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THE NATIONAL ASSEMBLY

THIRTEENTH PARLIAMENT – THIRD SESSION – 2024

COMMITTEE ON IMPLEMENTATION

REPORT ON THE GSMA MOBILE WORLD CONGRESS (MWC) AND THE AFRICA
HEALTH TECH SUMMIT 2024 IN KIGALI, RWANDA FROM 29TH TO 31ST
OCTOBER, 2024

 THE NATIONAL ASSEMBLY PAPERS LAID	
DATE:	05 DEC 2024
	DAY.
TABLED BY:	HON. RAPHAEL WAKIJA - CHAIRPERSON
CLERK-AT THE TABLE:	WILLIS OBIERO

Directorate of Audit, Appropriations and General-Purpose Committees
National Assembly
Parliament Buildings.
NAIROBI

December 2024

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ABBREVIATIONS AND ACRONYMS

AI	-	Artificial Intelligence
CMU	-	Carnegie Mellon University
DAK	-	Digital Adaptation Kits
GSM	-	Global System for Mobile Communications Association
IoT	-	Internet of Things
ISO	-	International Organization for Standardization
OSINT	-	Open Source Intelligence
PHC DPI	-	Primary Health Care Digital Public Infrastructure
PHC	-	Primary Health Care
PSC	-	Parliamentary Service Commission
TRL	-	Technology Readiness Levels Space
VRT	-	Variable Rate Technology
WHO	-	World Health Organization

CHAIRPERSON'S FOREWORD

The integration of technology including Artificial Intelligence (AI) into Kenya's legislative processes presents an exciting opportunity to modernize and streamline governance as well as extend the understanding of the power of technology to other sectors that benefit ordinary citizens. It serves in improving research capabilities for Parliament to enhancing public engagement and ensuring transparency. Moreover, technologies such as AI have the potential to make Kenya's legislature more efficient, accountable, and inclusive.

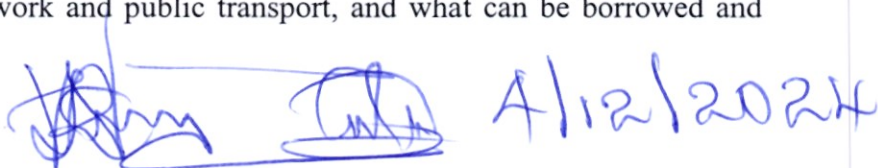
However, successful adoption will depend on addressing the challenges of access, infrastructure, and trust. With the right approach, AI could play a pivotal role in shaping Kenya's legislative future. Legislative research often involves sifting through vast amounts of data, reports, legal texts, and case studies. AI-powered tools, such as machine learning algorithms, can help to quickly analyze large volumes of documents, provide lawmakers with real-time data on global best practices, trends, and the potential impact of legislation and help identify relevant information for new policies or proposed laws. Additionally, AI-driven platforms could be used to analyze public sentiment, existing laws, and international standards before drafting new legislation.

Moreover, it is more evident now than ever in world history that one event taking place in one part of the world is capable of spiralling and causing ripples across the globe, thanks to the Internet amongst other modern communication channels. All this call for a broadening of scope, bringing together of the captains of technology, governance, business, health and agriculture industries, as well brains charged with policy formulation and legislation to generate solutions for our people.

Events such as GSMA World Mobile Summit and the Africa Health Tech Summit 2024 provide such an opportunity to share experiences, exchange ideas and propose solutions for implementation in the respective countries. It is also an avenue for networking and bringing together innovative brains for finding solutions to Africa's challenges and needs.

In this context, Kenya has learnt that indeed, the reality that world is a global village and the earlier the country aligns itself to fit in the global market production and supply chain, the better the prospects for the country in future. Notably, e-commerce, e-health and technology provide some of the best untapped opportunities and markets for Kenyan entrepreneurs. On governance, such conventions provide an opportunity to observe how different countries are run, their economic models, their localized equivalents of devolution, their municipalities, their agricultural, social and health framework and public transport, and what can be borrowed and implemented in Kenya.

Hon. Raphael Wanjala, CBS, MP

Handwritten signature in blue ink and the date '4/12/2024' written in blue ink.

Chairperson, Committee on Implementation

CHAPTER ONE

Preface

1. The focus of capacity building Members of Parliament and Parliamentary Staff is to develop the person and not just the work skills, this way; individual goals are aligned to organisational goals. The Parliamentary Service Commission (PSC) commits to promote an environment of structured and systematic training, learning and continuous professional development of its entire Members and staff to enable them perform their duties effectively and efficiently.
2. Strategic Pillar Number II; “*Excellence in Service Delivery*” of the PSC Strategic Plan of 2019 to 2030 provides for streamlining of interactions between Members of Parliament (MPs) and Parliamentary staff thereby enhancing the value of services that staff provide to MPs. The Pillar entails, among others, enhancing of staff wellness programs in addition to enhancing the human resource management and business processes. The PSC training and development policy provides for capacity building of officers for not more than two weeks after every two years.
3. To this end, the Clerk of the National Assembly approved an invitation to attend the GSMA World Mobile Summit and (the Africa Health Tech Summit 2024) in Kigali Rwanda from 29th – 31st October, 2024.
4. The GSMA World Mobile Summit 2024 and the Africa Health Tech Summit 2024 are two prominent events that are set to bring together global leaders, innovators, and experts to discuss and explore the future of mobile technology and healthcare in Africa. Both conferences are part of a growing trend of using technology to address key challenges in the regions they focus on.
5. The Summit covered a wide range of topics including: using technology to link healthcare systems globally, telemedicine, improving livelihood through technology, using Artificial Intelligence in African Healthcare systems locally, mobile health solutions, and public-private partnerships. Additionally, the delegation also attended side technology forums including visiting the Carnegie Mellon University Africa (CMU-Africa) in Kigali, Rwanda –

