

Cape Town, South Africa, 16 – 20 September 2019



CPTM Smart Partnership Quality Standards Inclusion Initiative

Leveraging the Value of Data through Smart Partnership

Brief and Recommendations

on

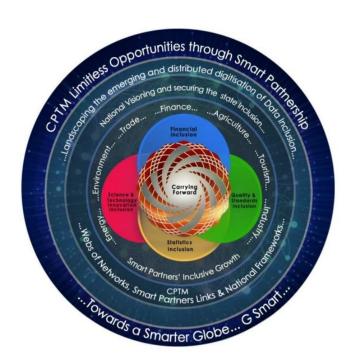
"Enhancing the role of National Bureau of Standards in shaping the National Data Strategies for achieving Adaptive Flexibility"







Cape Town, South Africa, 16 – 20 September 2019



Content

- > Recommendations
- > Forwarding Letter to CPTM's Quality & Standard Networks
- Background and Introduction
- Overview
- Insights from UNBS
- ANNEXES
- CPTM Reading Tips
- About CPTM

CPTM is a not-for-profit Company Limited by guarantee

Incorporated in England on 13th June 1995, under Companies Act 1985 to 1989

"This Company is being established, with the agreement of Commonwealth Heads of Government, pursuant to their decision taken at their meeting in Limassol on 25th October 1993 to revise the financial and organic structure of the Commonwealth Consultative Group on Technology Management."



Cape Town, South Africa, 16 – 20 September 2019

2019 Brief from CPTM Quality & Standards Inclusion NSBs Network for DEVCO/ISO General Assembly

Recommendations

In order to expand and integrate the NSBs new strategic role in developing **National Data Strategies**, **Commonwealth Partnership for Technology Management (CPTM) NSBs Network**, would like to restate their support to the ISO initiative in this context through 2019 Message to the 43rd DEVCO/ISO General Assembly in Cape Town, South Africa, 16-20 Sep 2019. Following are the main recommendations from CPTM NSBs:

- I. **to welcome and contribute** to ISO efforts to improving, understanding and developing new Standards for Emerging Data and Digital Landscape, which is fully supported by the National and CPTM Smart Partners inclusive growth initiatives Networks.
- II. to engage with National Governments, Industries and Communities in promoting and sharing the NSBs knowledge about the application of Data technology based on ISO Standards, among others (e.g. Data Asset Management Systems for sustainable national resources and provenance/ supply chain Distributed Ledger Technology (DLT) in trade);
- III. to continue to articulate the new strategic role of NSBs in Leveraging National Data Dividends in support of National Visions; to provide Executive Briefs to Heads of Government, Industry and Community leaders on specific ISO Standards developments in the Data Landscape;
- IV. to share their experience in developing Adaptive Flexibility Framework for National Data Strategies and promoting the engagement in the CPTM Smart Partners Network approach;
- V. **to encourage their supp**ort to ISO Technical Committees through the enabling active participations of NSBs from emerging economies.

On behalf of CPTM Quality & Standards NSBs Network Dr Mihaela Y Smith PJN KMN, Chief Executive / Joint Dialogue Convener

September 2019, London



Towards a Smarter Globe..... Towards Smarter Nations

"Leveraging the Value of Knowledge and Data for Socio Economic Transformation: The Smart Partnership Way" – 2018-2020



COUNCIL OF PATRONS & ADVISERS SMART PARTNERSHIP MOVEMENT

HE Yoweri Kaguta Museveni

President of Uganda CPTM Fellow & Companion Chair, Smart Partnership Movement Co-Founder CPTM Fellows' Endowment Fund

HON Tun Dr Mahathir Bin Mohamad

Prime Minister of Malaysia CPTM Fellow & Companion Co-Founder CPTM Fellows' Endowment Fund

SOUTHERN AFRICA DIALOGUES (SAID) Angola

Botswana (SAID 1997)
Democratic Republic of Congo
Lesotho (Global 2005)
Madagascar
Malawi

Mozambique (Global 2000) Namibia (SAID 1998) Seychelles

Mauritius

South Africa (Global 2014/15 deferred) Swaziland (Global 2003) Zambia (Global 2008) Zimbabwe (SAID 1999)

EAST AFRICA DIALOGUES (EAID)

Burundi

Kenya

Rwanda

Tanzania (Global 2013) Uganda (Global 2009 & 2001)

WEST AFRICA DIALOGUES
Through Ghana

CARIBBEAN DIALOGUES (BID)
Through Barbados
(BID 1999, 1996)

SOUTH EAST ASIA DIALOGUES (LID) LANGKAWI INTERNATIONAL DIALOGUE

Through **Malaysia** (Global 2015 tbc, 2011, 2007, 2004, 2002, 2000, 1999, 1997 1996, 1995)

Dr Mihaela Y. Smith Joint Dialogue Convener Smart Partnership Movement

> Correspondence Address: c/o 10 Orange Street Haymarket London WC2H 7DQ United Kingdom Email: info@cptm.org

11 Sep 2019 Smart Partners Library London

Dear CPTM Quality and Standards Inclusion Initiative Network and all Smart Partners,

RE: "Enhancing the role of National Bureau of Standards in shaping the National Data Strategies for achieving Adaptive Flexibility

-CPTM 2019 Message for the 43rd DEVCO/ISO General Meeting in Cape Town, South Africa.

On behalf of the Core Group of the CPTM Smart Partners Quality and Standard Network, we would like to forward you the **2019 CPTM Message**, as a contribution to the DEVCO/ISO General Assembly forthcoming deliberations.

