFD) Inter-American Development Bank
- Ramesh Krishnamurthy - Acting Coordinator, eHealth Unit Health Systems and Innovation Cluster World Health Organization (WHO)
- Mukhisa Kituyi - Secretary-General UN Conference on Trade and Development
- Ralf Dreischmeier - Corporate Leaders, Global Leader - Information Technology Practice, The Boston Consulting Group
- Gregg Lowe - Chief Executive Officer Freescale Semiconductor
- Dana Lorberg - Group Executive, Technology Relationship Management
- Larry Quinlan - Chief Information Officer , MasterCard
- Robert Pepper - Vice President, Global Technology Policy CISCO Systems,
- Robert E. Kahn - Co-inventor of the Internet Chairman, CEO and President Corporation for National Research Initiatives (CNRI)
- Som Mittal - Former Chairman and President NASSCOM India

3.0 Thematic Areas

Issues and agendas discussed centred on the following thematic areas

- I. Position Mexico as a leader in the ICT global market.
- II. Promote investment and business opportunities in the ICT products and services market.
- III. Debate about the models to provide e-Government services.
- IV. Present new industrial models based in the application of ICT (Digital Economy).
- V. Integrate new paradigms in public policy for entrepreneurs to innovate and generate more and new employment, new industry and careers.
- VI. Contribute in the transformation of Mexico into a society of information and knowledge.
- VII. Foster the adoption and development of the information and communication technologies.

Further, the panel sessions extended the discourse and covered the following arising issues;-

- I. Building and Sustaining a thriving ICT sector in Developed and Emerging Markets
- II. Developing comprehensive digital agendas
- III. Open Data Transparent Government Competing in a Data Driven Digital World
- IV. Closing the global skills gap
- V. ICT for global health care
- VI. Internet Governance with regards to rights, responsibilities, roles, trust and integrity
- VII. Protecting infrastructure and information challenges of the digital economy
- VIII. Accelerating global innovation ecosystems
- IX. The future state of broadband
- X. Maximizing the benefit of ICT

4.0 Declaration

- During the World Information Technology & Services Alliance (WITSA) 19th World Congress on Information Technology (WCIT2014), which took place from September 29th - October 1st , 2014 in Guadalajara, Mexico, delegates from over 80 nations gathered to discuss the impact of information and communications technologies and the imperatives of global collaboration to address the theme of the Congress “*Building the Digital Age Together*” so that every person on earth shares in its benefits.
- A program of 100 renowned speakers from around the globe, representing government, industry, civil society, nonprofits, institutions and academia joined together to define the roles each plays on the global stage of collaboration to build the Digital Age. Sharing the benefits of the *Digital Age* with everyone on earth is a critical goal, which must be the central focus of public policy and all policy actors.
- WITSA is committed to doing what it can do to fulfill the promise of this transformative new age. However, the reality of fulfilling this promise reaches beyond any one individual or organization; it must be accomplished through multi stakeholder cooperation and collaboration. WITSA’s 19th World Congress on IT is one way to inform, encourage and support global collaboration towards achieving this goal

5.0 RESOLUTIONS

The following resolutions were recommended:-

❖ ICT and Sustainable Economic Growth

Sustainable economic growth is defined in slightly different ways by different national governments but it is essentially the ability to improve our financial and social wellbeing without compromising the prosperity or wellbeing of future generations. A sustainable economy is therefore one in which economic growth can occur without negative environmental consequences.

- I. The three most critical environmental impacts that today's society must address are climate change, resource degradation and pollution. At the heart of all the three is energy efficiency and this is the area where the technology sector can make the most positive contribution. And indeed, when it comes to saving energy, ICT is in a unique position. Whilst on the one hand ICT products and services consume energy, on the other hand ICT and ICT enabled technologies help other sectors become more efficient. Indeed, the ICT sector can deliver energy savings at least five times larger than its own footprint.
Yet at the same time ICT is a powerful enabler of growth.
- II. Countries where the implementation of ICT is advanced enjoy significantly greater GDP growth than those where it is not. Moreover, there is far greater growth potential from the development of digital infrastructures than from physical ones. So investment in ICT-enabled networks such as smart grid, universal superfast broadband and intelligent transport systems vastly out-perform investment in traditional network infrastructures such as road, rail or air. However, there are barriers that abound.

III. Few governments have identified ICT as a potential tool in driving growth and reducing emissions, so ICT is rarely an explicit part of policy.

Secondly, technological readiness is well ahead of market demand, so many existing solutions that could be saving energy and stimulating growth are simply not being adopted.

