

# **Annual Report**

*of the United Nations Internet Governance Forum Recognized*

## **Dynamic Coalition on Data Drive Health Technologies**

**2020**

**DCDDHT**

## **Mission Statement of the United Nations (UN) Internet Governance Forum (IGF) Recognized Dynamic Coalition on Data Driven Health Technologies (DC DDHT)**

The Dynamic Coalition on Data Driven Health Technologies (DC DDHT) facilitates a multi-stakeholder dialogue on eHealth Technologies, to seek common ground on definitions, values, principles, ethics, norms, culture, standards, and so forth. Knowledge sharing between multi-stakeholders, with collaboration, assists innovation and delivery of quality eHealth products and services to promote the mandate of the United Nations Sustainable Development Goals (SDG), and in particular, goal number three. SDG Goal #3 seeks to “ensure health and well-being for all, at every stage of life”.

### **Acknowledgements**

This annual report was written by the members of the DC DDHT. The development of the report’s content was through discussions by email; conference calls; presentations; public discussions throughout 2020 and include the outputs from the Internet Governance Forum 2020 meeting session of DC DDHT.

**The founding members of the Dynamic Coalition in 2019 / 2020 were as follows:** Ms Amali De Silva – Mitchell (Founder and Coordinator); Mrs Janna Belote; Dr Bimalka Seneviratne; Mr Jorn Erbguth; Dr Galia Kondova; Mr Robert Guerra; Dr Champike Attanayake; Ms. Marina Shentsova. Mr Herman Ramos is an IGF Youth Ambassador and a member of our DC.

We also want to thank Dr Katerina Sideri; Mrs Lakmini Shah, Dr Janet Michaelis, Dr Stefan Bungart, Dr Pramilla Senanayake, EuroDIG, members of other IGF DCs and Best Practices Forums (BPFs), and the IGF Secretariat for their support, including a large number of, unlisted here, quiet supporters from our local communities.

### **Disclaimer**

The views and opinions within this report are those of the writers and may not reflect the views and opinions of the United Nations Internet Governance Forum Secretariat (IGF) nor conform to IGF definitions, practices, norms, values and so forth.

*Reported by:*

*Ms. Amali De Silva – Mitchell*

*Coordinator, Dynamic Coalition on Data Driven Health Technologies, January 31, 2021*

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## **Executive Summary**

The work of the United Nations Internet Governance Forum recognized Dynamic Coalition on Data Driven Health Technologies (DC DDHT) commenced in 2019, prior to the global health emergency caused by the Covid-19 pandemic. As such, the focus of the coalition is cemented within a frame-work for broad-based health technologies development and associated issues, rather than dealing with the specifics of the Covid-19 pandemic situation.

The Coalition works to highlight and incorporate the importance of multi-stakeholder discussions in the space of health care technologies, to promote responsible and effective use of data and technologies in providing global citizens with affordable, quality, well-serviced, and timely access to health care, as outlined by the digital health mandate of the World Health Organization (WHO) and noted as one of the United Nations Sustainable Development Goals (SDG). SDG number three #3 states the mandate as “Ensure Healthy Lives and Promote Well-Being For All. At All Ages”.

New developments in technologies such as block-chain, machine learning, artificial intelligence, electronic health records, and mobile wireless technologies are transforming the nutritional, informational, clinical, and administrative spaces of health care at ever-increasing speeds. However, not all communities have access to the same technologies and a digital health divide is emerging. While some communities explore complex health care solutions with state-of-the-art technologies and the expectation of emerging quantum technologies, other communities are still attempting to bridge basic internet connectivity issues, to allow for effective telemedicine and record-keeping.

Unlearning or undoing and re-establishing infra-structure and value propositions, to meet the most up-to-date standards of technology or emerging digital gaps, can be slow. DC DDHT wants to facilitate the knowledge dispersion of technologies and approaches to understanding, implementation, and service delivery in the emerging digital health care space early, so that all communities can be aware of the emerging developments together, building the principals, approaches, understandings, values, and ethics that are the foundation of safe health care service delivery for all.

