



# WORKSHOP ON MULTI-SECTORAL POLICY APPROACHES TO REGULATING DISRUPTIVE TECHNOLOGIES IN EAST AFRICA

Thursday 18<sup>th</sup> July 2019 to Friday 19<sup>th</sup> July 2019

GOLDEN TULIP CANAAN HOTEL, KAMPALA,  
UGANDA

Report by Mr Raymond Muhekyi (Rapporteur) and Dr Maureen Mapp (Convenor)

Organiser: Mr Patrick Mwaita, UNAFRI



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## **ABSTRACT**

The two-day workshop took place from Thursday 18<sup>th</sup> to Friday 19<sup>th</sup> July 2019 aimed at knowledge exchange among key policy making agencies, academia, the private sector, and the general public on ways of developing a multi sectoral approach to the regulation of emerging disruptive technologies in East Africa.

## **BACKGROUND**

On 18<sup>th</sup> and 19<sup>th</sup> July 2019 at the Golden Tulip hotel in Kampala, UNAFRI and the University of Birmingham Law School organised a two-day workshop with the aim of opening up the space to multi sectoral dialogue on the regulation of disruptive technologies like the blockchain, cryptocurrencies and artificial intelligence, in East Africa.

The workshop was the fourth in a series of research activities co-organised by UNAFRI and the University of Birmingham Law School on the complexities surrounding the regulation of emergent transformative technologies in Africa. In 2018<sup>1</sup>, the first ever policy maker's workshop took place in Kampala co-hosted by UNAFRI and the University of Birmingham consolidated the gains of the first (2016)<sup>2</sup> and second (2017)<sup>3</sup> Roundtables on the regulation of cryptocurrencies and the blockchain, held in Kampala. The 2018 workshop was opened by the Minister for Internal Affairs- General Jeje Odongo and the Minister of State (General Duties) for Finance, Planning and Economic Development, Dr. Gabriel Ajedra Aridru delivered the Keynote address.

The 2019 July workshop addressed the policy concerns raised in the 2018 workshop. Over fifty participants discussed the principles set out in the 2017 *Declaration on Fundamental Principles on the regulation of cryptocurrencies and the Blockchain (Digital Ledger Technologies) in Uganda and its Follow Up*<sup>4</sup> that was agreed at the second Roundtable. Participants adopted a series of recommendations on ways so developing a multi-sectoral approach to bridge the knowledge gap between policymakers/regulators and the technology sector's understanding about the socio-cultural, legal, economic, and political implications of this technologically enhanced environment. Group discussions were led by members of the Working Group on the regulation of digital assets and financial technologies (hereafter "Working Group") that was formed in 2018 to develop a research brief for policy makers.<sup>5</sup> The

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<sup>1</sup> *Report of the Policy Makers Workshop on Cryptocurrency and Blockchain regulation in Uganda* (July 2018) available at <http://unafri.or.ug/wp-content/uploads/2019/01/Report-on-Policy-on-Cryptocurrency-and-Blockchain-in-Uganda-Final-2018.pdf>.

<sup>2</sup> *Report of the first Round Table Discussion to develop instructive guidance on the regulation of cryptocurrencies in Uganda* (July 2016) available at <https://www.birmingham.ac.uk/Documents/college-law/law/research/Final-Report-on-Regulation-of-Virtual-Currencies-2016.pdf>.

<sup>3</sup> *Report of the Second Roundtable discussion on Cryptocurrency regulation in Uganda* (July 2017) at <https://unafri.or.ug/index.php/866/report-of-the-second-roundtable-discussion-on-cryptocurrency-and-blockchain-regulation-in-uganda-held-on-6th-july-2017/>.

<sup>4</sup> The 2017 Declaration can be found at <http://unafri.or.ug/wp-content/uploads/2018/04/Kampala-Declaration-on-Principles-on-regulation-of-cryptocurrencies-and-Blockchain-April-23.pdf>.

<sup>5</sup> Members of the Working Group are: Ms. [Dora](#) Nakyambade, Dr Maureen Mapp, Mr [Solomon](#) Rukundo, Professor [Eric](#) Kibuuka, Associate Professor [Ronald](#) Kakungulu-Mayambala, Mr [Kenneth](#) Muhangi, Mr [Patrick](#) Mwaita, Ms [Monica](#) Nakanwagi, Mr [Jasper](#) Okot, Mr [Tom](#) Walugembe, Dr [Gladys](#)



Research brief was presented on Friday 19<sup>th</sup> July 2019 to the chief guest, the Minister of State (General Duties) for Finance, Planning and Economic Development, Honourable Dr. Gabriel Ajedra Aridru who gave the Keynote address.

Participants at the event included academia, professional experts, policy makers from government departments like the Central Bank of Uganda, the National Information Technology Agency, the Uganda Revenue Authority, media houses, users and companies that are investing and trading in cryptocurrencies, companies working on the blockchain adaptation and interested individuals (see the list of participants at the end of this report for the names of participants).

## **SUMMARY OF RECOMMENDATIONS**

The summary of recommendations draws on comments, suggestions and proposals from the group deliberations, plenary discussions, and presentations at the two-day workshop on a cross sectoral approach to regulating disruptive technologies.

1. To develop a multi sectoral regulatory framework for disruptive technologies in Africa, comparative studies by academia and research bodies into use cases and the justification for regulation in Africa was required.
2. A range of approaches to the taxation of any income or capital gains on income from trading in crypto assets should be adopted given the difficulty of agreeing a taxable event, and the tax administration involved in regulating private money.
3. Any form of legal regulation should involve appropriate legal drafting bodies like the Law Reform Commission, and adjudicative bodies like the Judiciary.
4. The financial sector (both public and private) should actively participate in the discussions and proposed policy frameworks on regulation.
5. Regulatory convergence amongst African governments should build on already existing forums such as the eight economic blocs in the different regions of Africa.
6. There is need for wide reaching involvement of the informal sector, which is the biggest sector in terms of trade and usage of digital technologies in East Africa.
7. The responsibility for raising awareness, for informing and educating the consumers, end users and investors in technologies, should fall on every individual, in addition to the media, and the information sector.
8. Protecting human rights and enabling freedoms of citizens is a key principle that ought to underpin any regulatory framework. The language used in the policies should be human rights compliant and inclusive of all groups in ways that cut across

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Kisekka, Ms. [Jeroline](#) Akubu, Ms [Ritah](#) Butime, Mr [Vito](#) Semakula, Mr [Julius](#) Mboizi, Mr. [Moses](#) Muziki, Mr [Michael](#) Kizito, Mr [Leonard](#) Businge, Mr [Ben](#) Okello- Mwaka, Mr [Baker](#) Birikujja; Mr [Emmanuel](#) Mugabi, Ms [Caroline](#) Mugisha, and Ms [Doreen](#) Nawaali.



generations, culture, age, gender, race, ability, language, and other protected attributes.

9. The Civil society sector ought to take a lead in changing society and regulator's mindset to adopt new means of engaging with a culturally responsive technological regulation.
10. African governments should engage in a cross sectoral dialogue on regulatory matters with the businesses, civil society, and the public.
11. Involving the private sector in co-regulating blockchain technologies is a faster way to offer clarity to investors or businesses, to safeguard interests of users and consumers, to engender trust in the technology, and to prevent illegal or illegitimate business while promoting innovation in the technology sector.
12. Different regulators are needed to regulate the varied uses of technologies, and to prevent the illegal use of digital technologies. Data protection is one of the core principles that should underpin the regulation.
13. Future planning, policy frameworks should have wider awareness raising programmes that involve traditional institutions, public and private sector, and civil society.
14. UNAFRI needs to work closely with African member states and the Ministry of Finance, Planning and Economic Development to secure funds to host events on the regulation of technologies.

## DAY ONE: Thursday 18th July 2019

### Welcome Address: Mr John Sembuya Ssali, [UNAFRI](#)

Mr. Ssali welcomed participants to the two day event and extended a special welcome to Mr. Dziko Malunda (Malawi) the representative of the Governing Board of UNAFRI. Mr Ssali explained that the UNAFRI board comprised eleven member states selected from the four sub regions of Southern, Northern, Western and Eastern Africa. Uganda, as host to UNAFRI was a permanent member of the Governing Board, while Malawi was the current chair of the Governing Board. Mr. Ssali went on to read a welcome speech on behalf of the Acting Director of UNAFRI, Mr John Kitembo, who was unable to attend the event due to illness.<sup>6</sup>

Mr Kitembo's statement began by recognising all participants to the 2019 workshop; an event that was preceded by roundtables that dated back to 2016<sup>7</sup> when the first discussions on the possible regulation of virtual currencies were held in Kampala. The events, part of the research

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<sup>6</sup> Sadly, Mr John Kitembo died the following day on 18<sup>th</sup> July 2019. His obituary can be read here: <https://www.monitor.co.ug/News/National/Former-IGP-Kitembo-dead/688334-5201436-11g45q1/index.html>.

<sup>7</sup> Jamie Redman, "Uganda Considers Future Cryptocurrency Regulations" (2016) at <https://news.bitcoin.com/uganda-future-cryptocurrency-regulations/>.



collaboration between UNAFRI and the University of Birmingham, had provided the medium for sharing knowledge and experiences about policy making and the regulation of digital currencies. UNAFRI in conjunction with relevant stakeholders, was now exploring ways of regulating technologies like the blockchain technologies.

The era of information technology had given rise to the digital age also referred to as the Fourth Industrial Revolution (4IR)<sup>8</sup> facilitated by the growth in disruptive technologies. Advances in technology, often referred to as “disruptive innovation”, had changed people’s lives, leading to access to better services and improved quality of products being offered to consumers. The transformative power of technology today, made the world more integrated and inclusive, thereby accelerating the process of liberalisation and globalisation.

Countries in Africa grappled with the consequences of digitisation like transnational organized crime increasing vulnerability of the region. The scale of losses attributed to electronic devices in the region, sparked fears that private data may be at serious risk if it was not kept secure and protected. Still, the onset of disruptive technologies had had a strong impact on the capacity of the criminal justice systems to deal with illicit activities across boundaries. The constantly changing digital world, was gradually defining the nature and outlook of criminal justice administration. Criminal justice, an area that historically, was labour-intensive as tasks like investigations and court proceedings were usually recorded done by hand, could now be digitised. An effective criminal justice system underpinned by technology could help secure electronic data to facilitate investigations and guarantee physical security. Emerging technologies put additional pressure on law firms and the judicial organs to operate more efficiently and effectively to resolve the impact of transnational organised crime. While Africa’s judicial authorities were focused on using the full weight of the law, technology and international cooperation could help restore the rule of law as a platform for good governance and democracy.

Although these innovations had contributed to the digital space, they also raised legal and regulatory concerns around the world about illegal and illicit use of the technologies to further xenophobic tendencies, radicalisation of sections of populations to commit crime, and online fraud. Common digital innovations included Artificial Intelligence, the Internet of Things, the blockchain and distributed ledger technologies like cryptocurrencies and smart contracts.<sup>9</sup>

UNAFRI with the University of Birmingham Law School had since 2016 engaged several stakeholders through Round table discussions. The consequences had been a realisation of the need to take advantage of the technologies; and to embrace them to promote the provision of social services that suit the emerging needs of Africa. Scientific knowledge and technological expertise continued to evolve rapidly. While such innovation gave rise to new benefits, governments needed not only to encourage innovation, but also to protect the interests of investors so that the market was balanced, and competition did not suffer the effects of heavy-handed regulation of disruptive technologies.