IV. Policy makers urgently need to do three things: First, they must acknowledge the net benefits of using ICT as an enabler of sustainable growth and start using it intelligently as a tool; secondly, they need to find ways to encourage market demand for low carbon goods and services; and thirdly, they need to ensure that environmental policy and associated regulatory instruments are fit for purpose

❖ Digital Access

- I. There is need to reformulate our digital initiatives to focus on how to use technology to empower people and to meet real social or business needs rather than focusing on broadening access for its own sake.
- II. Our digital initiatives should move forward after they have taken 5 key elements into account: infrastructure, local content, government policy, knowledge and skills, and enterprise.
- III. Digital initiatives should be developed co-operatively. The public, private and non-profit sectors should come together to negotiate joint strategies that meet their own goals as well as produce tangible results that benefit the greater good. An initiative of five year window of opportunity for redefining these priorities to achieve results should be a considered.

❖ Privacy and Security

- I. The international businesses and government communities must collaborate to define and promote global standards for the development of internationally trusted and interoperable baseline electronic credentials used to authenticate with appropriate levels of assurance and a person's identity. Organizations should be able to incorporate credentials based on these standards into both new and existing instruments of identity authentication such as e-passports, national ID cards, driver's licenses and credit cards.
- II. Standards for electronic credentials must be built on the business uses for authentication and not just the underlying core technologies. They should promote common approaches for how organizations across different industries create credentials and use them within their various business and government operations.
- III. Therefore, standards must address data elements, verification procedures and management requirements necessary to create credentials protected by design and ongoing maintenance from tampering and misuse. Standard practices must accommodate varying organizational identity management requirements ranging from one- to three-factor authentication.
- IV. To address privacy concerns and create a climate of consumer confidence and trust, organizations issuing electronic credentials must demonstrate and publicize the safeguards used to protect an individual's personal information. Furthermore, organizations need to adhere to a code of conduct, based on best practices which requires them to clearly define and present to the public the uses of and benefits from electronic credentialing prior to requesting any personal data necessary to create these instruments.

❖ Health Care in the 21st Century

There is to accelerate the deployment of technologies in the delivery of healthcare outside of the traditional hospital mainframe. Interoperable, standardized technologies within traditional points of care are critical to improving the quality and reducing the cost of healthcare.

We propose that steps be taken to steps to contribute to the reporting of real-time, real-place health information – a new cartography of global health

5.0 LESSONS LEARNT

Although research shows that a wholesale adoption of best available technologies could dramatically reduce energy use, robust policy instruments are required to make this a reality and create the necessary market pull. WCIT therefore makes three key recommendations to policy makers:

❖ Recognizing ICT as a Tool

- Policy makers in government, particularly those tasked with generating growth or reducing emissions must recognize that ICT is one of most powerful tools they have at their disposal. The important thing is to evaluate ICT on the basis of what it is actually doing and what the net impacts are.
- So for instance if ICT is being used to facilitate a virtual conference that is replacing a transatlantic return flight, then the net impact of ICT is a reduction in emissions, a large reduction - because the fractional increase in electricity demand from the ICT has actually enabled a reduction in emissions equating to several tonnes of carbon. This kind of calculation should precede any decision about deploying ICT but it is rare that these important considerations are actually part of the decision making process in policy making. Economists and successful businesses understand this but governments lag well behind.

❖ Driving Demand

Better demand-drivers are urgently needed to encourage uptake of low carbon technologies and in turn drive competition around energy efficiency. Policy proposals must seek to bridge the cost-benefit or intention-action gap. Effective demand drivers include fiscal incentives where consumers are rewarded for making environmentally friendly choices; social incentives which make the green choice the cool choice (Zipcars for instance make “no car” the stylish car); better information so that consumers and businesses can differentiate pro-environmental choices and finally, green public procurement to lead by example and generate demand. Intelligent green procurement is not just about demanding green products but about common standards, flexible contracts and mandating de facto best practices.

Fit for Purpose Legislation

- I. Governments must ensure that their environmental legislation is predictable, achievable, consistent, transparent, equitable, simple and outcome-focused. Too much environmental legislation is unnecessarily cumbersome, or complex; there is duplication with overlapping measures, most importantly, governments must never dress up general taxes as environmental taxes because this is the fastest way to turn business and consumers away from the green agenda.
- II. WCIT called upon each individual and stakeholder group to commit to building an inclusive digital age by playing a collaborative role in the evolving Digital Age. The ICT Industry will continue to be actively engaged in addressing impediments of infrastructure, affordability, accessibility, protection and security.
- III. Governments are asked to develop digital agendas, enabling regulations and legal frameworks, equitable taxation models and market rules. Governments should also embrace ICTs and to consider them at the core decision-making.