the African campus of Carnegie Mellon University (CMU) that focuses in fields like technology, engineering, business, agriculture, public policy and data science.

6. The delegation also visited the Technology Readiness Levels Space (TRL) Rwanda, an initiative or platform dedicated to enhancing education and learning through innovative technologies, particularly in space satellite technology and its applications in agriculture.
7. This Report contains a summary of the topics covered, observations and recommendations by the Members of Parliament and officer that attended the training.
8. The Members of Parliament and officer appreciate the Parliamentary Service Commission; Office of the Clerk; and management of the Directorate of Audit, Appropriation and other Select Committees for the opportunity accorded to them to attend the Summit. The experience will not only go a long way in enhancing effectiveness and efficiency in service delivery but also make the institution of Parliament better and stronger, and ultimately translate into better governance.

CHAPTER TWO

2.0 INTRODUCTION

9. The GSMA Mobile World Congress was slated to take place in Kigali, Rwanda from 29th to 31st October, 2024. However, it was postponed and instead the Africa Health Tech Summit which ran on the same venue, dates and time took place which the delegation from the Kenyan National Assembly attended. The delegation was as follows:

- i. The Hon. Charles Gumini Gimose, MP – Leader of Delegation (Committee on Implementation)
- ii. The Hon. Bernard Kitur, M.P – Alternate leader of delegation (Departmental Committee on Communication, Information and Innovation)
- iii. The Hon. Josses Kiptoo Lelmengit, MP (Parliamentary Committee on Broadcasting and Library Services)
- iv. The Hon. Suzanne Ndunge Kiamba, MP (Parliamentary Committee on Broadcasting and Library Services)
- v. Mr. Mark Namaswa - Clerk Assistant II/Delegation Secretary
- vi. Ms. Winnie Vugutsa – Aide to Hon. Charles Gimose

2.1 About the GSMA World Mobile Summit and the Africa Health Tech Summit 2024

10. **The GSMA World Mobile Summit** is an event put together by the GSMA (Global System for Mobile Communications Association), which brings together industry leaders, innovators, and stakeholders from across the global mobile telecommunications sector. The summit typically serves as a platform for discussing the future of mobile technology, business models, digital transformation, and the growing impact of mobile on industries and economies worldwide. The 2024 GSMA World Mobile Summit was postponed and instead the Africa Health Tech Summit 2024 took place.

11. **The Africa Health Tech Summit 2024** is a forum focused on the connection of healthcare and technology in Africa. The summit brought together key stakeholders from the healthcare, technology, and investment sectors to discuss how innovation and digital transformation can address healthcare challenges on the continent.

12. Part of the focus at the Summit was on the intersection of Healthcare and Innovation: The summit highlighted how emerging technologies, such as artificial intelligence (AI), telemedicine, mobile health (mHealth), data analytics, blockchain, and Internet of Things (IoT), can transform healthcare delivery in Africa. It will also explore how digital health solutions can improve the overall healthcare service delivery across the world especially in developing nations.
13. The exhibition area was designed to be the central place for delegates to gather and exchange. There were coffee breaks and lunches during breakout sessions which took place in the adjacent halls.

2.2 The Kenyan Delegation

14. The Members of Parliament and staff from Kenya paid a courtesy call to Kenya's High Commissioner to Rwanda, H.E. Amb. Janet Mwawasi Oben at the Chancery in Kigali.



Kenya's High Commissioner to Rwanda H.E. Amb. Janet Mwawasi Oben hosts Members of Parliament Hons. Bernard Kitur, Charles Gimose, Suzanne Ndunge, Josses Kiptoo and members of their secretariat who paid her a courtesy call at the Chancery on Tuesday, 29th October 2024. The MPs were in Rwanda for Tech Conference and other sideline ICT meetings.

CHAPTER THREE

3.0 PRESENTATIONS AND SPEAKERS: Innovating for Community Health; Unlocking the Power of AI

3.1 Presentation by Hon. Dr Sabin Nsanzimana Minister of Health, Rwanda

15. Positioning technology in infectious disease and non-communicable diseases programs design, strategic planning and implementation science.
16. Using technology to facilitate clinical trials in Rwanda and multi-country research collaborations.