In the on-going engagement with policy makers, it was pleasing to note the current shift in the debate since 2016 from disparate attitudes towards technology use and regulation, to a

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<sup>8</sup> Klaus Schwab, *The Fourth Industrial Revolution* (World Economic Forum, 2016).

<sup>9</sup> Klaus Schwab, *The Fourth Industrial Revolution* (World Economic Forum, 2016) part 2.1 Megatrends. Pierangelo Rosati and Tilen Cuk, “Blockchain beyond cryptocurrencies” in Theo Lynn, John G. Mooney, Pierangelo Rosati, and Mark Cummins (eds) *Disrupting Finance: FinTech and Strategy in the 21st Century* (Palgrave Macmillan, 2019).



meaningful discussion on the roadmap to help bring about a recognition of the operations of start-ups and businesses, and in so doing proposing guidelines to facilitate their businesses.

In 2017, the second-round table adopted a *Declaration on Fundamental Principles on the regulation of cryptocurrencies and the Blockchain (Digital Ledger Technologies) in Uganda and its Follow Up*.<sup>10</sup> The Declaration had led to further discussions about the benefits of blockchain technology and its effects on development in the African region. There was once again, a call for policy guidelines to regulate innovative technology and its use cases.

The first ever Policy Makers Workshop on the regulation of cryptocurrencies and the blockchain in Uganda took place in July 2018. The two government ministers who attended the workshop made fundamental statements that supported the adoption of the 2017 recommendations and pledged to work closely with this forum to explore possibilities of pioneering a regulatory regime for distributed ledger technologies. A new interdisciplinary Working Group was set up to draft a research brief that could form the background for a public facing policy consultation on the regulation of distributed ledger technologies in Uganda.

In April 2019, the Government of Uganda inaugurated a national task force on emerging technologies.<sup>11</sup> This task force was mandated to make recommendations to guide the safe adoption of technology and would (hopefully) draw on the research brief, and thereby benefit from knowledge-sharing and the promotion of cooperation and partnerships between stakeholders. This July 2019 workshop hoped to explore multi-disciplinary approaches to regulation and in so doing to address policymakers' concerns from the 2018 workshop. The effectiveness of the proposals would be seen in the workshop outcomes that included proposals to inform the development of policies and guidelines on the safe use of the technology and how to mitigate the unintended consequences of regulation that was bound to come with these changes.

Mr Ssali concluded the statement by reaffirming UNA-FRI's position to promote collaboration between stakeholders including governments, multinational companies and the domestic private sector, academia, and civil society. Fostering linkages between all stakeholders would facilitate technology development and transfer on mutually agreed terms, including skills and exchange programmes that supported appropriate policies. Such collaborative networks would contribute to the achievement of the 2030 universal sustainable development goals in the African technological space. At the same time, indigenous peoples had the right to maintain, control, protect and develop their cultural heritage, traditional knowledge, cultural expressions, innovations and practices. Both indigenous peoples and local communities would have to be given space in policy discussions to support their social well-being and promote sustainable livelihoods.

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<sup>10</sup> The 2017 Declaration can be found at <http://unafri.or.ug/wp-content/uploads/2018/04/Kampala-Declaration-on-Principles-on-regulation-of-cryptocurrencies-and-Blockchain-April-23.pdf>

<sup>11</sup> National Task Force launch at <http://statehouse.go.ug/media/news/2019/04/09/president-launches-national-task-force-emerging-technologies> .



## Regulating Disruptive Technologies- Dr. Maureen Mapp ([Birmingham Law School](#))

Dr. Mapp began by outlining the research process that underpinned the workshop beginning with her research for the Commonwealth Secretariat on virtual currencies, working with the Bank of Uganda (2015). Following a partnership between UNA-FRI and Birmingham, the findings were shared at the first 2016 round table that developed instructive guidance on ways of regulating virtual currencies. The 2017 second-round table looked more closely at the arguments for the regulation of cryptocurrencies and the blockchain, culminating into the *Declaration on Fundamental Principles on the regulation of cryptocurrencies and the Blockchain (Digital Ledger Technologies) in Uganda and its Follow Up*. In the 2018 policy makers' workshop, the two government ministers- of Internal Affairs and of Finance and Economic development, urged the academic initiative (Working Group) to come up with policy guidance. This 2019 workshop would consider the Working Group's research brief and take a 'deep dive' into the complexities of regulatory convergence in this area.

Maureen gave an overview of technologies that had 'disrupted' existing business models in Africa, by disintermediating the notion of trust and of centralised authority (among other things). The first disruptive technology in East Africa was the Mpesa launched in Kenya in 2007. MPesa was facilitated by mobile phones and had disrupted money transfer and payment systems. The widespread adoption of MPesa was down to trustworthiness.<sup>12</sup> Other platforms like the MTN digital marketplace platform that offered financial products had a mobile money app MoMo with a global outreach of twenty-two countries and approximately two hundred million customers.<sup>13</sup>

Internet banking (itself based on one of the first ever disruptive technologies- the Internet), was introduced in 2010 by the Central Bank of Uganda in the form of the Bank of Uganda Banking System (BBS) which offered internet banking services including to government ministries. Other technologies included the "internet of things" where 'smart' devices were connected to each other via the internet,<sup>14</sup> and advancements in artificial intelligence.

From 2009, distributed ledger technologies like crypto assets (including cryptocurrencies) and the blockchain had come onto the market, and had 'disintermediated' the financial transactions and institutions. More was yet to come with the prospective launch of Facebook's stablecoin, Libra. The blockchain was already in use in East Africa like in Rwanda's land registration, in the cross border remittances, and payments sector.<sup>15</sup> Regarding artificial intelligence, Bowman Uganda was one of the first law firms in Africa to use artificial intelligence in its legal

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<sup>12</sup> Vikas Raj, M.D Accion Venture Lab, June 20, 2019: "We've seen people now willing to put money into a mobile account and use it because [companies like] MPesa ...has trust and credibility" <https://qz.com/africa/1646901/what-facebook-libra-currency-means-for-africa>.

<sup>13</sup> Emma Rumney, MTN to open 'marketplace' in step toward Africa's biggest bank goal, *Reuters* 28<sup>th</sup> May 2019 available at <https://www.reuters.com/article/us-mtn-divestiture/mtn-to-open-market-place-in-step-toward-africas-biggest-bank-go>.

<sup>14</sup> The term was first coined by Kevin Ashton and restated in "That Internet of Things thing" *RFID Journal* (2009).

<sup>15</sup> Carlo R.W. De Meijer "African countries open for blockchain acceptance" *Finextra*, 17<sup>th</sup> August 2018 available at <https://www.finextra.com/blogposting/15656/african-countries-open-for-blockchain-acceptance>.



work, and to host one of the first workshops on Law Tech and the use of artificial intelligence in legal practice.<sup>16</sup>

The demand for these technologies was driven a desire for financial inclusion facilitated by mobile devices, as well as enterprise efforts in the financial industry, and the movement of savings into digital currency. Consumer empowerment also played a role, with developments in social banking that used apps to transfer money within platforms like Facebook. Other factors that drove user adoption were relatively lower transaction and communication costs, transparency, and the speed of the transactions.

Despite the benefits of these disruptive technologies, there were social, economic, and physical harms, as well as the societal and individual impacts that needed to be considered. Social harm caused by nation states and corporations, and economic harm that caused some form of financial loss to a nation or an individual were but two areas of consideration. Equally, physical harm from hacking, fraud or deception, and online harm that caused mental health issues to some, affected society and individuals. The impact of technology use on the individual could be exacerbated depending on a person's status, education, age, ability, culture, or gender. The impact could be more severe if there was no clear duty of care on providers to mitigate against harms.

The potential harms and impact on society or vulnerable individuals required diversity in approach to regulation. In this regard the question of who to regulate, depended on who controlled access to the service, for example, the platform, internet content provider, a miner, developer, or individual generating user content. These potential regulatees needed to be assessed differently as their control over access to the technology or its potential harmful effect on other users or consumers would vary. Regulation as a tool of control could maintain trust between a regulatee and regulator. However, equally the policy aims of offering remedial action against illegal or abusive practices, of protecting human rights and enabling freedoms of citizens to access the technology, while giving clarity to business and end users about what was being regulated (like hardware, software, or online content) could sometimes pull in different directions.

The method of regulation would not be straightforward. Some regulators might choose not to develop compliance rules; a strategy that could help promote innovation but could equally expose end users in the lower social stratum to exploitation and abuse. Others might opt to apply the "same risk, same rules", a principle based approach that also addresses the economic function of the technology. Another option was to use code in developing regulations tailored to new functionality that was engendered by the technological innovation.<sup>17</sup>

Maureen concluded by recommending regulatory pluralism by design where the mode of regulation embraced both state and non-state rule systems and principles in its design. Any policy or regulatory framework would comply not only with existing legal rules and principles, but also take into consideration the values, beliefs and sometimes divergent underlying philosophies of those non state (informal) lower level sectors of society where vulnerable end users, investors and businesses might exist. Standard setting based on ethics of responsibility,

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<sup>16</sup> Digest Africa, "Bowmans and Citi bank hold their second fintech conference" 6<sup>th</sup> July 2018 at <https://digestafrica.com/bowmans-and-citi-hold-their-second-fintech-conference/>.

<sup>17</sup> Marlene Amstad, "Regulating fintech: Ignore, duck type, or code" (March 2019) available at <https://voxeu.org/article/regulating-fintech-ignore-duck-type-or-code>.



and policies that appreciated the political power (control) within these localised sectors, could offer a unifying language that cannot easily be achieved by state regulators alone.

## Keynote Speech: Mr. Dziko Malunga, for Chair, [UNAFRI](#) Governing Board

Mr. Dziko Malunga expressed great pleasure at being invited to address this unique forum of experts, policy makers, members of the private sector, civil society, and academia. The event's discussions he hoped, would help put into focus the development needs of the region premised on the benefits of emerging technologies. Mr Malunga said that it was particularly vital that society was now engaging technology to improve conditions of life, strengthen defences in health, promote new means of production of goods and services and explore new and unprecedented areas of social interaction between individuals, as well as between individuals and the environment.

On behalf of the chairperson of the Board of UNAFRI, Mr Malunga thanked the organisers for hosting the workshop which came out of the initiative by UNAFRI in partnership with the School of Law of the University of Birmingham. The deliberations at the forum were crucial to the future planning of the African region with its focus on developing technological operations on a par with the rest of the international community, without being compromised. This workshop created a suitable platform for the discussion of developmental issues that would be of help to African governments in their pursuit of strategies for socio-economic development. The level of representation at the workshop, bore witness to the importance of sector dialogue in policy development.

UNAFRI's governing board welcomed these initiatives borne out of the need to bring the people with relevant expertise to help ordinary minds to digest the ways in which the technology might be adapted for the public good. Eastern Africa was working towards the attainment of common realities to ease the flow of resources within the region, and in this regard legislative harmonisation; reinforced cooperation and enhanced solidarity was needed. This forum was an integral part of these aspirations to advise governments on how to build sustainable systems of service delivery. This forum would play a crucial role as a centre of expertise that contributed to better implementation of the policies based on suitable legislation, guidelines, and the sharing of best practices. Africa needed to move fast to put practical arrangements in place to use technology as the driver of future societal needs. Mr Malunga hoped that the workshop would develop new ideas that could be expanded upon in subsequent sessions, ultimately being assimilated in work plans.