Governments and industry must cooperate to establish equitable partnerships in building and sustaining a viable ICT industry in order to better serve societies.

- IV. International organizations are encouraged to continue investing and funding ICT development, especially in emerging economies, and to open up a closer relationship with the ICT industry. The model of transparent, open multi-stakeholder structures and processes, which is working successfully to enable effective governance of the Internet, is an example of successful collaboration based around consensus to achieve constructive public policy outcomes.
- V. The Congress asks governments, educational institutions and industry to close the global skills gap by providing employment opportunities to young people around the globe, and to enhance employment opportunities for women in all roles, while meeting industry and market demands.
- VI. All delegates are encouraged to work diligently to address the challenges that the vast growth of information itself presents through big data; the application of data analytics and artificial intelligence.
- VII. WCIT2014 underscored the need for these opportunities to be exploited responsibly and transparently and not as tools to subjugate individual and societal rights.
- VIII. WITSA's 2014 Guadalajara Declaration of Collaboration will endure for as long as it takes to fulfill the promise of the Digital Age to include everyone. Working together is the only way to make this dream a reality.

6.0 CONCLUSION

- I. In order to make the ICT sector as strong and effective as possible, a comprehensive ICT infrastructure must put in place which enables affordable connectivity, well defined standards, mechanisms for promoting security, and the ability to appropriately address cybercrime and privacy.
- II. ICT infrastructure investments must be a top priority for developing and emerging economies as well as for developed and industrialized countries. ICT drives the economy and enables its industries and society provided there is an infrastructure with broadband network capacity in place, supported by extensive mobile services. Without these, developed and developing countries could lose out on the business opportunities and the socio-economic benefits of ICT.
- III. A thriving ICT sector also requires a government that embraces the power of ICT to transform the public sector and the delivery of public services. The challenge for governments is how to implement these nascent opportunities to capture the benefits they offer citizens through better outcomes (effectiveness), and taxpayers through lower costs and reduced demand for scarce resources (efficiency). Public sector structures and processes can present barriers, and developing nations must avoid these effects by learning from the experience of developed nations.
- IV. Any long-term solutions for sustainable economic growth lie in building a knowledge-based economy through the development and adoption of ICT. This will help drive an economy towards transformative growth and enhance industry efficiency and output, as well as offer society greater access to opportunities for improving their quality of life, including knowledge and skills acquisition.
- V. A thriving ICT sector also requires a focus on supporting small and medium sized enterprises (SMEs), startups and growth entrepreneurship. These are critical since

the large and more established companies often do not exhibit significant growth in mature markets. It is therefore important to offer new growth companies such as tax incentives, financing and to create generally favorable business conditions.

- VI. Equally, taxation regimes must recognize the costs and risks of research, development and innovation and consequently schools and education systems must prepare people with skills both to develop and effectively use ICT. Given the leverage of ICT, governments should consider funding base-infrastructures such as broadband and building progressive tax regimes which not only reduce costs but also encourage growth.
- VII. Trade rules must take into account the constantly evolving and inherently international nature of digital commerce and business. Changes should be implemented after a thorough discussion with all stakeholders and governments should support business-led rules development where possible.
- VIII. Nations benefit the most where there is an ecosystem that encourages entrepreneurship, innovation and protection of intellectual property. Economic reforms will succeed where there is commitment to free market principles, including the rule of law, respect for private property, open trade and investment, competitive markets, and efficient, effectively regulated financial systems. These principles are essential to economic growth and prosperity and have lifted millions out of poverty, while significantly raising the global living standards. WITSA advocates free market principles and open trade and investment regimes as central components of sustainable global growth, employment and poverty reduction.
- IX. Whenever government regulation is necessary, these must be internationally coordinated. Incompatible national laws create a fragmented global market with

significant uncertainty as to the rules that apply. Uncertainty means risk and risk defeats investment and innovation.

- X. In addition, extraterritorial application of a country's laws and claims for far-reaching application of a country's regulatory schemes poses a significant problem to business, citizens and consumers and threatens global commerce. Therefore, it is crucial that regulatory schemes affecting global commerce (e.g., financial industry including capital and securities markets, financial services, insurance and banking, transport, advertising, consumer protection schemes, taxes) are non-discriminatory. Jurisdiction, choice of law agreements and enforcement issues must be dealt with in an open, transparent and responsible manner and with full consultation.