CPTM NSBs Network was initiated in 2010, as part of an integrated smart partnership strategy for inclusive and sustainable growth in developing countries. CPTM was formerly established in 1995 in New Zealand as a hybrid cooperative networking organisation, formed of representatives of fifty Governments in the Commonwealth, alongside Public/Private Sector International Members and Networking Professionals from the Commonwealth and beyond. CPTM Members have a distinct and most impactful smart partnership approach to development, based on building and co sharing intellectual equity, in real time situations. CPTM's networking interventions complement the traditional Development AID practices. NSBs Network is interrelated with all the other CPTM Networks, such as Governors of Central Bank and National Statistics Organisations (NSOs).

The 2019 Message reemphasises the continuous CPTM's NSBs Network promotion of the new work areas developed by ISO, some of which are of particular relevance for the emerging applications of Data and Digital Technology in developing countries. Therefore, the main focus of the message is related to the new areas for standards development, in which ISO raises awareness and is supporting capacity building for its Members NSBs.

As such, reference is made to the recent valuable CPTM NSBs Network contribution to the CPTM Central Bank



Towards a Smarter Globe..... Towards Smarter Nations

"Leveraging the Value of Knowledge and Data for Socio Economic Transformation: The Smart Partnership Way" – 2018-2020



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Governors Think Tanking session in July 2019, London. (e.g. in particular, the issues involving NSBs in the development of evidence, policies, decisions and searching for National Data Strategies, as well as in the development of Applications National Assets Data *Management* (<u>www.cptm.org</u>)

Through the example of Uganda Bureau of Standards (UNBS) the Message also highlights the most valuable contributions forthcoming from emerging economies to the new areas of standards development in the Data and Digital Landscape. UNBS as a full Member looks forward to sharing their unique experience from African region in the work of the Technical Committees ISO/IEC/JTC1/SC42- Artificial intelligence in which they are a full Member.

As in previous years, CPTM NSBs Network through its Message, would like to share their Insights and Recommendations, with DEVCO/ ISO GA on Enhancing the new Strategic role of NSBs for National, Regional and International emerging digital landscape.

Finally, we would like to thank in particular to the CPTM NSBs Networkers from, Uganda National Bureau of Standards i.e. Dr Ben Manyindo, Executive Director and his colleagues, Mr David Eboku and Ms Zainah Tondo, Dr Eve Gadzikwa, Director General & Secretary, Standards Association of Zimbabwe, as well as to Mr Alan Bryden, CPTM Companion, France.

We hope you have most successful deliberations at 43rd DEVCO / ISO in Cape Town, South Africa. We look forward to collaborating with DEVCO/ ISO Members in the forthcoming months.

Best regards to all

Dr Mihaela Y Smith PJN KMN

CPTM Director at Large / Joint Dialogue Convener

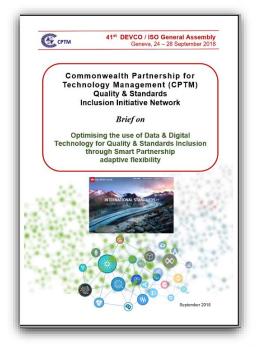
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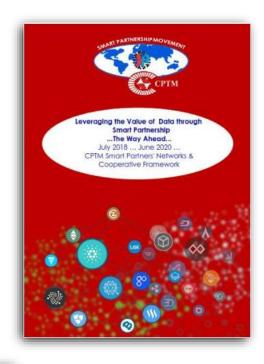
Encl: CPTM 2019 Message to 43rd DEVCO/ISO GA



43rd DEVCO / ISO General Assembly

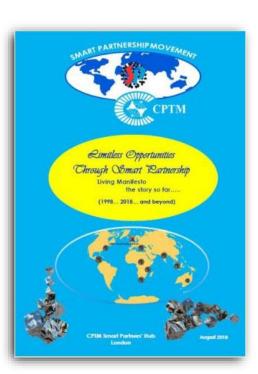
Cape Town, South Africa, 16 - 20 September 2019





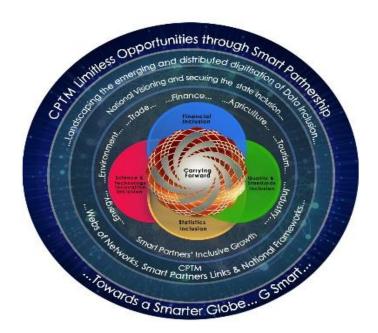








Cape Town, South Africa, 16 – 20 September 2019



Enhancing the role of National Bureau of Standards in shaping the National Data Strategies for achieving Adaptive Flexibility

1.CPTM Quality & Standards Network-Background & Introduction

The 2019 CPTM **Quality and Standards** Inclusion Networks Brief to the 43rd DEVCO/ISO/GA, Geneva, 16-20 September continue to reemphasise the 2018 Message about the critical need for enhancing the Strategic role of NSBs, delivered through Smart Partnership adaptive flexibility approaches in the emerging digital landscape.

The 2019 CPTM DEVCO/ISO Brief consists of (i) an update on 2018/2019 activities of the CPTM NSBs Networks (ii) key Smart Partners signals related to Data and Digital Technologies; (iii) challenges and opportunities for the role of NSBs in the development and application of Standards for Data Technologies; (iv) invitation to participate in the CPTM Initiative on Leveraging the Value of Data 2019/2020.

The CPTM Quality & Standards Network, initiated in 2010 and actively involved and contributing to the CPTM Smart Partnership Cooperative Framework in more than 27 countries in the Commonwealth and shares annually with ISO/DEVCO. Insights from its CPTM Think Tanking/Dialoguing and Networking ventures. (see ANNEX)

During 2018/19, CPTM NSBs Network continued to contribute to the Commonwealth Finance Ministers Central Bank Governors Meetings (October 2018), as well as the Commonwealth Heads of Government Meeting, London, April 2018.