To facilitate the on-going development of knowledge sharing and building, DC DDHT has collaborated with broader public multi-stakeholder groups within the Internet Governance Forum, as well as directly with the global public at the 2020 Internet Governance Forum meetings. The DC has made detailed recommendations for policy development that cross the four thematic tracks of the IGF meetings, which were Data, Trust, Inclusion, and the Environment, all of which impact and are impacted by SDG #3 and which can be supported to success, as noted by the WHO, through technology.

DC DDHT’s educational presentations in 2020 provided stand-alone background analyses and opinions on the topics of block-chain, machine learning and artificial intelligence, mobile technologies, implications for decision making with data-driven technologies, technology innovation and costs, the need for collaboration with health data, emerging technology trends and the ever-increasing digital health gap. DC DDHT members, as subject matter experts, have collaborated with EuroDIG and other groups and entities in the development of cross-cutting citizen-centered digital policies, with impacts from and for health care technologies.

In particular, the DC DDHT is focused on the conversation regarding the values and ethics of the digital health care space as it embraces technologies from Information and Communications Technologies (ICTs) to advanced super-computer based technologies such as hologram, laser, sound, mind-waves, nano, and quantum developments in science, technology, space technology, and physics. DC DDHT supports an environment for multiple stakeholders coming together to establish common understandings and principles to facilitate technological development and speed up the transition to higher standards of universal global health care, through the use of digital health technologies in a citizen-patient-centered, safe manner.

## 2020 Dynamic Coalition on Data Driven Technologies Score Card

eHealth	Goal Achieved		Delivery
Theme	Knowledge Sharing	Engagement	2020 Event
<b>Data Sharing</b>	Yes	Public Workshop	Euro DIG Workshop
<b>Data Sovereignty</b>	Yes	Public Workshop	Euro DIG Workshop
<b>Privacy</b>	Yes	Public Workshop	Euro DIG Workshop
<b>Cybersecurity</b>	Yes	Participant	BPF Survey
<b>Blockchain</b>	Yes	Public Workshop	IGF 2020 Workshop
<b>AI / ML /Quantum</b>	Yes	Public Workshop	IGF 2020 Workshop
<b>Mobile Access</b>	Yes	Public Workshop	IGF 2020 Workshop
<b>Internet Access</b>	Yes	Participant	ITU CW Public Consultation
<b>Quality Service</b>	Yes	Collaboration	DC CN Booklet

## **Policy Matters: Background**

### **Internet Governance Forum Framework, Dynamic Coalitions & An Introduction to the Dynamic Coalition on Data Driven Health Technologies (DC DDHT)**

Internet governance was one of the most controversial issues at the World Summit on the Information Society (WSIS) held in two phases, in Geneva, 2003, and in Tunis, 2005. Cognizant of the fact that any Internet governance approach should be inclusive and responsive, the WSIS requested the Secretary-General of the United Nations to convene a new forum for multi-stakeholder policy dialogue. The Internet Governance Forum (IGF) as a platform for discussions, brings various stakeholder groups to the table as equals to exchange information and share good practices. While the IGF may not have decision-making mandates, it informs and inspires those who do. It facilitates a common understanding of how to maximize Internet opportunities and address risks and challenges. *(Sourced IGF Website January 2021)*

#### **IGF Mandate**

Paragraph 72 of the Tunis Agenda:

*72. We ask the UN Secretary-General, in an open and inclusive process, to convene, by the second quarter of 2006, a meeting of the new forum for multi-stakeholder policy dialogue called the Internet Governance Forum (IGF). The mandate of the Forum is to:*

- *Discuss public policy issues related to key elements of Internet governance in order to foster the sustainability, robustness, security, stability and development of the Internet;*
- *Facilitate discourse between bodies dealing with different cross-cutting international public policies regarding the Internet and discuss issues that do not fall within the scope of any existing body;*
- *Interface with appropriate inter-governmental organizations and other institutions on matters under their purview;*
- *Facilitate the exchange of information and best practices, and in this regard make full use of the expertise of the academic, scientific and technical communities;*
- *Advise all stakeholders in proposing ways and means to accelerate the availability and affordability of the Internet in the developing world;*
- *Strengthen and enhance the engagement of stakeholders in existing and/or future Internet governance mechanisms, particularly those from developing countries;*
- *Identify emerging issues, bring them to the attention of the relevant bodies and the general public, and, where appropriate, make recommendations;*
- *Contribute to capacity building for Internet governance in developing countries, drawing fully on local sources of knowledge and expertise;*
- *Promote and assess, on an ongoing basis, the embodiment of [WSIS](#) principles in Internet governance processes;*
- *Discuss, inter alia, issues relating to critical Internet resources;*
- *Help to find solutions to the issues arising from the use and misuse of the Internet, of particular concern to everyday users;*
- *Publish its proceeding (Sourced IGF Website January 2021)*