To appreciate the role and significance of technology in the future, Dziko proposed that Africans look back to their past and then make comparisons with the present. One had to reflect on the vital role of disruptive technology right from the handheld hoe which powered peasant subsistence agriculture, to modernised mechanisation of agricultural production premised on medium and sophisticated machinery for the market. Other examples included the transition from the bicycle to locomotives, and now to electronically powered engines; from



the African drums <sup>18</sup>as a means of communication to the postal services, and eventually to the high-powered global social media networks of communication driven by internet and online technologies. In terms of financial transactions, there had in the past been simplistic transfers of finances by physical means – this had since changed to the current online wireless transactions across continents. Even within the financial sector, technology had defined unprecedented innovations in the precision and promptness of transactions. All these developments had come at a time when governments were developing strategies to take advantage of the innovations, driven by many factors including changes in priorities, market concerns, innovative advances, and the evolution of scientific knowledge.

To be effective, regulatory regimes had to respond to technological evolution while recognising that regulators played an important role in directing future development and use of technologies. Such regimes generally focused not only on risks associated with the product, but also on the risks associated with the intended use of the product itself. Other socio-economic considerations that policy makers had to respond to included ethical objections, competing goods or services, and the impact on labour as well as employment opportunities. A focus on products, rather than on the processes through which they arose, meant that the existing regulatory frameworks in most jurisdictions usually applied by default to the products or outcomes of new technologies as they emerged. The value attached to computers, robotics, drones, blockchain enabled applications, artificial intelligence, the internet and telecommunication networks was recognised by governments, but sufficient safeguards needed to be built around their application without impeding their development, or inhibiting their freedom to choose their way of complying with the law.

For technological innovations to make an impact in the African region, there had to be a change of mindset to adopt new and parallel means for meeting our changing physical situation and the associated diversity of human needs. In this regard, it was expected that the civil society could spearhead efforts in conjunction with government authorities to attain the social change focused on a reinvigorated and timely delivery of necessities in life which were so different and divergent from the past traditional systems of production. In effect, the past was gradually diminishing, and in the process phasing out the traditional systems. However, this change was going to come at a cost.

Disruptive technologies prompted a step change in the access to products and services, and dramatically altered how information was gathered, how products were made, and how people interacted. Disruptive technologies were often transformative in accelerating progress toward identified targets and goals (like the UN Sustainable Development Goals), but they also posed risks such as rising inequality, job losses, exclusion, data privacy, security, and a loss of societal trust. The escalated demands of preparing for the changed menu of needs, required an increase in operations and the need for regulations to guide operational demands. The effect of regulation created strong foundations for technology-led economies to thrive; boosting the capacity of people, firms, and institutions to promote higher standards of living in times of change; and brokering partnerships that harnessed disruptive technology, data security and expertise to solve development challenges.

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<sup>18</sup> Kabiru Kinyanjui, “Culture, Technology and Sustainable Development in Africa” *Asian Perspective* (1993) Vol. 17, No. 2, 269-295. Also, Akpomuvie Orhioghene Benedict, “The role of traditional skills and techniques in the development of modern science and technology in Africa” *International Journal of Humanities and Social Sciences* (2011) 1 (13) 178-186.



Mr Malunga concluded by stating that despite these challenges, there was much that policymakers and regulators could learn from their experiences—and that of their counterparts in other jurisdictions—with regards to regulating earlier emerging technologies and their products. He hoped that the workshop would open up a space for the inclusion of views, experiences and expert knowledge that would inform regulations. The resultant regulations should not stifle innovation, but instead encourage growth and increase capacity for the emerging fourth revolution to deliver on identified needs. He urged participants to build partnerships that promoted the growth of a new body of knowledge to fill the information gaps, especially when critical decisions were required.

## Session 1: Policy Making (Approaches, Challenges) from NITA (U)

Mr Emmanuel Mugabi, [National Information Technology Authority \(Operations\)](#)

Mr Mugabi began by pointing out that disruptive technologies like the blockchain, cryptocurrencies, and Artificial Intelligence were changing how regulators worked traditionally. Some of the disruptive technologies could be regulated within existing current laws, but it was those technologies that fell outside the regulatory perimeter that were problematic. For example, smart contracts on the blockchain could be regulated by the Uganda Electronic Transactions Act 2011 (in theory). However, it was not always clear whether such regulation covered all areas including flaws in the technology,<sup>19</sup> or covered the misuse of a technology in a manner that facilitated cybercrime. Moreover, the resulting losses did not always result in a remedy. Emmanuel gave the example of misappropriation of cryptocurrencies following hacks such as that happened in Japan.<sup>20</sup>

The fact that some cryptocurrency exchanges (like start-ups) offered little consumer protection meant that investors were vulnerable if they lost their assets. Sales and exchanges in Bitcoin were sometimes difficult to trace leading to a bleak prospect of getting a remedy, and the lack of collaboration among the crypto community meant that developers were all competing to create their own crypto coin, without giving much thought to consumer protection. Attaining a standardised means of remedial action like that accepted internationally in banking was difficult.

Mr Mugabi concluded by proposing mutual co-operation between regulators and business, citing the discussions between the Blockchain Association of Uganda and the Uganda Capital Markets Authority on a regulatory sandbox to test their ideas. Another area for regulatory co-operation was the Over the Top Tax (OTT) on social media use and mobile money transactions.<sup>21</sup>

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<sup>19</sup> G. Destefanis, M. Marchesi, M. Ortu, R. Tonelli, A. Bracciali and R. Hierons, "Smart contracts vulnerabilities: a call for blockchain software engineering?" *2018 International Workshop on Blockchain Oriented Software Engineering (IWBOSE)*, Campobasso, 2018, 19-25.

<sup>20</sup> Remixpoint a cryptocurrency exchange in Tokyo lost \$32 million dollars' worth of cryptocurrencies in an apparent hack: Lily Nonomiya, '\$32 Million swiped from Cryptocurrency Exchange in latest hack' *Bloomberg* July 12, 2019.

<sup>21</sup> The Excise Duty (Amendment) Act 2018 introduced the OTT tax of Uganda shillings 200 (\$0.05) per day was introduced in July 2018 on communications via social media like WhatsApp, Facebook and



Mr. Baker Birikujja ([NITA](#)) Legal Services Department

Mr Birikujja explained that regulatory oversight of NITA fell under the Ministry for Information, Communications Technology and National Guidance.<sup>22</sup> A survey carried out by NITA in 2017<sup>23</sup> showed that Uganda had over eight (8) million internet users of which only 1.7% used online forums for shopping. Most people in atypical African settings would prefer to physically meet the other party before purchasing a produce. Nowadays, laws such as the Electronic Transactions Act 2011, and its associated regulations – The Electronic Transactions Regulations, Statutory Instrument No. 42. 2013, provided for electronic transactions. This made it possible for parties to authenticate signatures electronically thereby facilitating value exchange, and validating ownership while offering integrity to the transaction.

The misuse of technology in cyber space such as via hacking where personal details ended up on the dark web, had led to a phobia about giving out too much personal information. Even so, the current regulatory remedies contained in Uganda's Data Protection and Privacy Act 2019, as well as the NITA regulations and policy framework aimed to protect personal information and offer remedies.

## Plenary Session

The plenary session explored the various meanings of a multi sectoral approach, and agreed on six recommendations that would inform a cross sectoral approach to regulating disruptive technologies to achieve the various aims of promoting innovation, preventing misuse and abuse, while offering remedies where appropriate.

### Recommendation 1: Research into integration of Regulatory Technology into regulatory regimes

Participants agreed on the need for intensive research by universities and research institutions on distributed ledger technologies and how they could be harnessed to support compliance in areas like Know-Your-Customer (KYC) and related regulatory processes. Comparative research was also recommended on countries that had already adopted regulatory technologies (Reg Tech), like the United Arab Emirates adaptation of blockchain technology for compliance.<sup>24</sup>

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Twitter that use internet data. For details on the impact of the tax: Ronald Kakungulu-Mayambala and Solomon Rukundo, "Implications of Uganda's New Social Media tax" *East African Journal of Peace & Human Rights* (2018) Vol. 24:2, 146-181.

<sup>22</sup> Ministry of Information, Communication Technology, and National Guidance at <https://ict.go.ug/>. See also a study on ICT in Uganda- Alison Gillwald, Onkokame Mothobi, Ali Ndiwalana and Tusu Tusubira, *The state of ICT in Uganda* (May 2019) available at <https://dig.watch/updates/state-ict-uganda-look-digital-uganda-vision>.

<sup>23</sup> *National Information Technology Survey 2017/18 Report* (NITA, March 2018) at [www.nita.go.ug](http://www.nita.go.ug).

<sup>24</sup> Joby Beretta, 'UAE' in Josias Dewey (ed) *Blockchain & Cryptocurrency Regulation* (2018, Global Legal Group Ltd).



## Recommendation 2: Taxation of crypto assets

Participants discussed the involvement of the tax sector in regulating cryptocurrencies given the different rules that could apply to crypto assets (or not). Arguably, if Value Added Tax did not apply to private money, then in theory any transactions involving trade in cryptocurrencies would be exempt from VAT.

As the income tax laws currently stood and given the unclear tax regime on crypto assets, participants recommended that where crypto assets were purchased as an investment, a capital gains tax should be payable if any profit was made during the transaction. Where the crypto asset was used for business, one option was to apply the Withholding tax of 6% to a business asset.

## Recommendation 3: Engage peer to peer communities in legal regulation

The evasion of any form of government regulation was the philosophy that underpinned the creation of crypto assets. To prevent peer to peer online communities that adhere to this philosophy from being in tension with regulators, there was a need to engage with this philosophy, rather than avoid it or ignore it.

To this end, it was agreed that policy makers and in particular those working in the legal sector specifically the Uganda Law Reform Commission, and the Judiciary, should work more closely with developers, start-ups, investors and users of disruptive technologies in order to frame laws and adjudicative processes that were inclusive of the peer to peer community perspectives and processes.

## Recommendation 4: Financial services involvement in regulation processes

Participants discussed the concept of money and its gradual evolution towards a digitalised form. This evolution was taking place in tandem with changing consumer habits that embraced online trade and the use of private money like cryptocurrencies, even though cryptocurrencies did not fall within the financial regulatory perimeter. Of note, monetary sovereignty was central to the running of government but as the Central Bank of Uganda had no monetary sovereignty over cryptocurrencies, the financial services sector needed guidance on the status of cryptocurrencies vis-à-vis legal tender and currency. The need for a harmonised position on this question was to prevent a situation where legal tender was devalued by cryptocurrencies, a situation not dissimilar to that posited by Gresham's law where "bad money drives out good."<sup>25</sup> With a wide range of competing financial technologies including the blockchain that underpinned cryptocurrencies, the market would eventually decide which currency to use.