In July 2019 CPTM Quality and Standards Network made a contribution to the 8th CPTM Central Bank Think Tanking.



Cape Town, South Africa, 16 – 20 September 2019

2. Overview on Data and Digital Landscape - ISO Developments

Among the recent new work areas developed by ISO, some are of particular relevance and actuality for the developing economies associated with the CPTM Smart Partnership Networks, as *Mr Alan Bryden* (CPTM Companion, former Secretary General of ISO) underlined i.a. on the occasion of the CPTM Central Bank Governors Think Tanking session, which took place in London at the end of June 2019. It is suggested that ISO raises awareness and supports capacity building of its Member, NSBs to follow and possibly contribute to the following work areas:

1- ISO/TC 307 Blockchain and distributed ledger technologies

Secretariat: Standard Australia (SA) Creation date: 2016

Scope

Standardization of blockchain technologies and distributed ledger technologies.

Rationale

Blockchain technologies are finding applications worldwide not only in relation to crypto currencies and for securing financial transactions, but also to improve traceability and security in the distribution chain or to secure contractual relations at large. (see as an illustration prospects in Uganda: https://www.researchgate.net/publication/327416757 Developing Countries and Blockchain Technology Uganda's Perspective)

2- ISO TC ISO/TC 322 sustainable finance

Secretariat:

BSI (U.K.) Creation date: 2018

Scope

Standardization in the field of sustainable finance for the integration of sustainability considerations and environmental, social and governance (ESG) practices into institutional investment decision making and wider finance management.

Rationale

Massive financial resources are being mobilized worldwide, targeting developing countries, to support both adaptation and mitigation in relation to climate change and, more generally to support investment related to sustainable development and the UN SDGs. It is important that the NSBs are able to raise awareness of their government, financial institutions and private sector to the development of international standards as tools to measure and support sustainable finance initiatives.

3. ISO/TC 268 sustainable cities and communities

Secretariat: AFNOR



Cape Town, South Africa, 16 – 20 September 2019

(France) Creation date: 2012

Scope

Standardization in the field of Sustainable Cities and Communities includes the development of requirements, frameworks, guidance and supporting techniques and tools related to the achievement of sustainable development considering smartness and resilience, to help all Cities and Communities and their interested parties in both rural and urban areas become more sustainable.

Rationale

Urban concentration is particularly happening in developing countries See for example:

https://www.theafricareport.com/10824/africas-prosperity-depends-on-sustainable-cities/

It is important that the new International Standard, ISO 37101, Sustainable development in communities - Management system for sustainable development - Requirements with guidance for use be publicized and promoted by the NSBs in their country.

4- ISO TC 323 Circular economy

Secretariat: AFNOR (France)

Creation date: 2018

Scope

Standardization in the field of circular economy to develop requirements, frameworks, guidance and supporting tools related to the implementation of circular economy projects. The proposed deliverables will apply to any organization or group of organizations wishing to implement circular economy projects, such as commercial organizations, public services and not-for-profit organizations.

Excluded: specification of particular aspects of circular economy already covered by existing TCs, such as eco design, life cycle assessment in ISO/TC 207 Environmental management and sustainable procurement (ISO 20400: 2017 – Sustainable procurement — Guidance).

Rationale

Raise awareness on new tools being developed by ISO to encourage and support circular economy projects

5- ISO/IEC JTC1 SC 42 Artificial intelligence

Secretariat: ANSI (U.S.A.) Creation date: 2017

Scope

Standardization in the area of Artificial Intelligence

- Serve as the focus and proponent for JTC 1's standardization program on Artificial Intelligence
- Provide guidance to JTC 1, IEC, and ISO committees developing Artificial Intelligence applications

Rationale

Raise awareness on new tools being developed by ISO to encourage and support artificial intelligence projects.

6- ISO standards and the "blue economy"



Cape Town, South Africa, 16 – 20 September 2019

Several countries associated to the CPTM network are directly interested by a strategic approach to the "blue economy" as a major area for economic development (e.g. South Africa, Namibia, Mozambique, Seychelles, Tanzania, Kenya, the Caribbean area, etc.).

At least three ISO TCs are relevant to this area:

- ISO TC 234 aquaculture and fisheries
- ISO TC 228 tourism and related activities
- ISO TC 8 ships and marine technologies

But several other ISO work areas are relevant, such as ISO TC 251 Asset management

The International Institute for Sustainable Development has recently published a comprehensive report on the issue of standards and the blue economy: see https://www.iisd.org/sites/default/files/publications/ssi-blue-economy-2016.pdf

It is recommended that ISO highlights its "tool box" of ISs related to this area of the "blue economy", of interest to many of its member countries and promotes their effective use and development.

3.INSIGHTS from Uganda National Bureau of Standards (UNBS) CPTM Member and Members of the ISO Technical committee ISO/IEC JTC 1/SC 42 Artificial Intelligence.

At refers to systems that can carry out closely prescribe task, and there have been some extraordinary successful examples based on machine learning, which involves developing algorithms through statistical analysis of large sets of historical examples. Notable success includes speech recognition systems build into phones, tablets and computers; programs such as Google Translate which know little grammar but have learning to translate text from an immense published archive; and computer vision software that use past images to 'learn' to identify, say, faces in photographs or other cars in the view of self- driving vehicles. (see ANNEX)

The UNBS has been part of the ISO/IEC JTC 1/SC 42. They have a national mirror committee UNBS/TC18, Information and Communication Technology. The secretary of the NMC is Zainah Tondo.