3.2 Presentation by Dr. H.E. Dr Jean Kaseya – Director General, Africa CDC

17. Summary of systems to combat Marburg virus in African setups such as Rwanda. Using technology to deal with infectious disease outbreaks. The use of a USD 125 million to build a health resilient framework to disease outbreaks.
 - a) Focus on improving the health industry
 - b) Refining the digital health transformation agenda
 - c) Building a continental health information system in Africa

3.3 Presentation by Ricardo Baptista Leite, CEO, Health AI

18. Approaches to harnessing the power of digital transformation in African healthcare, and through Health AI Africa.
19. Advocating for greater investment in AI-driven health initiatives for better health outcomes, improved infrastructure, and more sustainable healthcare systems in Africa.

3.4 Presentation by Hon. Dr Sabin Nsanzimana Minister of Health, Rwanda

20. Deploying technology in infectious disease and non-communicable diseases programs design, strategic planning and implementation science.
21. Using technology to facilitate clinical trials in Rwanda and multi-country research collaborations. He is a fellow of the Royal College of Physicians of Edinburg and African Scientific Institute.

3.7 Way Forward/ Takeaway lessons from the Africa Health Tech Summit

22. Artificial Intelligence and early diagnosis of ailments in Africa: AI can assist in the accurate diagnosis of diseases, especially in regions with limited access to specialist doctors. Machine learning algorithms can analyze medical images (e.g., X-rays, MRIs, and CT scans) and identify patterns that might be missed by human clinicians.
23. AI can also help with the early detection of diseases like malaria, tuberculosis, and HIV/AIDS by analyzing patient data and offering predictive insights. Kenyan businesses and businessmen have an opportunity to infuse the world view in their business undertakings by establishing liaisons with like-minded businesses from other nations. This can be built easily through respective chambers of commerce.
24. Access to Healthcare in Remote Areas: One of the biggest challenges in African healthcare is the lack of healthcare facilities and personnel in rural or remote areas. AI can bridge this gap by enabling remote consultations through telemedicine platforms and virtual consultations. AI-driven chatbots or virtual assistants can provide basic healthcare information, triage symptoms, and recommend actions before the patient sees a doctor.
25. Disease Surveillance and Outbreak Prediction: AI can improve the monitoring of infectious diseases and help predict outbreaks before they become widespread. By analyzing data from hospitals, health clinics, and even social media, AI can identify patterns that may indicate an emerging health threat. This can be crucial in managing diseases like Ebola, cholera, and more recently, COVID-19 and Ebola
26. Tailored Healthcare promotion: AI can be used to create personalized health education materials and programs, increasing awareness about disease prevention and healthy living. In many African communities, education around sexual health, maternal care, and nutrition can be limited, and AI-powered platforms can provide accurate and culturally relevant health information to a wider audience.
27. AI-driven chatbots can engage in conversations with users, answering questions about maternal health, safe childbirth practices, and vaccination schedules, promoting public health education.
28. Healthcare Data Supervision: Data management is often a major challenge in Africa's healthcare systems. AI can help organize and analyze health data more effectively, making it

easier to track patient records, identify health trends, and make informed policy decisions. AI can also aid in automating administrative tasks, reducing the burden on healthcare staff and allowing them to focus more on patient care.

29. Cost Reduction in Healthcare: AI can drive down the cost of healthcare in Africa by improving efficiency, reducing diagnostic errors, and automating tasks that would otherwise require significant human labor. This is especially important for low-resource settings where budgets are constrained, and healthcare costs must be carefully managed.
30. Example: AI can help streamline hospital operations by optimizing supply chains, scheduling, and resource allocation, resulting in cost savings that can be reinvested into patient care.
31. Training Healthcare Workers: AI-powered tools can help train healthcare workers, especially in under-resourced areas. Virtual simulations, online courses, and AI-based feedback systems can help improve medical knowledge and skills without the need for expensive physical infrastructure or specialized trainers.
32. In summary, AI can be a game-changer for healthcare in Africa, helping to overcome barriers such as limited access to healthcare facilities, resource shortages, and high disease burdens. By improving diagnostics, access to care, resource management, and public health initiatives, AI can support the development of more equitable and efficient healthcare systems across the continent.

CHAPTER FOUR

4.0 Technology Innovations at Carnegie Mellon University Africa – CMU-Africa, Kigali

The Carnegie Mellon University is a campus of Carnegie Mellon University located in Kigali Innovation City. CMU-Africa is part of the Carnegie Mellon College of Engineering. Three of its technological innovation areas that the Delegation visited include: The Upanzi Digital Public Infrastructure Network, The Robotics Labs and the use of Artificial Intelligence interventions in farming.



The Kenyan Parliament delegation poses with faculty and students of the Carnegie Mellon University - Africa in Kigali, Rwanda during a tour of the technology innovation facilities at the institution on 29th October, 2024.

4.1 The Upanzi Digital Public Infrastructure Network

The Upanzi Network is an Africa-based collaboration of engineering research labs working toward a secure and resilient digital transformation on the continent. It is domiciled at the Carnegie-Mellon University, Kigali.



Part of the Kenyan Parliament delegation try out tech gadgets at the Upanzi Network hub of the Carnegie Mellon University - Africa in Kigali, Rwanda during a tour of the technology innovation facilities at the institution on 29th October, 2024.

