COMMONWEALTH
TELECOMMUNICATIONS
ORGANISATION

# DIGITAL WEEK 2023 Action for impact

## CTO Forum 2023

Action for impact

## Ministerial Alliance for Digital Nations

Addressing ICT Issues for Commonwealth Transformation

## 60th CTO Council Meeting

Marlborough House

# Event guide

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# An overview of the week

The Commonwealth Telecommunications Organisation (CTO) is celebrating its emergence from the tumultuous period of the Covid-19 pandemic and its new course to enhance its value to members, by hosting a week of face-to-face ICT events from 20–24 February 2023, in London, United Kingdom.

Digital Week will provide a unique opportunity for CTO members to reconnect and to engage with stakeholders in the ICT sector and reveal the CTO's plans to support digital transformation in the Commonwealth and beyond.

**The activities planned for Digital Week are as follows:**

**20 February 2023**

## CTO Forum

Open to all CTO members and ICT stakeholders, the Forum provides an opportunity for ICT Sector Members to contribute ideas and discuss issues with representatives of Full Member Countries and other Members and to prepare advice for the Council.

**21–22 February 2023**

## Ministerial Alliance for Digital Nations

The Ministerial Alliance will bring together Commonwealth Ministers responsible for telecommunications, and information and communication technologies (ICT) to address ICT issues for Commonwealth transformation. This inaugural event will focus on affordable universal broadband connectivity, an essential aspect of any digital transformation programme.

**23–24 February 2023**

## 60th Council, Marlborough House

Open to Representatives of Full Member Countries and other CTO members, the 60th Council will determine the broad policies and strategies of the CTO; examine and approve the CTO's business plan, the Annual Report and, in the light of that Report, adopt any decisions it considers appropriate; Consider and approve the strategic plan, work plan and budget for the next year. The Council will also elect the members of the CTO's Governing bodies.

# Welcome to Digital Week

**Bernadette Lewis**
Secretary General, Commonwealth Telecommunications Organisation

**It is my privilege, as the Secretary General of the Commonwealth Telecommunications Organisation (CTO) to welcome you to our first Digital Week from 20–24 February 2023 in London, United Kingdom. The Week will feature three important ICT events of the CTO: the ICT Forum 2023, the inaugural Ministerial Alliance for Digital Nations and the 60th Council Meeting.**

Digital Week is a significant milestone on the CTO calendar as it marks the reunion of the CTO family and ICT community after a four-year hiatus imposed in part by the Covid-19 pandemic. It will unveil the new course for the CTO to support the acceleration of digital transformation in the Commonwealth.

With the theme, Action for Impact, Digital Week is bringing together CTO members, Governments, the private sector, and civil society and diverse stakeholders in the ICT sector to initiate meaningful action that will have a measurable impact on development in the Commonwealth.

This week's activities would not have been possible without the support of our Platinum Sponsor the Government of the United Kingdom; our Gold Sponsors, Meta and OneWeb and Topaz Sponsors, Telesat and E-Space.

To our esteemed ministers, speakers and moderators who have joined us, please accept our heartfelt thanks.

To our members and delegates, we are grateful for your presence. It is a tangible demonstration of your commitment to the CTO and a great encouragement to us.

Finally, to the staff of the Secretariat, thank you for your diligence and dedication to making this week possible.

Thank you for joining us. My expectation is that the week will be engaging and productive and that we will indeed initiate action for impacting the Commonwealth positively.

**Hon. Paul Scully MP**
Parliamentary Under Secretary of State, Department for Science, Innovation and Technology, United Kingdom

**I am delighted to welcome you to London for the Commonwealth Telecommunications Organisation Digital Week. After not being able to meet physically due to the Covid-19 pandemic, we are pleased to be able to reconnect in person.**

The Commonwealth brings together countries from around the world, developed and developing, big and small, to work together in partnership. We all have unique digital transformation journeys. We are grateful to the Commonwealth Telecommunications Organisation for facilitating this great opportunity to meet and discuss both best practice and our common challenges.

At the CTO Forum, we look forward to discussions between Commonwealth Governments, ICT Sector Members and other ICT Stakeholders on how to accelerate digital transformation.

The Ministerial Alliance will bring together Ministers from across the Commonwealth to discuss the key issues we face. Universal broadband connectivity is the foundation of digital transformation, so I look forward to hearing about our diverse experiences.

Lastly, the CTO Council Meeting will enable us to make decisions about the future of the organisation so it can continue to deliver for its membership.

Digital transformation is a whole-of-society journey, so we are grateful for this truly multi-stakeholder event. We hope that delegates have a successful and enjoyable week, and that the theme Action for Impact will chime true. On behalf of the Department for Science, Innovation and Technology, we hope you have a very pleasant stay in London.