They are following the work of the committee on the following standards, which are under public review and we hope to adopt soon: ISO/IEC 20546, ISO/IEC TR 20547-2, ISO/IEC TR 20547-5.

We are also following the work in the following items

- ISO/IEC WD 23053
- ISO/IEC WD 22989
- · ISO/IEC NP 24300
- ISO/IEC NP TR 24030
- ISO/IEC NP TR 24029-1
- ISO/IEC NP TR 24027

We hope that our participation in this committee will continue to get better as resources permit.



Cape Town, South Africa, 16 – 20 September 2019



UGANDA NATIONAL BUREAU OF STANDARDS

Should international standardization organizations support their member NSBs to raise awareness and build capacity to follow and contribute to international standards development?

The role of standards in supporting trade, innovation, economic growth and regulation has been demonstrated particularly in developed countries. In developing countries, this is not necessarily true. There are weaknesses in most everything from ethics to infrastructure which could be addressed by deploying standards. *The impact of the implementation of the global sustainability goals set out by the UN in 2015 is, perhaps more pronounced in developing countries than in their developed counterparts. The principle of "leaving no one behind", in essence is about not leaving developing countries behind.* Yet, the use of standards is the lowest in developing countries at all levels be it regulation or supporting trade.

The use of international standards is particularly essential in areas such as clean water, energy, climate change, artificial intelligence and security, where no single country can go on its own. In many cases developing country NSBs make efforts to adopt some international standards, a benefit they get by striving to be members to international standardization organizations. Nevertheless, the implementation of these standards remains low. Among the reasons are limited engagement of the stakeholders who could be aware, participate in the development of and implement these standards. Engaging stakeholders remains the best bet to benefit from the use of standards.

Developing country NSBs have fewer resources to increase awareness and engage their national stakeholders in participation. No wonder the level of participation remains low. Low participation precedes less implementation of the standards and failed benefits to the less developed economies. It is a vicious cycle.

It is imperative to put efforts to reach more stakeholders in developing countries to increase awareness about the benefits of standards, the processes involved in development and how to implement these standards. *International standards organisations could do well to increase support to their developing country members to alleviate these challenges.*

In Uganda, we have seen that a little effort to engage stakeholders increases their interest in international standards. Sometimes we are surprised to see that we have some experts in fields we thought we did not have. Recent development in artificial intelligence and in the cryptocurrency have been very interesting examples. *Uganda is now a participating member in ISO/IEC JTC 1/SC 42 - Artificial intelligence and, save for financial resources; we could well be bringing to the table unique experiences from our region.*

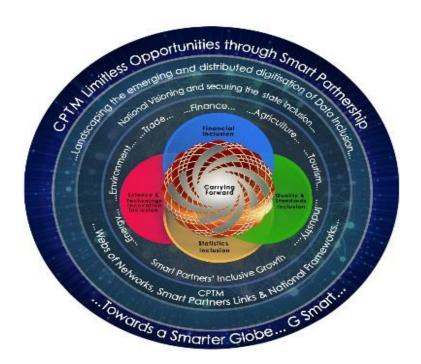
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Cape Town, South Africa, 16 – 20 September 2019

4. Conclusions

CPTM is supporting the NSBs participations in ISO effort for development of new Standards in Emerging Data Landscape. Through the CPTM Leveraging the Value of Data Initiative 2019/2020 the CPTM NSBs Network will contribute to their National Sustainable Development (See recommendations)



CPTM FINANCIAL INCLUSION & ADAPTIVE FLEXIBLITY NETWORK

Mr Moses Dinekere Pelaelo, Governor, Bank of Botswana; Mr Cleviston Haynes, Governor, Central Bank of Barbados; Mr Abbas Mahamat Toll Governor, Bank of Central African States, Cameroon; Mr Majozi Sithole, Governor, Central Bank of Eswatini; Dr Ernest Kwamina Yedu Addison, Governor, Bank of Ghana; Dr Gobind Ganga, Governor, Bank of Guyana; Dr Ret'selisitsoe Adelaide Matlanyane, Governor, Central Bank of Lesotho; Dr Patrick Ngugi Njoroge, Governor, Central Bank of Kenya; Dr Mario Vella, Governor, Central Bank of Malta; Dr Dalitso Kabambe, Governor, Reserve Bank of Malawi; Datuk Nor Shamsiah Mohd Yunus Governor and Chairman Bank Negara Malaysia; Mr Rameswurlall Basant Roi, Governor, Bank of Mauritius; Mr Rogerio Lucas Zandamela, Governor, Bank of Mozambique; Mr Ipumbu Shiimi, Governor, Bank of Namibia; Mr John Rwangombwa, Governor, National Bank of Rwanda; Ms Caroline Abel, Governor, Central Bank of Seychelles; Mr Timothy N. J. Antoine C.Dir, Governor, Eastern Caribbean Central Bank, St Kitts and Nevis; Mr E Lesetja Kganyago, Governor, South African Reserve Bank; Dr Indrajit Coomaraswamy, Governor, Central Bank of Sri Lanka; Dr Alvin Hilaire, Governor, Central Bank of Trinidad & Tobago; Professor Florens Luoga, Governor, Bank of Tanzania; Professor Emmanuel Tumusiime-Mutebile, Governor, Bank of Uganda; Mr Mark Carney, Governor, Bank of England; Dr Denny Kalyalya, Governor, Bank of Zambia; Mr John Mangudya, Governor, Reserve Bank of Zimbabwe: Mr Philip Lowe, Governor, Reserve Bank