33. Part of the Upanzi Network agenda is to:

- i. Build, experiment with, and contribute back to existing open standard digital technologies for the public good, and demonstrate technological solutions that can provide beneficial, cost-effective and interoperable digital services for Africans
- ii. Implement secure, privacy-protecting, fair, resilient and trustworthy digital technologies
- iii. Enable a more inclusive digital technology environment through the development of digital services that are well-suitable to resource-constrained individuals and environments

- iv. Empower users of digital technologies by building and promoting the development of human-centered digital solutions
- v. Build a network of existing African academic institutions that will act as trusted players where decision makers get trustworthy guidance about different technological solutions

34. Focal Areas of Interest:

- i. Cybersecurity
- ii. Digital public goods/digital public infrastructure governance and deployment
- iii. Public health and agriculture
- iv. Data
- v. Connectivity
- vi. Technology and society

35. The delegation learnt that:

- i. Data and in particular Big Data is the next frontier in the digital space
- ii. Africa has not been keen on how most of its data is used by the rest of the world especially the Global North which harvests data from platforms such as emails, social media networks and
- iii. The Global North is keen on harvesting and storing data especially from the developing world that is being used for business, technology, agriculture and health

36. The unchecked flow of data from Africa to the Global North poses the following ramifications for the African Continent:

- i. Privacy Violations and lack of data Protection Laws: Many African countries lack comprehensive data protection and privacy regulations. This means that companies or organizations harvesting data may not be bound by stringent rules on how personal information is handled, leading to potential misuse or unauthorized access.
- ii. Exploitation of Personal Data: Without proper oversight, personal data could be exploited for commercial gain, profiling, or even political manipulation without individuals' consent.
- iii. Economic Exploitation in the form of Extracting Value without Local Benefits: Data harvesting often leads to valuable insights or products, but the benefits may not flow back to the African populations from which the data is gathered. Foreign companies may gain profits without contributing significantly to the local economy or society.

- iv. **The Monetizing of Sensitive Information:** Data harvested from Africa can be valuable, especially for sectors like agriculture, health, and finance. However, this data could be sold or used in ways that do not benefit the local population, potentially creating a digital divide where African citizens see little return from their personal or community data.
- v. **Cultural and Social Harm and Cultural Bias and Misrepresentation:** Data harvested from African populations might be misrepresented or used inappropriately, reinforcing stereotypes or creating false narratives about African societies. Without context or understanding of local customs and environments, the data may not accurately reflect African realities.
- vi. **Disruption of local community setup:** In cases where data harvesting involves tracking or surveillance (e.g., mobile data usage, internet browsing habits), it can lead to social disruption, marginalization, or the displacement of local populations as companies may prioritize commercial needs over community welfare.
- vii. **Cybersecurity Risks:** When large-scale data harvesting occurs, sensitive data (such as financial, health, or personal details) is stored, making it a prime target for cybercriminals. African countries with less developed cybersecurity infrastructure may be particularly vulnerable to hacking, data breaches, and identity theft.
- viii. **Cross-border Data Leaks:** Data harvested in one country can often be stored in another, leading to issues with data sovereignty. In cases of data leaks or breaches, it can be difficult to hold responsible parties accountable, especially if the data is stored or processed in regions with weaker regulatory frameworks.
- ix. **Threats on Sovereignty and Autonomy:** Many data-harvesting initiatives are led by foreign companies or governments, which can lead to an erosion of national sovereignty. African governments may find it difficult to regulate or control their citizens' data, leading to an imbalance of power.
- x. **Data Colonialism:** This term refers to the idea that data from African countries is being harvested and used by foreign entities in a way that mimics historical colonial exploitation. African nations may lack the technical capacity to protect their data, leading to exploitation by outside forces.
- xi. **Discrimination and Bias:** Data harvested from African populations may not represent

- the diversity of the region accurately. If algorithms or AI systems are trained on biased or incomplete data, it could lead to discriminatory outcomes in areas like job recruitment, healthcare access, or financial services.
- xii. Exclusion from Benefits of AI and Big Data: As AI systems become more prevalent, the lack of accurate, representative data from African countries could exclude them from the benefits of these technologies. For example, health AI systems trained on data from other regions may fail to offer accurate diagnoses for African populations, potentially exacerbating health inequalities.
 - xiii. Ethical, Legal, Consent and Transparency Issues: Many data harvesting activities in Africa lack proper informed consent mechanisms. Individuals may not fully understand how their data will be used, or they may not have the opportunity to opt out, which raises significant ethical concerns.
 - xiv. Unclear Ownership of Data: There are often ambiguities around who owns the data being collected, especially in Africa where digital literacy rates may be lower, and there is less legal clarity on data rights. This could lead to the exploitation of individuals' data without fair compensation or recognition of their rights.
 - xv. Environmental and Social Consequences: Large-scale data harvesting initiatives, especially those linked to AI and machine learning models, often require significant energy consumption. If this is done in an unsustainable way, it can exacerbate environmental issues that disproportionately affect developing regions like Africa.
 - xvi. Negative Impact on Local Innovation: Foreign entities harvesting data from Africa may stifle local innovation, as the global data economy could be dominated by outside interests, leaving local tech entrepreneurs without access to the data they need to grow their businesses.