## **Role of the Multi-stakeholder Advisory Group (MAG)**

The Secretary-General of the United Nations established the Advisory Group (now referred to as the Multistakeholder Advisory Group - MAG). Its purpose is to advise the Secretary-General on the program and schedule of the Internet Governance Forum meetings. The MAG is comprised of 55 Members from governments, the private sector, and civil society, including representatives from the academic and technical communities. Moreover, representatives of former IGF host countries, as well as representatives of intergovernmental organizations, are invited to attend and contribute to the meetings and work of the MAG. The MAG holds face-to-face meetings, preceded by open consultations, up to three times a year.

## **Purpose of the DC Coordination Group**

The idea of establishing a Dynamic Coalitions Coordination Group (DCCG) emerged at the 10th [IGF](#) in João Pessoa, Brazil, during the first-ever main session dedicated to Dynamic Coalitions (DCs). The idea found broad support among members of the different coalitions, many of whom were exchanging views and good and best practices for the first time. The main task of the proposed Group would be, on one hand, to develop a framework for all DC with some common principles and recommended rules of procedure, and on the other hand, to act as a convener of coalitions to further the open and constructive discussions that took place in Brazil. The Group would work on obtaining organizational support in those areas where the Dynamic Coalitions may require support, look at areas of overlap and duplication, and aim to create synergies among DCs. It was suggested that it also serve as a liaison to both the IGF Secretariat and the [MAG](#). *(Sourced IGF Website January 2021)*

## **The Dynamic Coalition on Data Driven Health Technologies Within the UN IGF Framework**

The Dynamic Coalition on Data Driven Health Technologies, DC DDHT, is a recognized member of the Dynamic Coalitions of the Internet Governance Forum and as such is a member of DCCG. DDHT also seeks to work collaboratively with the working groups of the United Nations International Telecommunications Union (ITU), the World Summit on the Information Society (WSIS) activities, as well as with other international, regional, and national initiatives such as European Dialogue in Internet Governance (EuroDIG), Internet Society, Internet Corporation for Assigned Names and Conventions (ICANN), and others. Members of the Dynamic Coalition also hold positions within these other entities.

The founding mandate of the DC DDHT has been as follows: The DC will discuss the issues and make recommendations to improve data quality and access to data, for building or remediating technologies and services to the global public, in keeping with the United Nations Sustainable Development Goal # 3: Ensure healthy lives and promote well-being for all at all ages. This will involve supporting technologies for the eradication of diseases; easing blindness or hearing; enhancing nutrition; support of new developments for surgery; telemedicine; public health education; public health management and so forth. DC activities will include providing guidance and interpretations, risk management, advocacy and making recommendations for data standards and best practices, and providing input into other related and associated policies and legislation. DC Scope: Global, all health, associated industries, services, fields (such privacy, safety, etc.) in the private, non-profit, and public sectors. The intention is to be cross-cutting with no exclusions.

## **Policy Matters: eHealth Policy**

### **Multi Stakeholder Collaboration & Layers of Influence**

#### **DC DDHT, Pre-recognition at IGF**

This has been an exciting and eventful launch year, for the UN IGF Dynamic Coalition (DC) on Data Driven Health Technologies (DDHT). In October of 2019, when DDHT founders Amali De Silva – Mitchell and Janna Belote discussed the opportunity for a DC, no one had the slightest inclination that the whole of the world’s attention would, within months, turn to matters of health security, as abruptly as it did, in early 2020, with Covid-19. It had been Bill Gates, with TED talks, that had been inspirational in getting the technical, civil society, and non-medical stakeholders of society engaged with the need for better electronic health care, or e-health care systems. It is from this perspective, as well as inspired by the work of IGF, UN WSIS, ITU and UN (Artificial Intelligence) AI For Good, United Nations Development Program (UNDP), civil society, private sector, academia, and the media that this DC was initiated.