The key recommendation was for the Ministry of Finance and Economic Development to issue a policy on the legality of crypto assets, given that the Ministry had oversight of monetary sovereignty. Notably, this policy could only be arrived at after consultations between the Ministry, its government agencies like the Central Bank, and all financial services (both public and private). Within this context, public policy should draw on financial regulations, data

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<sup>25</sup> J. H. Munro, 'Gresham's Law', in Joel Mokyr (ed.), *The Oxford Encyclopedia of Economic History* (Oxford University Press, 2003).



protection and data security, and compliance policies. The private financial sector should also be invited to actively participate in the design of any compliance regulations.

### Recommendation 5: Collaborative approach by African governments for regulatory alignment

Participants considered the different approaches of African states towards the regulation of distributed ledger technologies like crypto assets and the blockchain. While some countries adopted a “wait and see” approach; other states applied a range of existing regulations like cyberlaws, communication laws, and financial laws.<sup>26</sup> However, it was observed that regulators tended to work in ‘silos’ often without a set of core cross cutting principles that governed their regulations, potentially leading to regulatory overreach, and sometimes regulatory dark matter where interventions in the form of non-binding instruments like guidance or administrative interpretations were used but without adequate public scrutiny.

Participants recommended a collaborative approach among African governments towards the regulation of disruptive technologies use cases to achieve regulatory alignment. Collaboration could start with the existing forums like the eight regional economic blocs,<sup>27</sup> diplomatic sectors (including Ministries of Foreign Affairs), and the African Union. Equally, African governments needed to consider problems with blockchain transactions that may require clarity, the global span of the technologies, and whether there was need for governments to create their own digital currency on a par with countries like China.

### Recommendation 6: Integrating the informal sector in regulation planning

Given that innovations were an inevitable aspect of a nation’s development, policy makers had the responsibility to ensure that the informal sector-the biggest sector in the economies in East Africa, was directly involved in planning for regulation. To this end, policy discussions regarding the benefits of technology and the benefits of regulation including risk management, and protections for users and consumers of technologies had to be communicated in languages that were accessible to ordinary people, not just those in elite circles.

## Session 2: Policy making (approaches, challenges)

### The regulation of Artificial Intelligence: unanswered questions, by Associate Professor of Law, Dr. Anthony C.K. Kakooza, [Uganda Christian University](#)

Associate Professor Kakooza began by explaining that artificial intelligence (AI) was not just any piece of software with an algorithm that responds to commands or instructions based on pre-defined multi-faceted input or user behavior. A true artificially intelligent system was one that could learn on its own using neural networks that could make connections and arrive at

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<sup>26</sup> Anton Didenko, “Regulating FinTech: Lessons from Africa” (2018) 19: 2 *San Diego International Law Journal* 311-370.

<sup>27</sup> The eight regional economic blocs are: Arab Maghreb Union (AMU), The Community of Sahel-Saharan States (CEN-SAD), Common Market for Eastern and Southern Africa (COMESA), East African Community (EAC), Economic Community of Central African States (ECCAS), Economic Community of West African States (ECOWAS), Intergovernmental Authority on Development (IGAD) and Southern African Development Community (SADC).



meanings without relying on pre-defined behavioral algorithms. True AI could improve on past iterations, getting smarter and more aware, allowing it to enhance its capabilities and its knowledge.<sup>28</sup>

Examples of the major AI systems included Siri- a virtual assistant which had the ability to draw on other applications. The more a person interacted with Siri, the more Siri learned from person using it. Other examples included the fictional character of Hal 9000 in a film about a computer that learned what a person was doing at the time,<sup>29</sup> and Skynet Terminator about an AI character that turned on humanity. There was Alexa, the virtual assistant who helped with all aspects of daily life including making phone calls and turning on lights.<sup>30</sup> The self-driving (and self-parking) Tesla car was being used in some hotels in Europe, Asia and parts of the United States of America, replacing human valets. Amazon.com the online shop was yet another example of AI being used to help get things even that a person did not know they needed. Other examples of the use of AI was in the music recommendation and streaming services like Pandora. In the workplace, AI could be used to develop an assessment tool to be used in cognitive assessment of potential employees by assessing risk tolerance and other sets of skills necessary for the job. Hirevue platform was one such example. The algorithms helped speed up the process of hiring saving Human Resources hours, even weeks of manual labour reading through curriculum vitae.

Anthony explained that to determine whether AI met the definition of an author in the context of an innovation, the principles of intellectual property would need to be applied. Authorship, where “author” meant the physical person who created the work or led to its innovation, was protected under section 5 of the Copyright and Neighbouring Rights Act 2006 and included a person or authority commissioning work or employing a person to create that work in the course of employment. In establishing whether AI generated contents could meet the requirements for copyright, there was need to consider originality, fixation, and authorship. This raised questions about whether the owner of AI generated work could be the software (algorithm) developer, the software user, the (big) data owner, or if it were in the public domain- one single person could claim ownership.

In conclusion, Anthony highlighted some concerns regarding the use of AI that regulators needed to be aware of starting with the inbuilt biases that could be perpetuated by AI tools at the very onset. For example, while AI enabled hiring systems may appear to make it an objective process, AI may increase the employer’s biases in hiring. Amazon experienced this problem while using *catalyte* and it was forced to scrap the tool. AI could also miss out on some issues like people with disabilities. Other issues included the example of autonomous cars- “Alexa, take the wheel: Who is driving you?”<sup>31</sup> Legal questions arose regarding autonomous cars (like the Tesla car) that had self-driving software. The software needed regular updating, but this created issues regarding data privacy, product liability, and network effects (with proper urban planning). While there were arguments in favour of driver-less cars

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<sup>28</sup> R.L. Adams, “10 Powerful examples of A.I in use today” *Forbes* (10<sup>th</sup> January 2017) available at <https://www.forbes.com/sites/robertadams/2017/01/10/10-powerful-examples-of-artificial-intelligence-in-use-today/#4d5ee9dc420d>.

<sup>29</sup> Rosalind W. Picard "Building HAL: computers that sense, recognize, and respond to human emotion", Proc. SPIE 4299, *Human Vision and Electronic Imaging VI*, (8 June 2001).

<sup>30</sup> Veton Këpuska and Gamal Bohouta, “Next-generation of virtual personal assistants (Microsoft Cortana, Apple Siri, Amazon Alexa and Google Home)” *IEEE* (2018) 99-103.

<sup>31</sup> *Data-Driven Law: Data Analytics and the New Legal Services*, Edward J. Walters (editor) (CRC Press, Taylor and Francis, New York, 2019).



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as it meant less concern over driver fatigue or negligence and therefore fewer road accidents, did this mean that all bus or truck drivers should be fired? There were related questions regarding whether in compensation cases, the law of Torts would be helpful if there was no negligence established. Under the law of Torts, if there was no negligence, there was no compensation, so the question was whether this could signal a move from a tort-liability system to product-liability system, even where liability might be difficult to establish. Perhaps the “black box” like that used in planes should be used instead? One last potential headache for insurance practitioners and lawyers was in determining who got priority in insurance coverage. The driver or pedestrian?

### Threats to Uganda's legal Environment occasioned by cryptocurrencies, by Mr. Kenneth Muhangi ([KTA Advocates](#)) and [Faculty of Law](#), Uganda Christian University

Mr. Kenneth Muhangi began by outlining the three basic aspects of crypto assets: digital format, operated electronically or in code, and were not attached to any state or government so did not have a central issuing authority or regulatory body. He gave the example of the Bitcoin as a cryptocurrency that only existed in computer code. Cryptocurrencies were part of a peer to peer (P 2 P) network with all transactions entered on a ledger called the blockchain. There was no regulatory body to update the ledger as it was decentralised. A group of people called miners verified the transactions in each block on the ledger.

Over the years, cryptocurrencies had challenged the concept of money. Although trust, versatility, and accuracy had fueled the success of the modern notion of money, centuries ago, barter trade was king. People got what they wanted through exchange of items (barter). For example, a person with matooke<sup>32</sup> who wanted potatoes, could exchange their matooke for potatoes. Actual money came to being during the agricultural revolution when livestock and plants were used as money. Then finally, paper money was introduced.

As Noah Yuval explained in *Sapiens*, money was not a material reality but rather a mental construct.<sup>33</sup> Gold coins and dollar bills had a value, but only in our common imagination. Before the invention of paper money, a trader would sell bread in exchange for pieces of gold or silver. A trader embarking on a journey, would travel with the coins trusting that upon reaching their destination, other people would be willing to sell them rice, houses, and fields in exchange for the gold or silver. Money was the most universal and most efficient system of mutual trust that transcended beliefs or values.

This mutual trust was being challenged by cryptocurrencies. The twenty first century had seen the introduction of a cashless society with every digital note backed by a physical one. Transactions were online or through a telecommunications network (Unstructured Supplementary Service Data or USSD). Within this context cryptocurrencies evolved using the peer to peer system where transactions took place directly between users without any intermediary, and with all transactions verified by network codes and recorded on a distributed ledger called the blockchain. Cryptocurrencies had economic value because people agreed

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<sup>32</sup> Matooke is an East African plant from the banana family.

<sup>33</sup> Yuval Noah Harari, *Sapiens: A Brief History of Humankind* (Vintage (2014)).



that it had value. Money was viewed as a material reality. The trust was not in an institution, but in cryptography and coding.

Facebook's proposed Libra stable coin was a case in point. United States Congressman Brad Sherman (Republican) of the United States House Committee on Financial Services, predicted that Libra's potential impact on the country could be even worse than the 9/11 terrorist attacks.<sup>34</sup> Other concerns were raised by Maxine Waters (D Calif.,) chair of the House Committee who was concerned that Facebook's Libra could destabilise currencies in its quest to create a new global financial system intended to rival the U.S. dollar. To Maxine, Facebook's plans raised privacy, trading, national security, and monetary policy concerns, to Facebook's users, other consumers, investors, and the global economy.<sup>35</sup>

Even in Uganda, Kenneth explained how Libra had the potential to disrupt the pricing of mobile money as it would be cheaper to transfer Libra through different platforms at (potentially) zero fees. The Libra stablecoin would be pegged to fiat currencies to avoid price fluctuations and would be run on a blockchain thereby offering more transparency than mobile money platforms. Even so, Libra had to be regulatory compliant. Facebook had promised to put in place stringent Know Your Customer (KYC) requirements, and to provide a data dividend for consumers – where tech companies paid users a dividend for collecting their data.

Regulators needed to pay heed to these concerns including the risk of illegal use of cryptocurrencies for example in money laundering. They (regulators) needed to be up to speed with Facebook's stablecoin technology to assess its weaknesses and how to mitigate its risks. Only then could potential threats including illegal use like money laundering and other related problems be addressed before they happened. As Hyun Song Shin, economic adviser, and head of research at BIS had stated, "Public policy needs to build on a more comprehensive approach that draws on financial regulation, competition policy and data privacy regulation."<sup>36</sup>

A regulatory starting point was Uganda's current legal framework. Relevant laws included the Electronic Signatures Act 2011 that recognised digital signatures, and the Electronic Transactions Act 2011 that provided for the enforcement of consumers rights. Equally, the draft National Payments Systems Bill (2019) had a broad definition of electronic money that could be interpreted to include cryptocurrency.<sup>37</sup> The Bill defined a payment system as a method that effected transactions through the transfer of monetary value and included technology that made such exchanges possible. Although the Bill did not expressly mention the blockchain or cryptocurrency, this definition appeared to cover the two. Even so, regulators had to be concerned about the risks posed by cryptocurrencies like inadequate data security, money laundering, being used for tax evasion due to the anonymity of transactions, and

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<sup>34</sup> Rob Price, "US Congressman Brad Sherman says Facebook's Libra cryptocurrency 'may do more to endanger America than 9/11'" *Business Insider*, 17<sup>th</sup> July 2019.