4.2 Way Forward/Lessons to borrow

37. **Stronger Legislative measures:** African governments can strengthen data protection laws, as a way of ensuring citizens' privacy rights are respected and no profits are made by external parties using their data without their consent.
38. **Capacity Building:** Increasing local capacity in data management, cybersecurity, and legal frameworks can empower African nations to protect their data and control its use. This can also be implemented through the promotion of technical innovation hubs, incentivizing innovation, monetization and greater investments in innovation hubs.
39. **Raising Public Awareness:** Educating citizens about the risks of data harvesting and their rights can help people make informed decisions about sharing their personal data.
40. **Taking a proactive approach in International Technological Cooperation:** International agreements can ensure that data harvesting practices are ethical and beneficial to all parties involved. This is a good arena for revenue generation, income and livelihoods for African masses.

4.2 Artificial Intelligence in Agriculture in Africa – Prof. George Okeyo, CMU-Africa

41. Prof. Okeyo is an IT specialist who is working with farmers and agricultural enterprise to harness the potential of technology especially artificial intelligence to improve agricultural production and efficiency in Africa. According to him, technology remains a reality that the rest of Africa will have to adopt in order to guarantee Africa a fighting chance in the future of crop and livestock production. For instance, in Rwanda, 66.5% of the population engages in agriculture contributing to approximately 29% of the country's Gross National Product (GNP).
42. The adoption of AI technologies can revolutionize various aspects of agricultural production, from planting, crop, pest and disease management and harvesting to market access and post-harvest management.
43. The CMU-Africa has developed AI tools (Agri-GPT) to assist in adopting sustainable agricultural practices, such as crop rotation, agroforestry, and conservation tillage, by providing actionable insights that reduce the environmental footprint of farming.

44. The AI tools are created using information sourced from farmer groups as well as agricultural extension officers and can also help farmers monitor the environmental impact of their practices, ensuring that agriculture remains environmentally sustainable while increasing productivity.

4.3 Way Forward/Lessons to borrow

45. The importance of agricultural extension officers in the African agricultural sector is still an integral component especially on information gathering, information and data sharing even in the era of artificial intelligence interventions. Predictive Analytics for Crop Yield and Weather Forecasting

46. AI and machine learning algorithms can be used to predict crop yields by analyzing historical data, weather patterns, and soil conditions. This helps farmers plan better, minimize losses, and ensure food security by optimizing planting and harvesting schedules.

47. Since most of African farmlands are rain-fed, weather forecasting powered by AI can provide more accurate predictions, which is crucial in regions prone to erratic weather patterns such as droughts or floods. This information can help farmers adapt their practices to minimize crop losses due to changing weather conditions.

48. Pest and Disease Detection remains a challenge in African farming models. AI models, particularly those using image recognition and computer vision, can identify diseases, pests, and nutrient deficiencies in crops early. This can significantly reduce the need for chemical pesticides by enabling more targeted and efficient treatments.

49. AI-based mobile apps allow farmers to take pictures of affected crops and get instant feedback on potential pests or diseases, as well as recommendations for treatment, often through partnerships with agricultural experts or local extension services.

50. Optimizing Resource Usage: AI-driven irrigation systems can optimize resource usage on components such as fertilizer and water usage by using sensors and weather data to ensure that crops receive the right amount of water at the right time, thus improving water efficiency, reducing waste, and saving costs for farmers.

51. AI systems can be used to analyze soil health and recommend optimal fertilizer types and quantities, preventing over-fertilization, reducing environmental impact, and boosting crop yields.