Coalition member contributions began in 2019 with participation for the EuroDIG input to the UN Secretary General’s High-Level Panel on Digital Cooperation. The following recommendation “That a UN WSIS 2 be held to mark 25 / 30 years and that emerging technologies be made the focus of this summit. New technologies such as holograms, brain wave technologies and other sensory technologies including the use of light must be incorporated into the existing framework values” was made. (*reference Amali De Silva – Mitchell*).

In preparation for the launch of the Dynamic Coalition on Data Driven Health Technologies, a Big Stage Event at EuroDIG 2020 was presented on the topic of Managing Integrated Community & Sovereign Health Data for Emerging Technologies. The session highlighted that over the past decade, the integration of technology within health care had become increasingly visible to the European citizen, through the citizen’s encounters with Digital-based eHealth Care. Robots, Telemedicine, Artificial Intelligence, and Block-Chain were a few of the new technologies and processes that were evident. These new emerging technologies in eHealth Care use vast amounts of data gathered from a variety of sources. This data, its nature, collection, availability, integration, management, quality, retention, and disposal, drive the development of new technologies and decision making.

Through a series of questions seeking insight, observations, and stories regarding these developments in Digital Health Care, the guests for the aforementioned fireside chat spoke about the following issues: Dr Janet Michaelis spoke about the speed of uptake of telemedicine with Covid-19; Dr Bimalka Senevirante spoke about the rapid deployment of robots in medicine and other technical advancements, and especially in Asia; Dr Stefan Bungart spoke on the need for quality data to foster good investments in health care. The session concluded with acknowledgement that a focus on data quality is a success factor for data-driven technologies.



In parallel, founding members of the Dynamic Coalition worked in collaboration on a number of successful EuroDIG 2020 sessions. Robert Guerra, Jorn Erbguth, Amali De Silva-Mitchell with Marina Shentsova, as Focal Point, presented, Privacy in Europe – GDPR vs. information freedom? Dr Andreas Maier responded during this session to Amali De Silva – Mitchell’s questions for dealing with new data types such as brainwaves, imaging technology, and other human outputs. Amali De Silva-Mitchell, Jorn Erbguth et. al with Dr Galia Kondova as Focal Point, presented Innovative Uses of Blockchain for Public Empowerment. These three sessions at EuroDIG 2020 launched the broad subject matter of the DC’s interests, as well as bringing its founding members together as a group.

Coalition members have also made contributions towards the UN ITU public policy-making initiatives on the development of the internet and standards, as well as participating in World Summit on the Information Society +15 (WSIS+15) Conference activities hosted by the United Nations International Telecommunications Union (ITU). The Youth Ambassador member of this DC is also participating in events that are specific to youth.

The Dynamic Coalition on Data Driven Health Technologies was granted UN IGF Dynamic Coalition recognized status in September 2020.

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# **Issues for Interoperability, Access, and the Quality Internet Of Things for eHealth Service and Product Delivery Reach to The Global Public**

## **Local Area Networks**

Network connectivity has always been the rate-determining step for internet access in rural areas over the past 25 years, in all countries, due to the high costs of the infrastructure. The move to wireless technologies has speeded up the reach of affordable access through the use of mobile technologies. Investment in remote areas is critical for equitable access and sustainable development activities for eHealth.

The development of rural local area networks (LAN) is a first step to then connecting wider. With the local network, citizens can develop their technical skills to manage a network themselves and develop content and services to support the local community without waiting for costly broadband, for instance, to reach their locality. Government and non-profits can support with funding, access to skilled experts, and providing content in a form that can be used in ready-to-go formats and can even be accessed through telephone dial-up connectivity. Governments should ensure that all critical content can be accessed via dial-up technologies until such time sophisticated connectivity is available. Governments can also promote private sector investment in rural areas.