<sup>35</sup> Salvador Rodriguez, "Rep. Maxine Waters asks Facebook to pause work on cryptocurrency Libra", *CNBC*, 18<sup>th</sup> June 2019 available at <https://www.cnbc.com/2019/06/18/rep-maxine-waters-facebook-should-stop-work-on-libra-cryptocurrency.html>.

<sup>36</sup> Nicholas Megaw, "BIS warns on Facebook risk to finance after Libra plan unveiled" *Financial Times*, 23<sup>rd</sup> June 2019.

<sup>37</sup> Uganda's National Payments Bill 2019 is available at <https://parliamentwatch.ug/bills/national-payment-systems-bill-2019/>. Elsewhere in East Africa, Kenya was the first East African country to develop national payments regulations (National Payment Systems Regulations, 2014) followed by Tanzania with its National Payments System Act No.4 of 2015. Other countries like Rwanda had a comprehensive National Payment System (RNPS) Strategy 2018 – 2024.



hacking. There was the question about how financial technologies could be synchronised with conventional payment systems, as well as concerns regarding liquidity, high trading fees, credibility, price manipulation, full transparency, and whether the system was compatible with users.

In conclusion, Mr. Muhangi emphasised that significant changes to laws and regulations were needed for cryptocurrency to be widely adopted. Inconsistencies for example in data privacy and data protection could limit the adoption of cryptocurrency. Therefore, strong data privacy and protection laws were needed to buttress efforts for a wider adoption of cryptocurrencies.

## **DAY TWO: Friday 19<sup>th</sup> July 2019**

The rapporteur Mr. Raymond Muhekyi summarised the key points of discussion on Day One including the way in which disruptive innovations and technologies had changed people's lives leading to better services and improved quality of products being offered to consumers. The risks identified included the illegal use of crypto assets to facilitate crime, and key recommendations looked at ways of driving forward the regulation of the financial technologies sector.

### **Session 1: Break out Groups**

The participants divided themselves up into four groups covering the following themes: policy approaches to regulation, private sector engagement, engaging fringe communities, and communication approaches. Each group had a member of the Working Group to facilitate the discussions. The groups came up with recommendations and guiding principles for a cross-sectoral approach to the regulation of distributed ledger technologies.

### **Group One: Approaches to regulation of distributed ledger technologies**

Group One participants were drawn from the National Information Technology (NITA), Uganda Revenue Authority (URA), Bank of Uganda (BOU), Mawazo Policy Institute and lawyers in legal practice.

The group recommended that the standards for regulating distributed ledger technologies like cryptocurrencies and the blockchain should be distributed among a range of separate regulators. Having a single regulator was not tenable given the different policy issues that arose when people used technologies. Policy issues included data security, money laundering and whether cryptocurrency qualified as legal tender. The group then sketched out potential regulators. For example, the group suggested that the National Information Technology Authority (Uganda), and the Uganda Communications Commission were best placed to determine how a data security framework should work in relation to digital currencies. Money laundering fell within the remit of the Financial Intelligence Authority (FIA) which could develop



guidelines on anti-money laundering in relation to digital currencies, while the regulation of legal tender was the mandate of the Central Bank of Uganda.<sup>38</sup>

The group emphasised the need for regulators to familiarise themselves with the workings of the technologies like the blockchain and the varied range of cryptocurrencies. Training and awareness raising could be achieved through partnership with the private sector such as the Blockchain Association of Uganda.<sup>39</sup>

The judiciary was a key player in consumer protection through adjudication on the enforcement of regulations. It was agreed that training and awareness raising strategies ought to be extended to the judiciary.

The group also recommended that policy makers and regulators in Uganda look to other countries like China<sup>40</sup> and Malta<sup>41</sup> to draw policy lessons on the shape of regulation of distributed ledger technologies. The group cautioned that any proposals including the adoption of a Central Bank's sovereign digital currency issued by government to dominate the market, should not push other digital currencies to the fringes.

## Group Two: Policy approaches for the Private Sector engagement

Group two was made up of private business including those trading in cryptocurrencies such as Kipya Bit2Big, Cryptocurrency Evolution Limited, Zulu Enterprises: those dealing in technological products like White Mare Technology Limited; and the telecommunications industry- Uganda Telecom Limited.

The group began by discussing the private sector and government collaborations in blockchain. They considered use cases of the blockchain in Uganda including in land registration. The group noted that the Ministry of Lands, Housing and Urban Development had entered a partnership with Bitland Uganda, which is part of Bitland Global, to register all properties on the blockchain to maintain secure immutable land records.<sup>42</sup>

Like Group one, this group also recommended the development of human capital through a strategy of mainstreaming technology skills training in workplaces, and universities. Using a comprehensive curriculum on the different aspects of the technology like security and privacy, skills training would plug the gap in the lack of awareness about distributed ledger technologies and their use cases.

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<sup>38</sup>The monetary policy of the Central Bank of Uganda can be found here: [https://www.bou.or.ug/bou/monetary\\_policy/Monetary\\_Policy\\_Overview.html](https://www.bou.or.ug/bou/monetary_policy/Monetary_Policy_Overview.html).

<sup>39</sup> Other associations include the Blockchain Association of Kenya, and Blockchain Tanzania.

<sup>40</sup> Samuel Haig, "PBOC to Strengthen Cryptocurrency Regulations in 2018" Bitcoin. Com 31<sup>st</sup> March 2018 available at <https://news.bitcoin.com/china-strengthen-cryptocurrency-regulations-2018/>.

<sup>41</sup> In 2018, Malta passed three sets of legislation: the Virtual Financial Assets Act, Chapter 590, the Innovative Technology Arrangements and Services Act, Cap 592, and the Malta Digital Innovation Authority Act, Cap 591 available at <http://www.justiceservices.gov.mt/>.

<sup>42</sup> Katende, Sempebwa and Company Advocates, "Blockchain, Cryptocurrencies and the law in Uganda", 22<sup>nd</sup> January 2019 available at <https://www.lexafrica.com/2019/01/blockchain-uganda/>.



Regarding the telecommunication sector, it was suggested that telecom companies needed to adopt blockchain technology, for example in the way Safaricom had developed Bitpesa (its mobile money network) in Kenya. Bitpesa was now widely accepted.<sup>43</sup>

There was also need for significant investment by government into ICT infrastructure to reduce the costs of internet.<sup>44</sup> It was also suggested that the government should develop its own cryptocurrencies and blockchain for use in the different sectors. India for example, was investigating the development of a digital currency backed by the rupee through leveraging distributed ledger technologies to reduce the cost of printing fiat tender.<sup>45</sup> If banks adopted these technologies, this could drive the growth and development of cryptocurrencies in Africa.

### Group Three: Engaging fringe communities in regulatory activities

Participants in Group three were mainly from the United Nations African Institute for the Prevention of Crime and Treatment of Offenders (UNAFRI), the Uganda Communications Commission and individual participants.

Group Three's main concern was the lack of inclusion of 'fringe' communities in regulatory activities. The group proposed that inclusion starts with mass sensitisation on the meaning of and use of distributed ledger technologies, raising awareness about the risks posed by cybercriminals, explaining how government intends to plug the gaps in cyber security, and then moving on to seek peoples' views on the inclusive use of the technology.

Engaging the fringe communities in discussions on regulation offered opportunities for key stake holders like the Ministry of Information, Communication Technology and National Guidance, and the police to engage in mass awareness campaigns.

In all, a coordinated policy approach to enhance computer literacy for the public, including increased awareness of computer usage as part of computer literacy campaigns, was an imperative.

### Group Four: Communication Policy Approaches

Group Four was made up of students from the International Law Students Association, UNAFRI, media houses like the Uganda Broadcasting Corporation, Television companies, Newspapers, Radio, individuals, and free-lance journalists. Group Four considered policy approaches to effective communication of messages on technology and its uses.

The group began with an overview of the policy approaches to communications by government entities. They considered existing partnerships like that between the Uganda Communications Commission's and Crypto Savannah, one of the leading blockchain firms offering crypto

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<sup>43</sup> Nour Naboulsi and Michael Neubert, "Impact of digital currencies on economic development in Kenya", 2018 ACBSP Region 8 Annual Conference Paris, France November 15- 17, 2018.

<sup>44</sup> Ecobank, *The high cost of mobile data in Sub-Saharan Africa* (Sept 2018) at [www.ecobank.com](http://www.ecobank.com).

<sup>45</sup> Nilesh Christopher, "RBI panel to study feasibility of digital currency" *The Economic Times*, 30<sup>th</sup> August 2018, available at <https://economictimes.indiatimes.com/news/economy/policy/rbi-panel-to-study-feasibility-of-digital-currency/articleshow/65601646.cms>.



education in Uganda.<sup>46</sup> While such training offered invaluable opportunities for increasing digital awareness, the group noted that clear and effective policies on communication were necessary to ensure that the knowledge did not remain with the elites.

A closed approach assumed that the public was only made up of elites who understood the technology. What was needed was simplification of the concepts of cryptocurrency and the blockchain and in this regard, the way forward was to identify the key players in communication and involve them in the dissemination of information on distributed ledger technologies. Those working in mass communication (media) including journalists, were one such group, and they too needed training on the optimal ways of sharing information through reporting, to support effective communication.

## Session 2: Research Brief by the Working Group presented to the Minister of State for Finance, Dr Gabriel Ajedra Aridru

On behalf of the Working Group on the regulation of digital assets and financial technologies in Uganda,<sup>47</sup> Dr. Maureen Mapp presented the research brief to the chief guest, the Minister of State for Finance, Planning and Economic Development (General Duties), Dr Gabriel Ajedra Aridru.

In outline, the brief was developed to help the Ministry identify and be aware of the technical, legal, social, economic, and political issues that may affect the use and regulation of digital assets and emergent technologies in Uganda. This information would help policy makers develop a comprehensive policy framework. The content for the brief was drawn in part from the recommendations of the 2018 policy maker's workshop where the both the Minister of Finance (General Duties) and the Minister for Internal Affairs identified areas for consideration. These were: reconciling the promotion of innovation with robust technological security, trust and risk assessment; the promotion of ethical behaviour, the applicability of existing legislative frameworks; approaches to the investigation, prosecution and settlement of disputes using forensic models; and socio-cultural legitimacy surrounding consumer behaviour among 'fringe' communities.

The brief was based on the country's long-term strategy to be a middle-income country by 2040<sup>48</sup> and aimed to facilitate public engagement across the country in policy formulation. The group drew on archival research and empirical research studies to inform the policy analysis.