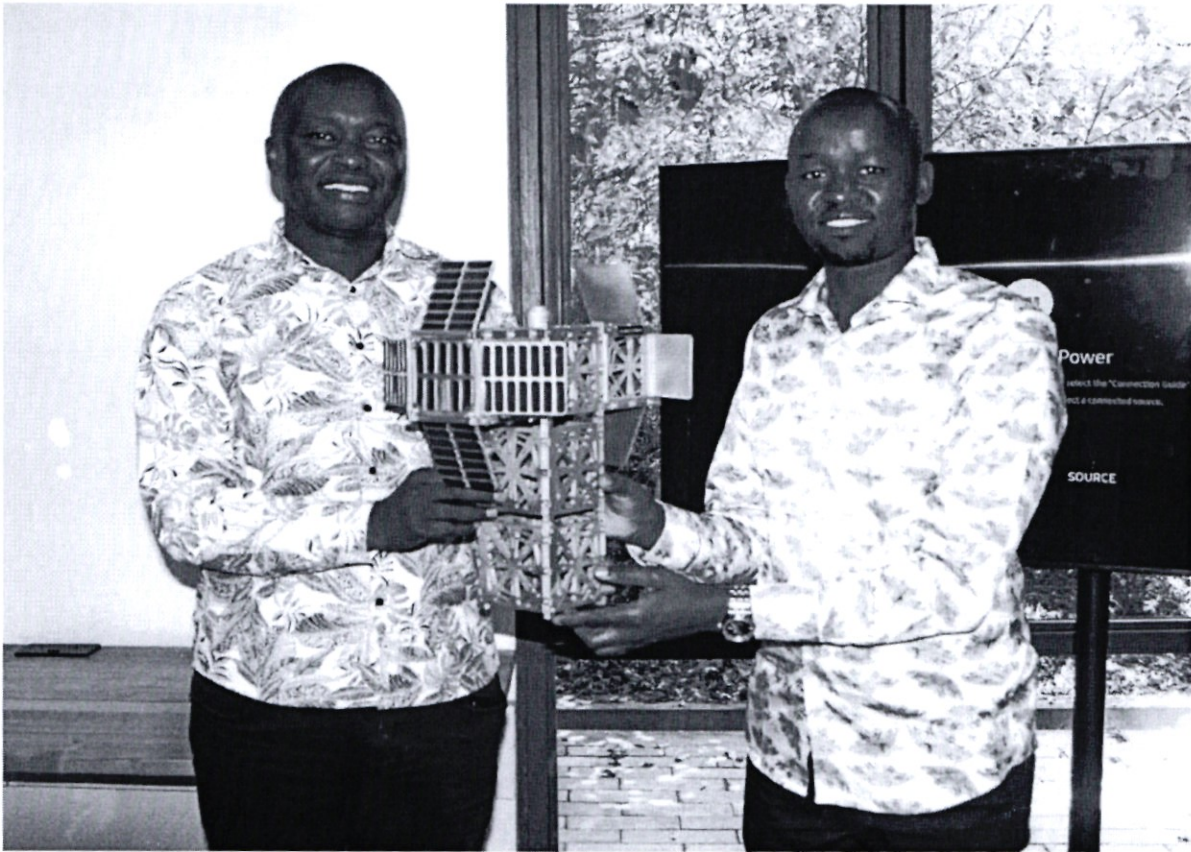
52. Market Access: AI and machine learning help farmers understand market demand by analyzing data from local and international markets, enabling them to predict prices, identify trends, and optimize production. AI can help connect farmers with markets, offering platforms where farmers can sell directly to consumers or buyers, thus cutting out intermediaries and improving farmers' profits.
53. Logistics and transportation optimization powered by AI ensures that agricultural products reach markets efficiently, reducing spoilage and losses, which is particularly important for perishable goods.
54. AI tools can assist in adopting sustainable agricultural practices, such as crop rotation, agroforestry, and conservation tillage, by providing actionable insights that reduce the environmental footprint of farming.
55. AI can also help farmers monitor the environmental impact of their practices, ensuring that agriculture remains environmentally sustainable while increasing productivity.
56. AI can promote financial inclusion by helping farmers gain better access to credit, insurance, and other financial services. AI-based platforms assess the creditworthiness of smallholder farmers by analyzing their farming data and performance, even in the absence of formal credit histories.
57. AI is used in insurance models to create micro-insurance products tailored to African farmers, where weather data, satellite imagery, and AI predictions can help determine when and how payouts should occur in case of crop failure due to droughts or floods.

CHAPTER FIVE

5.1. TRL SPACE RWANDA – A SATELLITE INNOVATION HUB IN KIGALI

Presentation by Serge Tuyihimbaze, IT Specialist, TRL Space. Mr. Tuyihimbaze is an IT graduate currently working on innovations around satellite technology and its applications to local African solutions on sectors such as agriculture.

58. TRL refers to Technology Readiness Levels within the context of space technology or space applications. TRL is a framework used to assess the maturity of technologies, from the initial concept to full deployment. The TRL scale is widely used in industries such as aerospace, defense, and space exploration to evaluate technological developments. It is located at the another of Rwanda's technology incubation hubs.
59. TRL provides space where investors, governments and technology experts converge to brainstorm on the next level of innovation in Africa. Presently, TRL Space in Kigali, Rwanda is focused on developing satellite solutions for regional benefit specifically to be used in agriculture.
60. TRL Rwanda specializes in the manufacture of satellites and remote sensing devices. The goal is to deploy the satellites to space then use them to gather information that can be used for agricultural benefits in the region.
61. At the moment, the innovation hub assembles the satellites locally but has to import cameras that will eventually be mounted on the satellites before deployment to space.
62. TRL Space Rwanda recognizes the level of investment needed for satellite technology and at the moment, fabricates and assembles satellites, mounts cameras on them then liaises with established satellite and rocket manufacturers such as Elon Musk's SpaceX to launch its satellites to orbit.



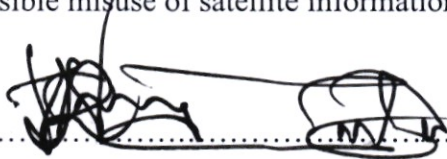
Kenyan MPs Hon. Bernard Kibor Kitur (l) and Hon. Josses Kiptoo Lelmengit pose with a satellite prototype at the TRL Space Lab in Kigali, Rwanda on 30th October, 2024.