Non-profits can be of tremendous support for enabling affordable and inclusive access, as services can be implemented at an effective price point and designed, developed, and delivered with local content. A diverse group of non-profits can provide a spectrum of services at different cost points and levels of access. Specialists for the disabled, elderly, etc. can focus on providing optimal services for these groups. Nonprofits working as a business cluster could perhaps eliminate administrative costs while enabling a high level of specialization. Non-profit ISPs are in reality a prototype or start-up for large service providers who then connect to them in the future when the profitable margins present, due to the active take-up of technology by the rural population. However, where rural populations are decreasing, a commitment is required to support these communities to achieve affordable equal access as more and more services are provided through the use of technologies. This is a fair process, that can even become soon, a human right! (*Reference Ms Amali De Silva-Mitchell public input; ITU consultations (9)*)

## **Quality Internet**

E-health access for all, as a goal, has become a critical issue highlighted by the need for access to health due to the Covid-19 pandemic. From information on public awareness, dissemination of information quickly, sharing of quality data between organizations, having access to electronic systems that can take vast amounts of data and then output that data in required formats, the need to educate staff to use electronic systems, the need for hardware, software, connectivity are all very current issues that have to be addressed to successfully control and eliminate Covid19 and prepare the global community for the future. E-health delivery is a critical component of any modern public health care system and the infrastructure to support it is vital. There is a need to tailor solutions to the technology available to communities and then advance all to a common data shareable standard if fast solutions to issues such as drug testing are to be effective to address the variations of a population's composition concerning DNA,

age, and so forth. Non-profits, both medical and technological, can be helpful with e-health service delivery to support cost-effective and fast-results solutions for the provision of quality internet access. *(Reference: Ms Amali De Silva- Mitchell eBook "The Value of Internet Openness in Times of Crisis")*

### **Mobile Technology**

Mobile Technology can be a tool to overcoming some of the issues that are prevalent with interoperability for eHealth care services and products through traditional internet connectivity. Mobile technology is used to convey many business services and hence has the advantage of considerable investment in this type of technology to enhance quality and bridge the Digital Health Gap which can be economic, infrastructure, social, environmental, or technically oriented. The investment for the individual user is also far less than the traditional hardware or software and the associated access costs required, making it a cost-effective solution. *(Reference: Mr Herman Ramos IGF Workshop 2020)*

## **Trust is a Key Element for eHealth Systems Development With Speed**

By building a common understanding through language and values, multi-stakeholder teams developing and operating health care systems and outcomes will be able to build trust amongst each other to enable effective, timely, cost-effective outcomes (*Reference: Dr Stefan Bungart; MI eHealth.EuroDIG 2020*) that meet the requirements of healthcare for the providers as well as patients. Government, business, and non-profit will see a beneficial return on the human and financial investment. As such an open collaboration, to enable the development of a common set of principles, values, and definitions for eHealth Systems development is required at all times. Such a collaboration would include a wide range of stakeholders with backgrounds including medicine, research, data science, computer systems, application development, public policy and economics, privacy, law, accounting and finance, insurance, mathematics, and the public. The application development environment and the source data sets become more complex daily, and effective systems design is key to excellence in outcomes. A common language, with a focus on establishing critical attributes of data, is crucial.

The DC DDHT is developing living documents on shared values, principles, and definitions to promote effective multi-stakeholder development of e-health care systems through the vision of establishing excellence in data quality, equity, and responsibility. Data drives the systems old and emerging (AI, blockchain etc.). This document could be used as an introduction by stake-holders gathering to use intentional design of health data systems to mitigate the unpredictable risk of sub-optimal outcomes when developing technology solutions. These stakeholders are Doctors, Nurses, Patients, Hospital Administration, Computer Scientists, Data Scientists, Policy Makers, Privacy Professionals, Lawyers, Accountants, Financiers, Stockholders, the public, etc.

The value of stakeholders understanding each other when developing policy, procedures standards, and technology was highlighted within the context of building trust, to speed up evidence-based effective results (*Reference: Steven Covey; Speed of Trust 2006*). The strategic value propositions (*Reference: Kaplan & Norton 2004*) for multi-stakeholders were illuminated by showcasing the ability of these Emerging Technologies to assist with speed to the achievement of SDG#3 for universal health care services globally, in innovative new ways, with opportunities to transcend issues such as complexities in data sharing, intellectual property, startup costs and so forth, while providing efficient, auditable, effective solutions within the clinical and administrative spheres of e-health. The Dynamic Coalition believes that education and knowledge sharing are key to establishing a common language for application development.