Policy implementation remained the responsibility of the government Ministers. However, there was no coherent policy framework on the regulation of emergent technologies like financial technologies in Uganda. Where they existed, policy statements from the different regulators appeared to sit in sector specific regulatory silos that did not 'speak' to each other. For example, the Financial Intelligence Authority (FIA) had submitted its proposals to the

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<sup>46</sup> CryptoGuru, "Uganda Eager to Adopt Blockchain Technology, Says Director, Uganda Communications Commission" 1<sup>st</sup> April 2019 available at <https://bitcoinke.io/2019/04/uganda-eager-to-adopt-blockchain-technology-says-uganda-communications-commission-director/>.

<sup>47</sup> The research brief was prepared by Maureen Mapp ([Birmingham](#)), Solomon Rukundo ([URA](#)) and Dora Nakyambadde ([URA](#)) with contributions from other members of the Working Group -see note 5 above for the names of members of the Working Group.

<sup>48</sup> Uganda Vision 2040 available at <http://www.npa.go.ug/uganda-vision-2040/>



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Ministry of Finance that aimed to bring cryptocurrencies within the scope of the Anti-Money Laundering Act,<sup>49</sup> while the Capital Markets Authority (CMA) was reported to have drafted cryptocurrency regulations, although the contents of the regulations were not readily available.<sup>50</sup> Since 2017, the Bank of Uganda had developed a National Payments Policy Framework that provided for (among other things) the regulation of mobile money, a reduction in cash payments, and a move towards electronic money.

These developments were commendable as they reflected a paradigm shift from a 'wait and see', approach to that of developing sector specific regulation. Even so, FIA, CMA and BOU were all agencies that fell under the Ministry of Finance and this seemingly fragmented approach to policy formulation could lead to conflicting policy choices, or leave unaddressed loopholes in the proposed regulation which could be used by some to circumvent the regulation (regulatory arbitrage). The regulatees - businesses and end users, could also be subject to over regulation by different regulators, which would defeat the purpose of promoting innovation.

The Research brief focused on financial technologies (fintech) given their significant disruption to traditional payment systems, to the issuance of securities, to capital raising ventures, to other financial services, and to regulatory systems themselves. Regarding the latter, the policy on payments contained in the 2017 *National Payments System Policy* by the Central Bank of Uganda could be influenced by the growth in regulatory technology (known as reg tech) which challenged the way traditional processes like reporting, monitoring and compliance were done by regulators. Disruption to financial services also raised policy questions regarding the protection of financial stability, and safeguarding the integrity of markets and payment systems. There was the question of maintaining monetary stability under section 4(2) (a) of the Bank of Uganda Act, Cap 51 by controlling the flow of money and credit to the economy, and in so doing ensuring trust in the fiat currency, protecting consumers and investors, and combatting the illicit use of digital assets that was facilitated by the untraceable nature of transactions. Tax administration by the Uganda Revenue Authority was another policy concern as the lack of access to financial information undermined a tax administration's ability to determine and collect the correct amount of tax from taxpayers. Typically, cryptocurrency accounts were held under pseudonyms that did not provide sufficient identifying information, with some individual users sometimes having multiple accounts making identification difficult.

Policy making required an understanding (from an ethical perspective) of who might be negatively affected or harmed by a policy, including an individual's own vulnerability in relation to that harm. Factors such as age, education/literacy attainment, sex, gender, race/ethnicity, ability, had to be considered. Policy making also had to consider whether regulators could engender collective compliance if they viewed a specific financial technology and/or digital assets as a public good and open to everyone to use and/or consume. Ethical concerns were at the heart of the *Kampala Declaration on Fundamental Principles on the Regulation of Cryptocurrencies and the Blockchain*, as was the question of how regulation could achieve socio-legitimacy among 'fringe' poor, rural and illiterate communities in order to reduce their vulnerability. The Declaration identified four areas of recognition that were key to attaining social cultural legitimacy: a recognition of cultural differences among the various ethnic

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<sup>49</sup> "Uganda to enact law to regulate cryptocurrency trading" *Xinhua*, 20<sup>th</sup> February 2019 at [http://www.xinhuanet.com/english/2019-02/20/c\\_137837288.htm](http://www.xinhuanet.com/english/2019-02/20/c_137837288.htm).

<sup>50</sup> Julius Busingye, "Is blockchain technology gaining traction?" *The Independent*, 17th July 2019 available at <https://www.independent.co.ug/is-blockchain-technology-gaining-traction/>.



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groups; recognition of relational principles of ownership and transfer of property in emergency situations; participatory approaches to dispute resolution in close knit kinship communities; and recognition of the diverse range of ethnic languages spoken in a given district or region.<sup>51</sup>

Policy intervention was timely given that the regulation of cryptocurrencies had been the subject of debate in the Uganda Parliament. According to the Hansard of 29<sup>th</sup> November 2018, in response to Mr Mathias Mpugga's (DP, Masaka Municipality) concern about the lack of regulation in this area, the Minister of State for Finance, Planning and Economic Development (Planning) Mr David Bahati (MP, Ndorwa West) said that this was a grey area. There was neither a law that allowed cryptocurrencies to operate, nor a law that prohibited them from operating. Minister Bahati suggested that the best way to handle cryptocurrency was through legislation, and he promised to table the National Payments Bill to deal with emergent technologies. The Bill was yet to be tabled by the Minister (at the date of the workshop).

Previously, at the first African Blockchain Conference hosted in Kampala from 23-24<sup>th</sup> May 2018, the President of Uganda Mr. Yoweri K. Museveni expressed his interest in and support for the use of the blockchain and cryptocurrencies in Africa. The President cautioned against the adoption of a "dogmatic" approach to financial sector development that could be counterproductive to economic development.<sup>52</sup> Counterproductive approaches included over regulation of a sector, or where there were differential regulations, giving start-ups an unfair advantage over established players.

The Working Group noted that if there was no government intervention, the impact would be significant as businesses would lack the clarity needed in relation to licencing of activities, monitoring and compliance requirements. Lack of clarity would affect society and individuals potentially leading to a loss of trust in government's ability to provide oversight of the sector. The collapse of One Coin- a cryptocurrency whose leader Dr Ruja Ignatova was on the run exemplified the risk posed to end users. One Coin still had about one hundred thousand people using it in Uganda. This despite warnings from the Bank of Uganda in 2017 against any dealing in such virtual currencies.<sup>53</sup> Then was the D9 club- a Ponzi scheme that offered high rates of interest for payments in Bitcoin,<sup>54</sup> but was now facing two law suits *Palm Fox International (U) Ltd v DFCU, BoU, and FIA*,<sup>55</sup> and *Smart Protas Magara and 138 others v FIA*.<sup>56</sup> Both court cases involving over two hundred people who alleged that they had been defrauded of their money showed that individuals and businesses could suffer significant financial and associated harms in this emergent fintech sector.

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<sup>51</sup> ANNEX, *Follow Up to the Declaration* Para 10 (f) on socio-cultural legitimacy.

<sup>52</sup> The Observer team, "Museveni, Mutebile disagree on cryptocurrencies" *The Observer*, 23<sup>rd</sup> May 2018 available at <https://observer.ug/special-editions/57755-museveni-mutebile-disagree-on-cryptocurrencies.html>; also on NTV Uganda, May 23, 2018 available at [https://www.youtube.com/watch?v=fxSP\\_5MI9MM](https://www.youtube.com/watch?v=fxSP_5MI9MM).

<sup>53</sup> Warning against One Coin can be found at <https://www.bou.or.ug/bou/media/statements/One-Coin-Digital-Money-operations-in-Uganda.html>.

<sup>54</sup> A D9 club advert posted on 23<sup>rd</sup> February 2017 available at <https://d9clubuganda.wordpress.com/>.

<sup>55</sup> *Palm Fox International (U) Ltd v DFCU, BoU, & FIA* HC Miscellaneous Cause 423 of 2017, decision of 7<sup>th</sup> March 2019 available at <https://ulii.org/ug/judgment/hc-civil-division-uganda/2019/51>. Although a ruling on a preliminary point of law has been delivered in this case, the substantive issues that cover misleading clients (ethical issues) and fraud were yet to be determined by the court.

<sup>56</sup> *Smart Protas Magara and 138 others v FIA*, Miscellaneous case 215 of 2018, decision of 7<sup>th</sup> March 2019 available at <https://ulii.org/ug/judgment/hc-civil-division-uganda/2019/52>.



**The background:** distributed ledger technologies and their benefits for economic development were visible in areas like land registration, insurance, banking, and in the international remittance sector. Likewise, artificial intelligence was taking root in Africa, with Fintech startups like Kudi (a Nigerian fintech) transforming the payments and money transfer system.<sup>57</sup> Financial transaction services were also offered via mobile phones (mobile money). However, as these technologies penetrated the economy, there were fringe communities left behind by the digital revolution. Such communities usually lived in peri urban and rural localities, and typically had low levels of formal and digital literacy, were economically disempowered, and sometimes were governed by their customary norms and political forms of governance.

Technology literacy levels in Uganda were still considerably low. Most people in rural Uganda were technologically illiterate, with some lacking basic knowledge on how to operate a mobile phone beyond making a call. Adapting to the complicated internet based distributed ledger technologies could leave such people vulnerable to scams. Even mobile money that was praised for its ease of usage was difficult for some. In rural areas it had been reported that many people were unable to operate the mobile money service themselves and rely on the mobile money agents for assistance.<sup>58</sup>

Seventy seven percent (70%) of an estimated forty four million people lived in rural areas in Uganda but most of these people were economically disempowered. Many could not afford to purchase smart devices to use these technologies. The Finscope Uganda report of 2018 for example, showed that adult Ugandans above the age of eighteen and living in rural areas were significantly less likely to have mobile phones and to have access to the internet than adults living in urban areas. Uganda also had a large (formal) financial access gender gap with twenty three percent (23%) of adult women using informal services via their village savings groups and co-operatives as compared with fifteen percent (15%) of adult men doing the same.<sup>59</sup>

Socio- cultural legitimacy was central to the development of Africa's digital technological evolution. This is because people made choices about their compliance with regulation based on whether the regulators and regulation recognised localised notions of business models, how people used emergent technologies (like communal ownership of mobile phones),<sup>60</sup> and how communities dealt with disputes arising from the misuse or abuse of that technology. Equally, despite the existence of accessible technology interfaces, cultural (and religious), values, norms and beliefs could limit access to technology. One such belief- that mobile phones can sometimes facilitate extra-marital affairs, had caused some women who owned a

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<sup>57</sup> Using phone networks, Kudi has developed a chatbot for bill payments and money transfers that operates through Facebook Messenger and Skype: "Top-10 Artificial Intelligence Startups in Africa" April 7, 2019 at <https://www.nanalyze.com/2019/04/artificial-intelligence-africa/>.

<sup>58</sup> Eronie Kamukama, "Develop user-friendly mobile money interface", *Daily Monitor*, February 6 2017, <http://www.monitor.co.ug/Business/Markets/-user-friendly-mobile-money-interface/688606-3800742-kfs74f/index.html>.

<sup>59</sup> Financial Sector Deepening (FSD) *FinScope Uganda 2018 Survey Report* available at <https://fsduganda.or.ug/finscope-2018-survey-report/>.