Cape Town, South Africa, 16 – 20 September 2019

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CPTM QUALITY & STANDARDS INCLUSION NETWORK

Mrs Masego Marobela, Managing Director, Botswana Bureau of Standards (BOBS); Mr Theko Fako, Deputy Managing Director, Botswana Bureau of Standards (BOBS); Mr Molebatsi Rabolinyane, CEO, Standards and Quality Assurance Department, Ministry of Trade and Industry, Cooperatives and Marketing, Lesotho; Ms Chie Wasserfall, CEO, Namibia Standards Institution; Ms Sihle Busisiwe Zwane Executive Director at Eswatini Standards Authority (SWASA) Dr Noah Nhleko, Chairman of Standards Authority, Eswatini (SWASA); Dr Eve Gadzikwa, Director General & Secretary, Standards Association of Zimbabwe; Mr. Bernard Nguyo, Acting Managing Director, Kenya Bureau of Standards; Mr Charles Gachahi, Director, Standards Development & Trade, Kenya Bureau of Standards; Mr. Andy Ally, CEO, Seychelles Bureau of Standards; Dr Egid B. Mubofu, General Director, Tanzania Bureau of Standards; Dr Ben Manyindo, Executive Director, Uganda National Bureau of Standards; Mr Raymond Murenzi, Director General, Rwanda Standards Board; Mrs Antoinette Mbabazi, Division Manager of National Certification, Rwanda Standards Board; Mr Charles Booto à Ngon, Agence des Normes et de la Qualité, Cameroon; Mrs Dianne Lalla-Rodrigues, Director, Antiqua and Barbuda Bureau of Standards; Mrs Anthea Ishmael, Chairperson, CROSQ, Director, Barbados National Standards Institution; Ms Julia Douett, Director, Standards Division, Bureau of Standards Jamaica; Mr Deryck Omar, CEO, CROSQ, Barbados; Mr Jose Trejo, Belize Bureau of Standards Chairman of CROSQ; Dr Steve John, Director, Dominica Bureau of Standards; Mr Robert Medford, Grenada Bureau of Standards; Ms Candelle Walcott-Bostwick, Executive Director (Ag), Guyana National Bureau of Standards; Mr Theodore Reddock, Ag Executive Director, Trinidad & Tobago Bureau of Standards; Mr Verne Emmanuel Directors St Lucia Bureau of Standards; Dr Renae Ferguson Bufford, Director, Bahamas Bureau of Standards; Datuk Fadilah Baharin, Director General, Department of Standards Malaysia (Ministry of Science, Technology & Innovation); Shri M J Joseph, Director General Bureau of Indian Standards; Dr Senaratne Siddhika, Director General/CEO, Sri Lanka Standards Institution (SLSI); Dr Bronwyn Evans, Chief Executive Officer, Standards Australia Ltd; Mrs Rajwantee Ramrukheea, Chairperson, Mauritius Standards Bureau; Mr Vaughan Renner, Chairperson, Standards New Zealand; Ms Chantal Guay, Chief Executive Officer, Standard Council of Canada; Mr Garth Strachan, Acting Chief Executive, South African Bureau of Standards; Mr Davlin Chokazinga, Director-General, Malawi Bureau of Standards; Mr Manuel Mutale, Director, Zambia Bureau of Standards; Dr Scott Steedman CBE, Director of Standards, BSI, UK; Mr Nick Fleming, Market Development Manager, BSI, UK; Mr Tim McGarr, Market Development Manager, BSI, UK: Ms Emelie Bratt, Lead Programme Manager, BSI, UK; Ing Francis P. Farrugia, Standardization Director, Malta Competition and Consumer Affairs Authority; Mr Sergio Mujica, Secretary-General of ISO; Switzerland; Mr Alan Bryden, Former Secretary General of ISO, CPTM Companion.



Cape Town, South Africa, 16 – 20 September 2019

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Tan Sri Omar Abdul Rahman, CPTM Chairman, CPTM Fellow, Malaysia;
Professor Christopher Chetsanga, President, Zimbabwe Academy of Sciences, CPTM
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Group for High Technology (MIGHT), Malaysia; Mr Alan Smith, CPTM Companion, UK;

CPTM DATA & STATISTICS INCLUSION NETWORK

Dr Albina Chuwa, Director General, National Bureau of Statistics, Tanzania; Professor David Hand OBE, Head, Data Science Institute, Imperial College London, UK; Dr Burton Mguni Statistician General, Statistics Botswana; Mr Joseph Tedou, Director General, National Institute of Statistics, Cameroon; Mr Zachary Mwangi, Director General, Kenya National Bureau of Statistics; Ms Mothoweso Lefosa, Director, Lesotho Bureau of Statistics; Mrs Mercy Kanyuka, Malawi Commissioner of Statistics, National Statistics Office, Malawi; Dr. Rosário Bernardo Francisco Fernandes. President. National Statistics Institute. Mozambique: Mr Alex Shimuafeni, Statistician-General & CEO, Namibia Statistics Agency; Mr Risenga Maluleke, Statistician-General, Statistics South Africa; Mr Yusuf Murangwa, Director General, National Institute of Statistics of Rwanda; Mr Amos M Zwane, Director of Statistics, Eswatini Central Statistical Office; Ms. Imelda Madgalene ATAI (Acting Executive Director), Uganda Bureau of Statistics; Mr Shelton Kanyanda, the Living Standards Measurement Study-Integrated Surveys on Agriculture (LSMS-ISA), the World Bank, Italy; Professor Sir Charles Bean, Former Deputy Governor Bank of England; Mr Jonathan Athow, Deputy National Statistician & Director General, Economic Statistics, National Statistics, UK; Ms Laura Marie-Therese Ahtime, CEO National Bureau of Statistics, Seychelles; Ms Marie Jennifer Jean Louis, Chairperson, National Statistics Board, Mauritius; Mr Stavros Karagiorgis, Director & Chief Statistics Officer, Cyprus National Bureau of Statistics; Mr Edwin St. Catherine, Director, St Lucia Statistics office; Professor David Hand, Senior Research Investigator and Emeritus Professor of Mathematics Imperial College, UK; Ms Carol Coy, Director General, Statistical Institute (STATIN), Jamaica; Mr Dave Clement, Director of Statistics, Central Statistical Office, Trinidad and Tobago; Mr Statchel Edwards, Chief Statistician, National Statistics Office, Antigua and Barbuda: Mr Lennox Benjamin, Chief Statistician, Bureau of Statistics, Guyana; Mr Grady Clarke, Chief Executive Officer, Bureau of Statistics, Barbados; Mr John Kalumbi, Director, Central Statistics Office, Zambia; National Institute of Economic and Social Research, UK; Mr Jeremy Rowe, Data Science Campus, UK