If the stake-holders speak the same language, the data definitions are clearer and the expected outcomes will carry lower risk leading to better decision making on the part of the clinician, hospital administrator, and the patient-user. This approach will also assist companies in developing pharma products and patient support technologies such as artificial limbs and so forth. These products and services are increasingly supported by the Internet of Things, Artificial Intelligence, Blockchain, and of-course traditional Information and Communication Technologies (ICTs) for systems such as Telemedicine. eHealth as a specific area for technical systems design by multi-stakeholder discussion has not had its place until right now, at IGF with the DC DDHT's public engagement session at the IGF Virtual Meetings in November 2020. A summary of these discussions, important to issues regarding Covid-19 and overall health care for the global population, are noted below.

## **Summary of Issues Discussed:**

### **Data Quality & Trust (Artificial Intelligence, Machine Learning, Internet of Things, Holograms)**

How Machine Learning is conducted was reviewed and the risks for data input, processing, and output discussed and illustrated with examples into eHealth. The quality of the automated systems and the risk of biased decisions that might arise from – but is not limited to – biased training data was noted with extension to AI. Systems based on deep learning can show pretty good results without the need to fully understand the domain by the developers. However, they also show unexpected bad results. Potential biases are just the tip of the iceberg of this problem. Those biases can disadvantage any group. This is not limited to those vulnerable groups that are currently in the focus of the public debate. Some of these biases might be detected by testing. Most of them will go unnoticed. The exploitation of the weaknesses of trained systems can be used for attacks. Without directly hacking the systems in question, it is often possible to provoke any outcome regardless of the case presented. The current public awareness is much too limited to biases towards a small number of groups. Systems based on programmed (and not trained) algorithms do not show this kind of quality issues and should be preferred where trust in the outcome of the system is required. The use of trained systems, especially in health care settings, requires a high degree of fault tolerance.

Other new technologies such as Quantum Computing, Holograms, IoT, Crispr, etc., and their uptake in the public e-health space were also noted. *(Reported by: Mr Jorn Erbguth)*

### **Data Transaction Security & Trust (Block-Chain, Smart Contracts)**

Blockchain applications for eHealth patient records were presented. First of all, the different types of data included in patient records were outlined. These types of personal data include information on patient's personal and clinical data, family medical history, immunization records, list of major diseases, list of prescribed medications, hospitalizations, etc. Features such as decentralization, immutability, anonymity, auditability, characterize the Blockchain technology. On this basis, different frameworks for Blockchain-based privacy-preserving patient data sharing could be developed such as cross-organizational medical data sharing and access management and access control management for data in the cloud. However, the immutability characteristic of Blockchain poses rather a problem wherever permanent deletion of data is required. *(Reported by Dr. Galia Kondova)*

### **Data Complexity & Trust (Standards, Interoperability, Quantum Technologies)**

Mobile Technology as a tool for bridging the Digital Divide was discussed within the context of e-health. The Digital Divide is the gap that exists between individuals who have access to modern information and communication technology and those who lack access.

The number of people that use smartphones is rapidly increasing and the cost of data acquisition to use the networks is decreasing. Mobile technologies provide a prominent solution to reduce the digital divide and contribute to digital inclusion. In the current era of technological growth and innovation, Mobile Technologies can play an important role as a catalyst to enhance economic development and the quality of life in developing countries and developed countries. Technologies have the potential to

widen access to different places and people, allowing the testing and understanding of many different health conditions of the user.

One of the important points discussed concerned the development of a regulatory framework, including standards to control the flux of data, data privacy, and trust between patients and mobile healthy technology developers. *(Reported by: Mr Herman Ramos)*

**Quantum Technologies** are beginning to create a stir with its ability to process vast amounts of data at speed. The opportunities for health care are already being touted from the opportunity for rapid drug design, analytics, and simulations to move preventative health care into predictive healthcare, hologram technologies for surgery, visual diagnostics for telemedicine, in silico clinical trials, advanced sensory health data collection to assist patient support and the ability to enhance patient-centric medical care are just a few of the examples for the opportunities that are potentially deliverable by these emerging technologies. Professor Shohini Ghose (*Professor of Physics and Computer Science Wilfred Laurier University; TED Talks*) has also suggested that one of the benefits of quantum technologies is that for data security, which can make systems using quantum technologies some of the safest in the world. *(Reference: Ms Amali De Silva – Mitchell)*