5.2 Takeaway point on applications of Satellite technology to agriculture

63. Through Variable Rate Technology (VRT), satellite data can be used to guide precision agriculture by enabling farmers to apply fertilizers, pesticides, and water only where needed, reducing costs and environmental impact. For example, satellite imagery can identify areas of a field that are underperforming, prompting the application of fertilizers or treatments in those specific zones rather than across the entire field
52. By combining satellite data with weather forecasts, historical crop performance, and other variables, AI and machine learning models can be used to predict crop yields. This helps farmers prepare for harvest and adjust production strategies to meet market demand.
53. Satellites help with accurate weather forecasting by monitoring rainfall, temperature, wind patterns, and other atmospheric conditions. For farmers, this information is crucial for planning planting and harvesting schedules, managing irrigation, and protecting crops from extreme weather events (e.g., droughts, storms).

54. Long-term satellite data can also be used to monitor climate change and its effects on agriculture. By tracking shifts in climate patterns, farmers can adjust their practices to mitigate the impact of changes like rising temperatures or changing rainfall patterns.
55. Satellites can help detect environmental conditions that are favorable for pest outbreaks or disease spread. By monitoring vegetation patterns and weather conditions, satellite data can support early detection systems, alerting farmers to potential threats before they become widespread for instance, the case of locust invasion in Eastern Africa in 2019-2020.
56. Satellites can create accurate maps of agricultural lands, delineating field boundaries and identifying areas that require attention. This helps farmers manage large-scale farms more efficiently by targeting specific areas for interventions.
57. Satellite data can help measure the carbon footprint of agricultural activities, providing insights into greenhouse gas emissions and guiding farmers toward more sustainable practices.
58. Finally, as a legislative body, the Parliament of Kenya can spearhead the adoption of this technology through legislation that will promote the food security of the nation, adoption of technology as well as put in place checks and balances to protect the country from possible misuse of satellite information.

SIGNED.....



DATE.....

4/12/2024

HON. RAPHAEL BITTA SAUTI WANJALA, MP
CHAIRPERSON,
COMMITTEE ON IMPLEMENTATION

APPENDICES

Appendix I: Programme Summary of Activities

Registration desk	Exhibition	Congress**	
<u>Tuesday, 29th October, 2024</u>	12:00 – 18:00		
<u>Wednesday, 30th October 2024</u>	07:30 – 18:00	08:30 – 18:30	08:30 – 17:30***
<u>Thursday, 31st October 2024</u>	08:00 – 18:00	08:30 – 18:30	08:30 – 18:00

Appendix II: Detailed Programme – Breakdown of Activities

Africa Health Tech Summit 2024 In Kigali, Rwanda from 29th to 31st October, 2024

	Morning	Afternoon	Evening
Mon 28 th October 2024	Registration		free
Tue 29 th October, 2024	<p>9:00-10:00 - AHTS Official Opening Ceremony</p> <p>10:00 – 11:00 Opening Plenary: Innovating for Community Health; Unlocking the Power of AI</p> <p>11:00-11:30 Health Break</p> <p>11:30-13:00 Transforming Health Systems: Bridging Connectivity and Electrification for Primary Health Care. This session brings together global health leaders to address power and connectivity challenges in Primary Health Care Digital Public Infrastructure (PHC DPI) in low-resource settings. Through initiatives like HealthConnekt and the Health Facility Solar Electrification (HFSE), it highlights progress, challenges, and opportunities in building sustainable, digitally-enabled health systems.</p> <p>13:00 Lunch Break</p>	<p>14:00 – 15:30 - The Way Forward: Financing Digital Health for Lasting Health Impact</p> <p>The role of strong digital health is vital in creating resilient and sustainable health systems, which has led to increased interest from donors in funding and collaboration opportunities. This involves utilizing grants and catalytic funds to support key initiatives. It is important to highlight lessons learned and evidence gathered, as well as the role of organizations in mobilizing new funding to address essential aspects like power, connectivity, and interoperability.</p>	<p>14:00 – 19:30</p> <ul style="list-style-type: none"> ▪ Drones4Health – Transforming Access, Elevating Care ▪ Transforming Healthcare: Digital Solutions for Maximizing Medical Equipment in Africa ▪ Enhancing Health Security: Mastering OSINT and Cybersecurity Hygiene ▪ Cultivating Entrepreneurial Talent for Africa’s HealthTech Revolution