<sup>60</sup> The Uganda Bureau of Statistics Household Survey (2016) established that although seventy three percent (73%) of households in Uganda have a mobile phone, sixty eight percent (68%) of them have phones owned individually, while five percent (5%) of households had mobile phones that are jointly owned- figure 11, para 11.1, page 158.



mobile phone to keep it a secret from their husbands.<sup>61</sup> The question of religious permissibility determined whether for example, Islamic funds and institutions that closely followed the principles of Islamic law, could deal in cryptocurrencies given their speculative nature.<sup>62</sup> Uganda's national sharia regulatory authorities were yet to rule on whether cryptocurrencies were permissible. Others like Joseph Kabuleta, an influential Christian journalist turned preacher with a following of about twenty thousand people, had suggested that Bitcoin might be the 'New World Currency'.<sup>63</sup>

Against this background, it was important to evaluate the applicability of existing laws to emergent technologies beginning with an identification of the irreconcilable aspects of the law that did not map onto the features of digital assets or technology, and the lived reality. Some issues were identified. The first was the lack of categorisation of cryptocurrencies as money for purposes of taxation. The Value Added Tax (VAT) Act under Section 1(h) excluded money from the definition of goods that attract VAT on any value added to an item in the production chain.<sup>64</sup> However, the fact that cryptocurrencies did not constitute money in either the economic or legal sense, did not exempt profits expressed in cryptocurrencies, from taxation.<sup>65</sup> As the law stood, cryptocurrency users were liable to pay Capital Gains tax on profits acquired as part gross income for a business.

The second example was tension between obligations and rights in distributed ledger technologies. Under the ordinary data protection law, the addressees of duties and the addressees of rights were clearly distinguished, but in distributed networks like that of Bitcoin, the lines between addressees of duties and rights were blurred. Every node contributed to the network's functioning to some extent for example the users running the nodes of the Bitcoin network were both producers and consumers of Bitcoin (prosumers). In such an instance, the roles of the controller and the data subject were not always clear and might even collide.

A gap between the law in the statute books, and technological capabilities could be seen in section 25 of the Electronic Transactions Act (2011). The law required transactions to be revocable within seven days, yet decentralised cryptocurrencies made payments within seconds. The law in Article 9 of the Electronic Transactions Regulations 2013 required service providers to give physical addresses as part of the measure to safeguard against fraud for example, yet IP addresses and other online addresses provided a more accurate source of information on business premises. The fact that some cryptocurrencies like Dash, Monero and ZCash were virtually untraceable mean that the anonymity and pseudonymity of transactions rendered laws that targeted traditional financial institutions based on physical or paper

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<sup>61</sup> GSMA, *Connected Women: A Case Study of Airtel Uganda* March 2015, at page 8 available at [https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/06/Case-Study\\_Airtel-Uganda-1.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/06/Case-Study_Airtel-Uganda-1.pdf).

<sup>62</sup> *Halal Cryptocurrency Management* edited by Mohd Ma'Sum Billah (Palgrave Macmillan 2019).

<sup>63</sup> "Exposed!!!! The New World Order Currency" Part 1, YouTube, available at <https://www.youtube.com/watch?v=JlqRDnkR6SI>.

<sup>64</sup> Under Section 1(h) VAT Act as amended by the VAT Amendment Act 2011 "goods" includes all kinds of movable and immovable property but does not include money. The VAT Act in section 1(n) defines money to include (i) coin or paper currency issued by the Bank of Uganda as legal tender, (ii) coins or paper currency of a foreign country used or circulated as currency; (iii) a bill of exchange, promissory note, bank draft, postal order, or money order, other than a coin or paper currency that is a collector's piece, investment article or an item of numismatic interest.

<sup>65</sup> Aleksandra Bal, "How to Tax Bitcoin?" in the *Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data*, by David Lee Kuo Chuen (ed) (London: Academic Press, 2015) 267-282.



transactions ineffective in obtaining information. This was more so if cryptocurrencies were used by cybercriminals to finance their activities undetected. Broadening the sources of identifying information to include online bases, could help achieve the legislative aims.

#### Fintech Policy Framework – guiding principles

The Working Group proposed that the Ministry of Finance, Planning and Economic Development develop a cross- sectoral Fintech policy and accompanying framework, one that acknowledged the self-regulatory nature of digital technologies, and the fact that regulation by code (technology) was a possibility. The Group recommended a combination of principled and rules-based approaches as optimal for Uganda's technological and economic growth. Several principles that could inform the policy were identified:

**Conceptual Clarity:** the policy should offer conceptual clarity regarding the classification of digital assets and financial technologies. The classifications should be based on the principle of clarity and certainty surrounding the qualifying and non-qualifying technology activities; licensing and listing regimes and the required standards; notification and pre-approval processes; and rules for the valuation of crypto assets. Clarity on the public interests to be protected (if any) was required, as were the safeguards in place like consumer protection and sanctions for noncompliance with the safeguards.

To avoid over regulation, there ought to be an overarching national level regulator who also engages with other regional and international policy makers. As Parliament had not explicitly delegated powers to any specific regulator, and public bodies were not restricted by their mandate, the Ministry of Finance could use a flexible approach to create such an overarching body. Examples included the use of a Memorandum of Understanding like that between the Central Bank of Uganda and the Uganda Communications Commission on the regulation of mobile money.

**Proportionality principle:** all reporting, monitoring, compliance, and associated requirements should pass the proportionality test. This meant that the purpose for which the regulation was required had to be legitimate; the means by which the regulator's objectives were pursued had to be laid down in the law; the regulatory intervention had to be correctly directed to its technological target; and the regulatory measure should not exceed what was necessary to attain the legitimate objective. Regulatory measures could include any proposed security bond. Equally, the sanction should be proportionate to the purported infringement. In this regard, the Know Your Customer and Anti Money Laundering requirements like suspicious activity reporting should not be so onerous as to stifle the innovation of start-ups.

**Technological security, trust, and risk assessment:** policies needed to provide for measures that promoted security for financial technologies, and for the user. Trust could be achieved by maintaining the independence of (private) peer to peer transactions, while having strong consumer protection regulations. A risk-based approach could be adopted- one that clearly communicated the identification, selection, and prioritisation of risks as well as the rationale for that choice. Periodic risk assessments to promote technological security had to be provided for. Regulators should consider how encryption and other technology enabled protections could be drawn upon to offer effective consumer protection. The policies should encourage the automation of regulatory compliance underpinned by the principles of interoperability, scalability, cybersecurity, accountability, transparency, and trust.



**Technological neutrality:** the policy maker should be guided by the principle of technological neutrality in two ways. At the technical level, policy makers could apply the “same risk, same principle” approach, while at the level of drafting of legislation, technologically neutral language should be used as far as possible. The Uganda Law Reform Commission and the Parliamentary Legislative Committee should be involved in scrutinising laws for conformity with the principles.

**Ethical principles** of ‘do no harm’, of fairness, of transparency, of trust, of non-deception and of non-discrimination in the supply of products should underpin the obligations of consumer protection and aim to reduce vulnerability posed by technology. To encourage socially desirable behaviour, a duty to prevent or mitigate harm should be included in the policy. Equally important for policy makers was a strategy to address the gap between the social acceptability of a digital asset or technology, and what was ethically acceptable.

**Inclusivity principle:** the language used in policies should be inclusive of all groups in ways that cut across generations, ages, sexes, genders, races or ethnicities, abilities, languages, and other divides. Policies should be framed using formats that supported people with any form of impairment be it visual, audio, or dyslexia, dyspraxia, including hidden impairments or learning disabilities. Inclusive policies would draw on cross sectoral communication strategies.

The policy should recognise the right to economic, social, and cultural development; to freedom of expression (to protect the production and distribution of software); and the right to property including intellectual property rights. Data protection should be at the core of the policy.

**Principle of socio-cultural legitimacy:** policy making should aim to achieve socio-cultural legitimacy among ‘fringe’ communities to reduce their vulnerability. One way was to leverage society’s understanding of technology, including the localised languages created by user groups or consumers. A socio- culturally legitimate fintech policy for the future should adopt to the changing nature of doing business in Uganda, while supporting new technologies to open the financial and economic sector to the unbanked and those who are financially excluded.

In conclusion, Uganda could lead the African continent in innovation-friendly regulation that not only encouraged and supported the technology sector, but also offered consumer protection like privacy, and a recognition of business practices as framed by localised norms and political systems. The identified gaps in the laws and policies could be addressed through amendments to laws and revision of policies to legitimise the use of technologies. Even so, to address the policy questions raised above using these core principles, a robust policy framework was required to promote innovation, safeguard transactions, and offer protections for a secure and sound digitally enhanced financial environment in Uganda.

The Minister of State for Finance, Dr Gabriel Ajedra g. Aridru received the research brief from Dr Mapp.



## Keynote Address: Minister of State for Finance, Planning and Economic Development (General Duties), Hon. Dr Gabriel Ajedra Gadison Aridru

The Minister of State for Finance, Planning and Economic Development (General Duties) Dr Gabriel Ajedra Aridru (MP, Vurra County) asked the participants to observe a moment of silence in honour of the life of Mr John Kisembo the Acting Director of UNAFRI who had died the previous evening.

The Minister began his Keynote address by thanking the organisers of the workshop and the Working Group for fulfilling their pledge to him at the 2018 Policy Makers workshop to produce a paper to guide the government on the regulation of digital assets like cryptocurrencies and blockchain. Dr Ajedra made clear that he was a firm believer in distributed ledger technologies use cases, and that he had even invested in cryptocurrency.

Dr Ajedra gave an overview of the history of money, its origins in the barter trade, and the introduction of cowrie shells, and coins. Coins were the precursor to the first legal note in the 17<sup>th</sup> century by a King of Asia [King Narai]. Paper money was first issued in China, and fiat currency introduced later in the early 19<sup>th</sup> century as a legal tender controlled by a centralised authority like a central bank. Fiat currency had no value and had to be backed by something – in the case of the United States of America, it was gold. President Nixon realised that as the American economy was growing, it was difficult for the country to build up gold reserves equivalent to the notes that were being printed. So, in 1971 Nixon issued an executive order to delink the fiat currency from the gold reserves. The Federal Reserve began to print money without having an equivalent in the gold reserves. Prior to this delinking, each federal state had the power to coin its own money, although this mandate was different from the authority to create legal tender.<sup>66</sup>

As technology developed, payment and credit methods transformed the use of cash. Money did not need to be exchanged physically as credit cards, and other plastic cards gradually replaced the need for cash. Significantly in 1990, David Chaum introduced the first digital currency underpinned by a cryptographic program for digitally secure cash. No other transaction could be duplicated in the network. More than two decades later, the same ideas were being used in distributed ledger technologies like the blockchain. Equally, crypto assets had now got to the stage when they were recognised as a medium of exchange. The classic definition of cryptocurrency was any form of currency that only existed digitally, with no central issuing or regulating authority but instead used a decentralised system to record transactions and manage the issuance of new units, while relying on cryptography to prevent counterfeiting and fraudulent transactions. These features posed challenges to policy makers who were grappling with the regulation of this space.

Whereas Uganda's economy was just over \$ 30 billion United States dollars,<sup>67</sup> the most actively traded crypto assets in terms of global market capital was Bitcoin whose market value amounted to over \$182,844,677,753 billion United States dollars. Ethereum was the second highly traded crypto asset after Bitcoin with a market capital of \$19,262,448,873 billion United States dollars. There were other coins like XRP with a capitalisation of \$11,209,494,060 billion

<sup>66</sup> *Hepburn v. Griswold* 75 U.S. (8 Wall.) 603 (1870).