# Policy Considerations For Emerging Technologies In The eHealth Space

Policy considerations and recommendations from the IGF 2020 Dynamic Coalition on Data Driven Technologies IGF 2020 session and discussions throughout 2020 are noted below. These considerations fall under four broad categories:

## 1 Environmental Space / Eco-System

- a. Affordable universal access to e-health for each family unit space with trusted data exchange in times of pandemic crisis is critical and this should be extended to the new normal to meet SDG#3
- b. Local Area networks in rural communities development, for connecting the last mile
- c. Technology obsolescence creating a digital divide
- d. e-Waste issues and circular economies within eHealth for sustainable development

## 2. Social Service Delivery Cluster

- a. Telemedicine provides critical support to meet quarantine and isolation requirements for Covid-19
- b. Ethics in the health care space amongst all stakeholders must be developed further. New technologies such as blockchain, machine learning, AI, quantum technology, and holograms add a new dimension to the ethical values currently in place and hence the discussion on ethics must be developed further.
- c. Digital health gaps can manifest in several ways such as for network access, interoperability including data exchange, language and cultural barriers, cost, intellectual property, and copyright.

## 3. Governance, Collaborations & Rights

- a. The issue of universal access internet access for telemedicine should be addressed in collaboration with Dynamic Coalition on Smart Cities and the Dynamic Coalition on Community Networks
- b. Opportunity for a UN Center for Quantum Technologies Assisted Medical Initiatives
- c. Data sharing and privacy of patient health data and intellectual property are important
- d. Updates to privacy for new data input and output formats, such as with brain wave data files, light should be discussed

## 4. Technical Standards

- a. Work collaboratively with cross-cutting policy makers; medical and technical standard setters
- b. Mobile technology sophistication and affordability is an important tool to facilitate the reach to all global citizens for E-health care through telemedicine. This accessibility would meet SDG#3.
- c. Data quality is critical but not sufficient for good decision making. Poor data quality and misinformation are an issue and awareness of these issues are important. Outputs of AI / ML always come with bias and errors that cannot be completely detected or avoided such as Trojan data (*Reference: Amali De Silva-Mitchell; EU public consultations on AI*). Reasonable human intervention for the evaluation of results should be part of any reporting process to reduce bias and error.

- d. Issue of Universal Access to the Internet can be addressed by collaboration with IGF Dynamic Coalitions, IGF Best Practices Forums, ITU, standard setters such as the Institute of Electrical and Electronic Engineers (IEEE), International Standards Organization (ISO), academic institutions, private sector, non-profits, and so forth.



## **Emerging Technologies Within eHealth and the Consequences for the Environmental, Social, Governance (ESG) & Ethics**

ESG approaches to transparent public reporting, highlight the measurement of the ethical values of processes, technologies, services of an entity. The ESG framework not only looks at environmental factors such as waste management but also evaluates the human capital components such as diversity and inclusion in terms of society and governance, with an end-user perspective in mind. End users can be the patient or hospital administrator, financial investor or philanthropist, amongst other multi-stakeholders, identified under a value proposition for the development of a new technology application or process. Increasingly, the unknown stakeholders are being mentioned as well, as a future risk or as opportunities that can present. It is here that the Dynamic Coalition on Data Driven Health Technologies is particularly helpful in assisting with open multistakeholder discussions that encourage participation from a variety of groups. Technologies can also assist in data collection and performance measurement of these values in real-time, so that quality initiatives that support the United Nations Sustainable Development Goals can be implemented.

## Conclusion

### Key Policy Questions and Related Issues:

- Role of new technologies as a tool to assist in the eHealth space is now undisputed
- Risks lie in the quality of the products and services and their limitations and safety
- Ethics and education thereof are critical to mitigate risks
- Standards and best practices will define the quality of eHealth and build trust
- Value Propositions for the e-health space must be clearly defined, for effectiveness
- Access to e-health is facilitated by partnering and collaborating with others
- Speed of practical up-take of new technologies requires trusted collaboration
- Waste from eHealth must be acknowledged and dealt with
- Universal health care access assisted by technology is an enabler of UN SDG #3.

### Key Take-away:

The Dynamic Coalition on Data Driven Technologies acknowledges that existing and emerging technologies show evidence-based support as an enabler for reaching the United Nations Sustainable Development Goal #3. However, good standards, education, knowledge, and data sharing amongst global stakeholders, enshrined in robust ethical frameworks, are key to successful global outcomes for the future.