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Tan Sri Omar Abdul Rahman, CPTM Chairman, CPTM Fellow, Malaysia; Lt General (Ret'd) Ihsan H Shurdom, CPTM Director, Jordan; The Hon Mr Marco Mukoso Hausiku MP, former Deputy Prime Minister, CPTM Companion, Namibia; The Hon Temeki Ts'olo Minister in the Prime Minister's Office, Office of the Prime Minister, Lesotho; Ms Maseithati Mabeleng Principal Secretary - Cabinet Office of the Prime Minister, Lesotho; Dr Nkobena Boniface Fontem, Senior Adviser at the Civil Cabinet, Office of the President, Republic of Cameroon; Professor Sir David Omand GCB, King's College London, UK; Prof Yaneer Bar-Yam, Professor and President, New England Complex Systems Institute; Professor Sheila R Ronis, Chair and Professor, Department



Cape Town, South Africa, 16 – 20 September 2019

of Management, Director, Center for Complex and Strategic Decisions, CPTM Companion, USA; Mr Jamie Bartlett, Director, Centre for the Analysis of Social Media (CASM) at Demos, UK; Mr Carl Miller, Research Director, Centre for the Analysis of Social Media (CASM) at Demos, UK; Mr Norman M Chakanetsa, Executive Director, National Economic Consultative Forum, Zimbabwe; Professor Virginia Gamba, Under Secretary General & Special Representative for Children and Armed Conflict, United Nations, USA; Mr Silas Mosuhli, Director, Lesotho Smart Partnership Hub; Hon Mr Joseph Tsang Mang Kin GOSK, CPTM Companion, Mauritius; Mr Henk Schoeman, Director, Schoemans Office Systems (pty) Ltd, CPTM Companion, Namibia; Ambassador Barry Faure, Secretary of State for Foreign Affairs, Ministry of Foreign Affairs, Seychelles; Mr Moses Zungu, Head of Smart Partnership Secretariat, Prime Minister's Office, Eswatini; Mr Lekoma Mothibatsela, Executive Director, OSS Botswana Pty Ltd, CPTM Companion, Botswana; Ms Mpho Makhema, Former Vision 2016 Council Secretary, CPTM Companion, Botswana.