<sup>67</sup> In 2019, Uganda's Gross Domestic Product (GDP) was worth 34.39 billion United States dollars- *Trading Economics* available at <https://tradingeconomics.com/uganda/gdp> .



United States dollars, with the total market capitalisation of cryptocurrency at around \$262,033,786,060 billion United States dollars.<sup>68</sup> Clearly there was growth in speculation in this area.

With the acceptance of cryptocurrency came the question of usability- whether cryptocurrencies could be used for trading. If the answer was yes, then cryptocurrencies were here to stay. Dr Ajedra acknowledged the observations by the Working group that cryptocurrency fell outside the ambit of the tax authority (URA). The example of the VAT Act Cap 349 that excluded money in its definition of goods that attract a tax where value has been added during the chain of production was apt. The Minister pointed out that although many legislative frameworks did not mention cryptocurrencies, governments were beginning to realise that due to advancements in technology they needed to develop policies and regulation that could manage digital currencies as they were assets that people owned or held on to. Moreover, like any other commodity, cryptocurrencies were affected by geographical, political, and economic factors including volatility and susceptibility to speculation just like stock. In countries like the United States, the House Committees had held hearings<sup>69</sup> on Facebook's plans to launch Libra because they realised that a lot of financial capital was moving into digital currency, yet there were no clear policies, or control over it. From a tax perspective, the only tax avenue was probably under the window of capital gains tax.

Regarding the present situation in East Africa, Kenya was further ahead having set up a task force to look at issue of regulating cryptocurrency.<sup>70</sup> Uganda, the Minister reported was not far behind as two weeks prior to the workshop, the President of Uganda had directed the Ministry for Finance, Planning and Economic Development to develop a policy on cryptocurrency regulation. The Ministry would draw on the expertise of the group and of participants in drafting its policy on cryptocurrency regulation. The Minister's presence at this workshop was to affirm the government intention to intervene in crypto assets development through a well-researched policy on the regulation of the industry.

The reasons for regulation were various. There were some phony schemes, like that in Mbarara where people had been promised unbelievably high returns on 'investment' in crypto assets. Some may have lost their money. As a risk taker, however, the Minister had himself invested in crypto assets after being convinced by a friend to do so. The Minister borrowed ten million Uganda shillings, invested it in cryptocurrency and in the first month, received four million shillings as a return. After four months, he had registered a profit of sixteen million Uganda shillings. There were plenty of other opportunities like Dark coin [formerly Dash] a cryptocurrency that was speculative and promised high returns. However, if merchants were willing to accept it as a medium of exchange, it had the potential to grow as more people invested in and acceptability increases. Dark coin was very cheap to buy –at about 32 cents each, so an initial investment could potentially reap significant profits.

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<sup>68</sup> More information on July's market capitalisation can be found on CoinMarketCap's Historical Snapshots of July 2019 available at <https://coinmarketcap.com/historical/>.

<sup>69</sup> The Senate Banking Committee hearing was held on the 16<sup>th</sup> of July 2010, while the House Committee on Financial Services held a hearing on the 17<sup>th</sup> of July 2019.

<sup>70</sup> The Kenya Blockchain and Artificial Intelligence Taskforce was instituted in February 2018 to explore the application of distributed ledger technologies and artificial intelligence in Kenya. Muthoki Mumo, "Tech dream team to produce Kenya's blockchain roadmap" *Business Daily*, 28<sup>th</sup> February 2018 available at <https://www.businessdailyafrica.com/corporate/tech/Ndemo-taskforce-Kenya-blockchain-roadmap-ICT/4258474-4323074-gjwqqnz/index.html>.



For as long as technology was changing the way people engaged with money and banking, the need to debate policy and regulation was not wishful thinking. Technology was transforming people's lives, and the private sector working in collaboration with government agencies needed to seek appropriate measures under a regulative framework that ensured the safety and wellbeing of those using the crypto assets. A good policy, Dr Ajedra emphasised, had to be technically correct, with sufficient political support to be implementable. The Minister was pleased to note that the workshop offered a forum to deliberate the processes and capacity required to formulate such policies.

To change the way government intervened in order to correct the market, it was pertinent that the country shifted focus from traditional (and sometimes outdated) means of production, to conventional systems for the delivery and production based on complex disruption that required room for innovation. A new and accelerated technological phase of innovation was fast altering the path of emerging markets through rapid cross border connectivity and industrialisation, linking billions of consumers to existing business enterprises. In the process, the technology use was also generating a lot of data. Businesses were being transformed and commerce now had a breakthrough across borders. The Minister then demonstrated how cross border transactions (payment in this case) were made in cryptocurrency via a wallet, using his mobile phone.

Regarding the opposition to technological developments the Minister observed that banks were opposed to cryptocurrencies because users could bypass the traditional banking system. No long ago, banks had viewed mobile money as disruptive to the banking system. Nowadays, banks were offering mobile money services as well as different ways of banking including mobile banking and online banking. The future of money was digital. Banks like J.P Morgan one of the world's largest banks, was planning to launch its own cryptocurrency, countries like Sweden and China moving towards a 'cashless' society. Even so, it was imperative for policy makers to address issues of privacy, confidentiality, and security in the usage of crypto assets.

The Minister ended his speech by thanking participants for engaging in the workshop (group discussions) and thanked the Working Group for the research brief. He called upon participants to learn about crypto assets and invest in them and urged regulators to work collaboratively to develop policies that were broadly in regulatory alignment.

### Thank You Speech to the Minister for Finance by Professor Eric Paul Kibuuka

Professor Kibuuka began by thanking the State Minister for gracing the occasion and giving an eloquent speech. He noted that we now lived in the age of post modernisation which was an exciting age to be in especially for those scholars of post modernity. Thirty years ago, people had not seen many new developments in technology unlike now. It was vital that this knowledge was given to all including young people and including in universities.

That the President had directed the Ministry of Finance, Planning and Economic Development to develop policies on cryptocurrency regulation, was a source of delight for Professor Kibuuka. He urged the Minister when reviewing the regulation processes, to include UNAFRI in the discussions with the Ministry and its Agencies. He also requested the Minister to prompt the Bank of Uganda to move faster in its work in this area.



In conclusion, Professor Kibuuka observed that cryptocurrencies were not disruptive per se. They were innovative, prompting people to move on and see how they could change society for the better. In this context, managing risk through appropriate regulation was important. He expressed admiration for the Minister who did not fear taking risks, but had invested in cryptocurrency, and encouraged people to invest in it as well. He encouraged Dr Ajedra to use the research brief for policy guidance as he (the Minister) had assured the workshop participants. Professor Kibuuka also urged UNAFRI and the University of Birmingham to broaden the remit of the research activities to other African countries to fulfill the objectives of UNAFRI namely to support countries with their development plans.

### Session 3: Next steps

The last session of the day looked at the way forward and suggestions were given by participants on future activities and ways of facilitating wider public engagement in the regulation of digital assets.

#### Future activities

It was agreed that the Working Group should continue to work on multi sectoral approaches to regulation through various activities like knowledge exchange workshops on fintech and other distributed ledger technologies, and hosting awareness raising events basing on the availability of facilitators and speakers. Drafting of documents for public use based on what had worked in Uganda was useful, as was consideration of what worked for other countries. Where funds were available, UNAFRI should include other African countries in such programs. Participants underscored the need to involve universities including hosting symposiums at universities as they were the centre of research. Universities could develop learning materials, form societies on the technologies including blockchain societies, working in collaboration with the private sector. KIPYA CONNECT for example who run workshops in this area in collaboration with universities in Africa. Participants noted that universities may be cautious about running programmes that were not pre -approved by the regulatory body [Uganda National Council for Higher Education].

#### Engaging the public via traditional authorities

Participants noted that engaging the public engagement necessitated going beyond the use of state authorities like local government authorities at the district level, and public facing bodies like the police. Traditional authorities like the Kingdoms of Buganda,<sup>71</sup> Chiefdoms, and other kinship structures, it was agreed had the establishment to reach out to a bigger audience than the state, and needed to be utilised more in public policy engagement on distributed ledger technologies use.

#### Follow up

Participants agreed to have post workshop follow ups including setting milestones to be achieved in future. All participants should be agents of change by passing on information through their networks.

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<sup>71</sup> Other Kingdoms include those of Bunyoro, Toro, Busoga, and Rwenzururu. The chiefdoms include those of the Alur, the Bamasaba, the Acholi, and the Langi. Other societies include the Jopadhola, Karamojong and the Bakiga.



### Speakers for future events

For future events it was proposed that speakers could include those researching or working in the area, journalists, civil and public servants, as well as users/consumers including luddites who were sceptical about the use of technology. Influential people that could be invited included religious leaders, opinion leaders, and traditional leadership especially those in charge of traditional finance departments or treasury. Equally important were the voices of public figures with a considerable audience including on social media, who were able to explain complex points in simple language that was understood by people who were not well versed in the language of code, or in English. Politicians were important public figures especially those members of parliament who engaged with or raised issues in parliament regarding the regulation of digital assets and distributed ledger technologies.

### Communications policy

To communicate complex technological ideas to the public, it was suggested that breaking down concepts in simple, catchy but relevant language could bridge the communication gap.

### Collaborative networks

Participants underscored the need for regulators to work with a range of local partners such as businesses, civil society organisations including community based organisations to increase the benefits of regulatory measures. Attending events organised by other bodies working in the same field was important. To facilitate this, a mailing list of participants was important.

### Funding

It was suggested that UNAFRI should source for funding to facilitate the travel of delegates across African countries. Other possible funding avenues for future events included the Ministry of Finance, Planning and Economic Development.

### Publicity

Participants acknowledged the need for more publications from the workshops and using the press media to create awareness about what has worked in Africa in this regulatory space.

### Closing Remarks Mr. Patrick Mwaita (UNAFRI)

Mr. Mwaita closed the workshop with a word of appreciation to chair of UNAFRI represented by Mr. Malunda from Malawi, and a word of thanks to participants for attending the workshop. He acknowledged the special contribution of Professor Kibuuka who had attended all the events since the inception of the programme in 2016. The contribution of organisations like KIPYA CONNECT was acknowledged as a private sector business that organised regular symposiums on blockchain and offered training on blockchain use. Mr Mwaita suggested the need for a larger forum to gradually build up a body of knowledge on technology use in Africa. He concluded by encouraging all participants to create awareness about distributed ledger technologies and their implications for regulation by spreading the information through their networks.

\* Comments or queries on matters raised in this Policy Makers Workshop report may be directed to Raymond Muhekyi and Maureen Mapp at [M.O.Mapp@bham.ac.uk](mailto:M.O.Mapp@bham.ac.uk).



## List of participants at the workshop on multi-sectoral approaches to regulating disruptive technologies (2019)

Hon. Dr. Ajedra Gabriel Gadison Aridru, [Minister of State](#) for Finance, Planning and Economic Development (General Duties)

Mr Pius Asiimwe ([Kipya Bit2Big](#))

Mr Andrew Bagala

Mr Baine Brian, [AF Mpanga Advocates](#)

Mr Baker Birikujja, National Information Technology Authority ([NITA- Uganda](#))

Mr Stephen Bwiire, [Cryptocurrency Evolution Limited](#)

Mr Aloysius Byamukama

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