<p>Wednesday 30th October, 2024</p>	<p>Investor Summit</p> <p>9:00 – 10:30 am: Advancing Community Health: Exploring Investment Opportunities in African HealthTech This session will explore investment opportunities in Africa’s HealthTech space, highlighting advancements in mobile health, AI, and diagnostics. Panelists will discuss key markets like Kenya, Nigeria, and South Africa, addressing the gap between rapid tech growth and slower improvements in investment, infrastructure, and regulatory environments, with examples from the HTHA cohort.</p> <p>Speakers: Hon. Minister Paula Ingabire – ICT and Innovation</p> <p>Connecting Africa’s Responsible AI in Health Ecosystem</p> <p>11:00 – 12:30 AI-Driven Health Systems: Transforming Disease Surveillance and Clinical Decision Support in Africa’s Primary Healthcare</p> <p>12:30 – 13:00 Supply Chain strengthening: Building Medical Supply Chains of the Future: Partnerships, Technologies & Business Models (TRVST initiative)</p> <p>Lunch Break</p>	<p>14:00 – 15:30 Digital One Health: Emerging Digital Technology Trends as a Driver of One Health</p> <p>15:30 – 16:30 Public Private Partnerships to scale HealthTech in Africa</p> <p>Resourcing Strategies to Accelerate Digital Health Workforce Development Roundtable</p> <p>Innovation Together: Scaling Community Health Solutions to Achieve SDG3 in Africa</p> <p>Innovating Safely: Integrating HealthTech Innovations into Public Health Systems</p>	<p>Advancing Digital Health Equity in Africa: The Role of Gender and Innovation</p> <p>Thrive360: Transforming Digital Health with Predictive Analytics and Proactive Stock Management</p>
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<p>Thursday 31st October, 2024</p>	<p>9:00-10:30 Connecting Africa Digital Health Communities of Practice</p> <p>SMART Guidelines for Community Health: Standardizing Requirements for PHC Digitalization</p> <p>The WHO SMART Guidelines facilitate the effective adaptation of health recommendations into digital systems, promoting timely and accurate health interventions. Through Digital Adaptation Kits (DAKs), these guidelines provide operational guidance, enhancing workflows for Community Health Workers (CHWs) and ensuring they deliver consistent, high-quality care with the right digital tools.</p> <p>10:30 – 12:00 AI, Emerging Tech, and Digital Health: Consulting on the Path Forward RoundTable</p> <p>Amplifying Youth Voices in Africa’s Digital Health Transformation: Launch of The Africa CDC Youth in Digital Health Network (AYiDHN)</p> <p>Smarter Approaches to Capacity Building the Workforce on Digital Health at Scale Roundtable</p> <p>AHTS CLOSING CEREMONY</p> <p>Organized field trips</p>	<p>Organized field trips</p>	
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1050-1145	<p>Networking break</p> <p>Check out the world-class exhibition area and brand new feature: the Business Circle (The Business Circle is an eye-catching, innovative platform at the heart of the Congress exhibition area that will serve as a central space to showcase and engage with new products and services, host and participate in networking opportunities, present to an audience in a dynamic space and learn from other 13WCC attendees (networking across formal and informal meetings arranged through our AI-powered matchmaking app)).</p>	
1145-1225	<p>Facilitating trade: helping turn the wheels of international commerce</p> <p>Today, across the world, millions of micro, small and medium enterprises (MSMEs) remain excluded from the benefits of international trade. Public private partnerships are empowering greater access for the many small businesses who lack the resources to navigate complex, opaque border processes. Join this session to learn how chambers, businesses and governments are working together to simplify, modernize and digitalize trade and make business work for everyone, everywhere, every day.</p>	<p>Søren Toft- CEO Mediterranean Shipping Company (MSC) Aranca González- Dean Paris School of International Affairs (PSIA), Sciences Po Mohammad Ali Rashed Lootah- President and CEO Dubai Chambers</p>
1225-1255	<p>Multilateralism in times of disruption: double back to move forward</p> <p>The global economic and business landscape is shifting . . . and it is shifting faster than ever before. With this in mind, we're reserving a session to discuss the very latest issues emerging at the very time we meet. We've got our finger on the pulse of issues affecting people and planet and are committed to remaining agile in our programming to ensure we bring you the very latest insight.</p>	<p>John W.H. Denton AO- Secretary General International Chamber of Commerce (ICC) Klaus Schwab- Founder and Executive Chairman World Economic Forum</p>
1255-1505	<p>Networking lunch and exhibitions program</p>	
1505-1535	<p>The power of agreed rules: how arbitration promotes peace and prosperity The objective of this session is to explore the role of arbitration in fostering peace and prosperity through the voluntary acceptance of agreed rules. The panelists will discuss the importance of consensual dispute resolution, the benefits of a rules-based global economy, and how arbitration can promote international transactions, including with states and state owned enterprises. The session aims to provide a big picture view of the role of</p>	<p>Justin D'Agostino- CEO Herbert Smith Freehills Michael McIlwrath- Founder ; Chair MD Disputes ; ICC Governing Body for Dispute Resolution Services</p>

	arbitration in strengthening multilateralism and global governance.	
1525-1555	Networking break	
1555-1620	When food becomes geopolitics As world food supplies become subject to geopolitics, food shortage becomes a	Giampiero Massolo- President Italian Institute for International Political Studies

	growing risk. How to deal with food used as a means of exerting political pressure in a multilateral world? To avert crisis and secure the global food system, the agri-food sector requires strong collaboration between the public and private sectors. How can MSMEs and chambers contribute to a cross-sectoral effort to secure global supply chains?	(ISPI)
1620-1645	Partnerships for prosperity International organisations, governments and civil society cannot address global issues and successfully implement the SDGs working alone. The expertise, experience and innovative solutions of all stakeholders, including small business, entrepreneurs, governments and NGOs are needed. Chambers worldwide are playing a pivotal role in pioneering partnerships that are key to supporting a multilateral model that needs to work for generations to come. We're shining a spotlight on just some projects making a real impact.	Claude Béglé- Founder & CEOSymbioSwiss Sergio Mujica- Secretary General International Organization for Standardization(ISO)