CPTM EMERGING DATA AND DIGITAL LANDSCAPE INCLUSION NETWORK

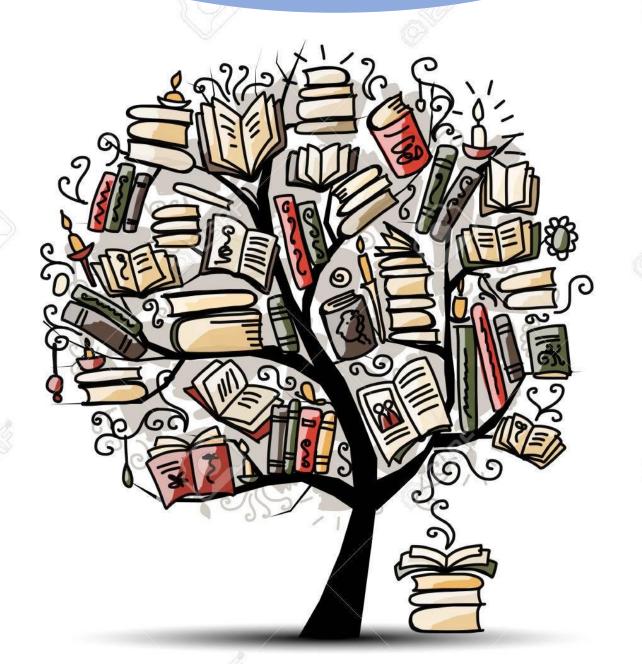
Professor David Hand OBE, Senior Research Investigator and Emeritus Professor of Mathematics Imperial College, UK; Sir David Omand GCB, King's College London, UK. Dr Max Ganado Senior Partner at Ganado Advocates, Malta; Mr Gordon J. Pace Professor Department of Computer Science University of Malta; Dr Joshua Ellul Lecturer Department of Computer Science Faculty of ICT University of Malta; Professor Michael Mainelli, Executive Chairman, Z/Yen Group Ltd, UK; Mr Malcolm Johnson, Deputy Secretary-General Telecommunication Standardization Bureau (TSB) and (ITU) Switzerland; Mr Venkatesen (Vijay) Mauree Programme Coordinator, Policy and Technology (ITU) Geneva, Switzerland; Dato' Dr Haji Amirudin bin Abdul Wahab, Chief Executive Officer, CyberSecurity Malaysia: Dr Solahuddin bin Shamsuddin, Chief Technology Officer and Cybersecurity, Malaysia; Mr Ahmad Izham bin Khairuddin, Director, Communications and Multimedia, Consumer Forum of Malaysia, CPTM Companion; Malaysia; Dr Jabiri Bakari, CEO, E-government Agency, Tanzania; Professor Husin Jazri, Associate Professor, Computer Science Department, University of Namibia; Mr Nkundwe Moses Mwasaga, CPTM Networking Member, Tanzania; Mr Carl Miller, Research Director, Centre for the Analysis of Social Media (CASM) at Demos, UK; Mr Mike Brookbanks, Visiting Fellow, Surrey Centre for the Digital Economy, UK; Dr Phil Godsiff, Senior Research Fellow, Centre for the Digital Economy, UK; Mr Oliver N Oram, CEO, Chainvine Ltd, UK; Mr Rajvi Mathur, Chainvine Ltd, UK; Mr John Carter, CPTM Director and Companion, SA. Professor David Hand OBE, Senior Research Investigator and Emeritus Professor of Mathematics Imperial College, UK; Sir David Omand GCB, King's College London, UK, Dr Max Ganado Senior Partner at Ganado Advocates. Malta: Mr Gordon J. Pace Professor Department of Computer Science University of Malta: Dr Joshua Ellul Lecturer Department of Computer Science Faculty of ICT University of Malta; Professor Michael Mainelli, Executive Chairman, Z/Yen Group Ltd, UK; Mr Malcolm Johnson, Deputy Secretary-General Telecommunication Standardization Bureau (TSB) and (ITU) Switzerland; Mr Venkatesen (Vijay) Mauree Programme Coordinator, Policy and Technology (ITU) Geneva, Switzerland; Dato' Dr Haji Amirudin bin Abdul Wahab, Chief Executive Officer, CyberSecurity Malaysia; Dr Solahuddin bin Shamsuddin, Chief Technology Officer and Cybersecurity, Malaysia; Mr Ahmad Izham bin Khairuddin, Director, Communications and Multimedia, Consumer Forum of Malaysia, CPTM Companion; Malaysia; Dr Jabiri Bakari, CEO, Egovernment Agency, Tanzania; Professor Husin Jazri, Associate Professor, Computer Science Department, University of Namibia; Mr Nkundwe Moses Mwasaga, CPTM Networking Member, Tanzania; Mr Carl Miller, Research Director, Centre for the Analysis of Social Media (CASM) at Demos, UK; Mr Mike Brookbanks, Visiting Fellow, Surrey Centre for the Digital Economy, UK; Dr Phil Godsiff, Senior Research Fellow, Centre for the Digital Economy, UK; Mr Oliver N Oram, CEO, Chainvine Ltd, UK; Mr Rajvi Mathur, Chainvine Ltd, UK; Mr John Carter, CPTM Director and Companion, SA.





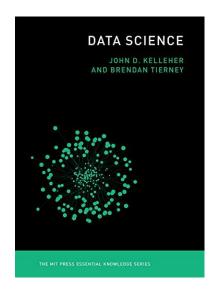
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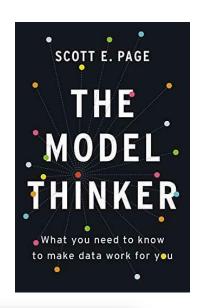


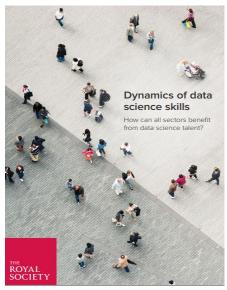


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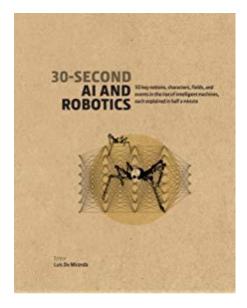


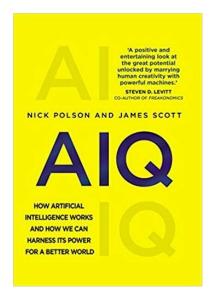


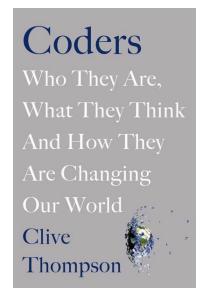


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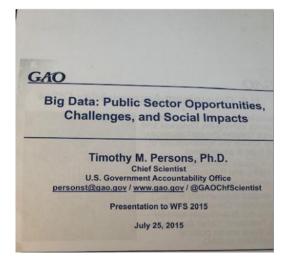
Hands on introduction into Artificial intelligence







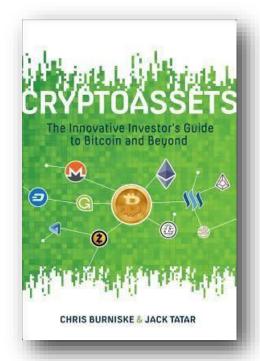


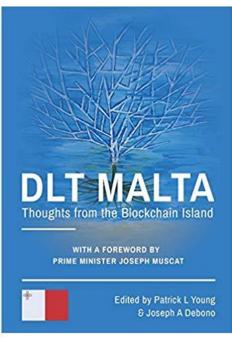


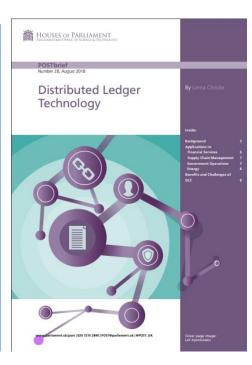


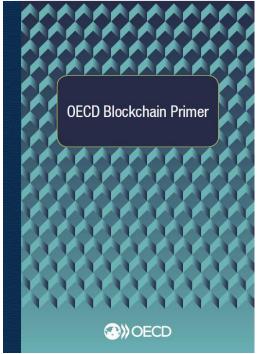


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Coming soon: ISO standards for blockshain technology - APNOR Solutions En