## **Voluntary Commitment**

The Dynamic Coalition on Data Driven Health Technologies is committed to working with other Dynamic Coalitions and Best Practices Forums recognized by the UN Internet Governance Forum.

In 2021 the primary collaborative activities will include:

1. Workshops on ethics, value propositions for e-health, and so forth
2. A booklet on ethics, norms, values, principles in e-health care, which is a survey of opinions that can also be presented in a visual format

## **Administrative Matters**

### **1)Administration and Accountabilities of the Dynamic Coalition on Data Driven Technologies: Status Update**

The Dynamic Coalition gained recognition status from UN IGF in September 2020.

*The proposed deliverables / action plans were:*

- Four Educational & Informational Materials: *Status Complete*  
Presentations by DC members at IGF 2020 and EuroDIG 2020
- Annual Public Survey: Due to the short inaugural year this was enabled by public consultation for open comments during the IGF workshop session from participants: *Status Complete*
- Annual Poster Competition: This is integrated with the Public Survey and allows for participants to comment through the use of multi-media: *Not Applicable*
- Collaborative work: Contributed to the booklet of the DC on Community Connectivity; Contributed to ITU Council Working Group on International Internet Related Public Policy Issues and other activities and presentations listed under section 2 below and Significant Contributions of DC members for 2020 noted under section 3 below: *Status Complete*

The DC DDHT has open membership and this is enabled by subscription to the DC mailing list whose address is available on the IGF website. Currently, the membership is comprised of persons from Africa, Asia, Europe, and the Americas. The DC has subject matter experts, affiliates, and friends from the medical, legal, business, technical, academic, civil society, and government sectors. The DC has a coordinator who hosts the meetings and champions, and encourages the activities of the DC.

The DC holds a virtual call for members and affiliates the third Friday of each month and further calls for additional planning of events as required. Notes from these calls are posted to the email list for the information of all members. Copies of relevant documents and emails are posted to the member list for information. The list also constitutes as the archive of documents for the DC. This enables any new member to “catch-up” quickly on the activities of the DC. The list is managed by one of the founding members.

A detailed Terms of Reference is in existence and places emphasis on the thoughtful conduct of the membership.

The DC has embraced an Agile Systems approach to attaining its deliverables. This is the modern approach for technology systems development and the DC will also be able to gain firsthand experience of this process methodology.

The DC wishes to collaborate with other IGF DCs and BPFs and this process in itself is a learning process for the DC, as it makes recommendations for agility and speed of technology development as a success factor to meet UN SDGs.

## **2) Links to the background and scripts from the public engagement, education, contribution, and consultation activities of the members of the Dynamic Coalition on Data Driven Health Technologies in 2020.**

1. [M.I. E-Health – Managing integrated community & sovereign health data for emerging technologies – Are we ready? – BigStage 2020 - EuroDIG Wiki](#)
2. [Innovative uses of blockchain for public empowerment – WS 04 2020 - EuroDIG Wiki](#)
3. [Should public policy priorities and requirements be included when designing Internet standards? – WS 05 2020 - EuroDIG Wiki](#)
4. [Privacy in Europe – GDPR vs. information freedom? – WS 09 2020 - EuroDIG Wiki](#)
5. [Community networks and smart solutions in remote areas – a bottom-up approach to digital citizenship – WS 12 2020 - EuroDIG Wiki](#)
6. [Fighting COVID19 with AI – How to build and deploy solutions we trust? – WS 14 2020 - EuroDIG Wiki](#)
7. [IGF 2020 – Day 3 – DC Data Driven Health Technologies | Internet Governance Forum \(intgovforum.org\)](#)
8. Ebook: [“The Value of Internet Openness in Times of Crisis” eBook – CyberBRICS](#)
9. [Council Working Group on International Internet-related Public Policy Issues \(CWG-Internet\) \(itu.int\)](#)

## **3) List of substantial contributions from members of the Dynamic Coalition on Data Driven Health Technologies in 2020:**

Refer to substantive paper document for DDHT at link:

[DC Coordination Activities | Internet Governance Forum \(intgovforum.org\)](#)