04 Feb 2019 Coming soon: ISO standards for blockchain
technology







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About CPTM Networks of Networks and Smart Partnership

The theme of [Leveraging Value of Data] made us think that technology could be one of these vehicles to make Visions a success. (...) Finance is key to the success of any of these programmes. New technology allows us to simplify some of our financial needs. And all of this is to help us succeed in our Visions. A Vision... is a plan. The most important is the desire to do things that will work to allow you to reach the goals you are striving for. (...) For Smart Partners the most important is how we can use these vehicles to enable nations to succeed, to truly be inclusive. Smart Partnership exists to address the exclusions that exist in our societies, to overcome these shortfalls. (...) Smart Partnership looks at how do I consider what will be good for me but also my neighbour. Information flows are very important for this inclusion. Ignorance leads to conflict but with information flow and sharing you can create understanding. 'Prosper thy neighbour' is not only about material needs but also about information. People need a better un-



derstanding of what is happening in their society. (...) The system should be inclusive, opening opportunities to all in society. As we think about why certain nations succeed and others fail I believe it is about the inclusiveness of the system. Systems that exclude people in one way or the other are a real factor in this. (...) An open system is not one that allows anything and everything; it is one that doesn't exclude. Everyone preaches good governance but when you look at specific systems or organisations they are closed to many. (...) Systems should be predictable, not secretive. (...) Good governance and transparency can make this better. By educating people and sharing information properly you can maximise what a country can achieve. (...)

Hon Mr Marco Hausiku, former Deputy Prime Minister, Namibia, CPTM Companion, July 2017

Since 1995, CPTM has pursued and developed a unique, practical and effective Smart Partnership dialogue platform and approach that seek win-win and prosper thy neighbour outcomes. It has evolved a Commonwealth-wide Smart Partnership Network (better described as a Network of Networks), together with a philosophy and culture, that reflect values of tolerance and co-operation. CPTM's Network achieves real-time interactions with valuable results for all its participants. CPTM has been particularly successful in familiarising members of its Network with the key issues underlying new technological developments, thus helping them to deal successfully with a changing world. This does much to support the efforts of Commonwealth developing nations and their Leaders to formulate and carry forward national visioning to leverage technology and data for socio-economic priorities and transformation, and to achieve sustainable development goals. The CPTM platform has always been based on a high level of specific skills and disciplines as well on the wisdom of experience in problem-solving. It is cost-effective and affordable, promoting solutions and solving problems speedily and consequently with much-reduced legacies of resentment and discontent. Above all Smart Partnership mobilised a real time interest in youth, including children and women. As long-time proponents, practitioners and beneficiaries of the Smart- Partnership philosophy and practices, we in Seychelles and as lunderstand alongside Barbados, Botswana, Cyprus, Cameroon, Guyana. Lesotho, Malta, Malaysia, Mauritius, Mozambique, Namibia, South Africa, St Lucia, Swaziland, Tanzania, Uganda and Zambia commend the CPTM Smart-Partnership platform, as an additional creative and constructive instrument available to Commonwealth members and other like-minded countries.

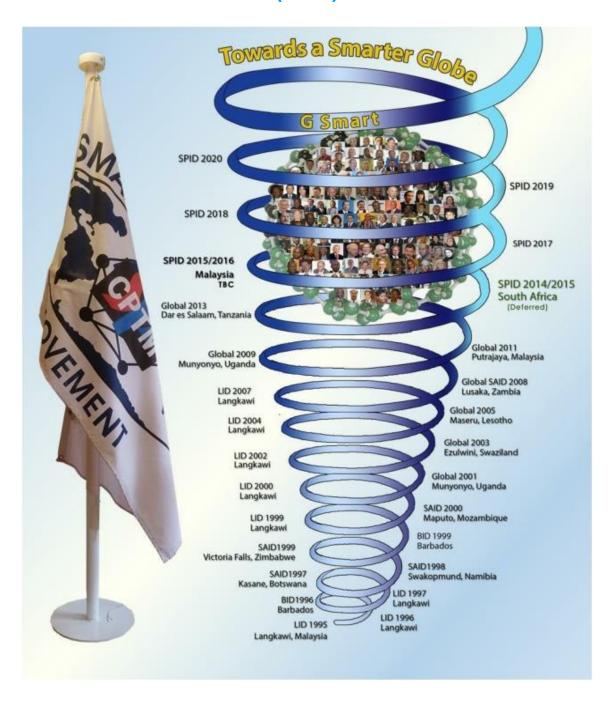
Hon Vincent Meriton, Vice President of Republic of Seychelles 20th Aug 2018



43rd DEVCO / ISO General Assembly

Cape Town, South Africa, 16 – 20 September 2019

"Smart Partnership International Dialogue" (SPID)







For further information and background, contact:

COMMONWEALTH PARTNERSHIP FOR TECHNOLOGY MANAGEMENT

CPTM Smart Partners 'Library,

10 Orange Street Haymarket, London,

WC2H 7DQ

Tel: 0207 798 2500 Mob: 44 (0)7785378380

E-mail: info@cptm.org or sptm@smartpartnership.org,

or please visit: www.cptm.org