# CTO Forum 2023 Monday 20 February

**OPENING SESSION (09:00–10:00)**

## Welcome

09:00 **Introductory remarks — Master of Ceremonies**
**Mr Peter Ngwan Mbengie**, CTO Forum Chair, Executive Committee (EXCO) Development Partner, Telecommunications Regulatory Board, Republic of Cameroon

09:05 **National anthem of the United Kingdom**

09:07 **CTO Commencement song**

09:10 **Welcome**
**Ms Bernadette Lewis**, Secretary-General, CTO

09:15 **Introducing the CTO today**
**Hon. Manoa Kamikamica**, Chair of the Commonwealth Telecommunications Organisation and Deputy Prime Minister and Minister of Trade, Co-operatives, SMEs and Communications, Republic of Fiji

09:25 ***Keynote address* — Challenging times and the digital transformation imperative**
**Mr John Curran**, President and Chief Executive Officer, American Registry for Internet Numbers

09:50 **Group photograph**

10:00 ***Networking break***

**SESSION ONE (10:30–11:00)**

## Cybersecurity for digital transformation

**MODERATOR:** **Mr Peter Ngwan Mbengie**, CTO Forum Chair, Executive Committee (EXCO) Development Partner, Telecommunications Regulatory Board, Republic of Cameroon

10:30 **Cybersecurity for digital transformation**
**Ms Erika Lewis**, Director, Cyber Security and Digital Identity Department for Science, Innovation and Technology (DSIT), United Kingdom

10:50 **Q&A session**

**SESSION TWO (11:00–12:45)**

## Digital transformation building blocks

**MODERATOR:** **Mr Peter Ngwan Mbengie**, CTO Forum Chair, Executive Committee (EXCO) Development Partner, Telecommunications Regulatory Board, Republic of Cameroon

11:05 **Public awareness and an enabling environment for digital transformation**
**Mr Ezra Chiloba**, Director-General, Communications Authority of Kenya

11:30 **Digital regulation: an introduction to the UK's online safety bill**
**Mr Tim Dwyer**, Head of International Engagement, Security and Online Harms, DSIT, United Kingdom

12:00 **Digital identity: industry best practices**
**Ms Colleen Elliott**, Digital ID Strategy Lead, Microsoft

12:20 **Digital identity: government approach**
**Ms Caroline Copley**, Head of Digital Identity Legislation and International Strategy, Cyber Security and Digital Identity Directorate, Department for Science, Innovation and Technology (DSIT), United Kingdom

12:40 **Q&A session**

12:45 ***Networking luncheon***

**SESSION THREE (13:45–15:30)**

## Practical approaches to digital transformation

**MODERATOR:** **Mr Peter Ngwan Mbengie**, CTO Forum Chair, Executive Committee (EXCO) Development Partner, Telecommunications Regulatory Board, Republic of Cameroon

13:45 ***Keynote address* — Practical approaches to digital transformation**
**Ms Megan Lee Devlin**, Chief Executive, Central Digital and Data Office, United Kingdom

14:15 **Internet of Things (IoT) for achieving the United Nations Sustainable Development Goals (SDGs)**
**Mr Matt Hatton**, Founding Partner, Transforma Insights

15:00 **Q&A session**

15:30 ***Networking break***

**SESSION FOUR (16:00–17:00)**

## Commonwealth development and digital transformation

**MODERATOR:** **Mr Kwame Baah-Acheamfour**, Head of International Affairs, Ministry of Communications and Digitalisation, Republic of Ghana

16:00 ***Discussion forum* — What can Commonwealth governments do to accelerate digital transformation? How can CTO help?**

16:45 **Election of officials**

17:00 **End of session**

CTO COMMONWEALTH TELECOMMUNICATIONS ORGANISATION

## Training and events listing

**Leading with impact — Masterclass for regulators**
Botswana
27 February–3 March 2023

**Diploma in Telecommunications Management Studies**
South Africa
1 February–8 May 2023

**Liaison Officer Meeting**
Tanzania
16 May 2023

**HR and ICT Forum**
Tanzania
17–18 May 2023

**Digital Transformation for Digital Nations Programme**
Location TBC
Dates TBC

**For more information visit cto.int/training, or contact programmes@cto.int**

# Ministerial Alliance for Digital Nations | Tuesday 21 February

**OPENING SESSION (09:00–09:55)**

## Welcome

09.00 **Opening remarks**
**Professor Tim Unwin**, Master of Ceremonies and Chairholder, UNESCO ICT4D

09:05 **National anthem of the United Kingdom**

09:07 **CTO Commencement song**

09:10 **Welcome address**
**Ms Bernadette Lewis**, Secretary-General, CTO

09:15 **Goodwill address**
**Ms Doreen Bogdan-Martin**, Secretary-General, International Telecommunication Union

09:20 **Special remarks**
**H.E. Baroness Patricia Scotland KC**, Secretary-General, Commonwealth of Nations

09:25 ***Chairperson's address* — Official opening of the Ministerial Alliance for Digital Nations**
**Hon. Manoa Kamikamica**, Chair of the Commonwealth Telecommunications Organisation and Deputy Prime Minister and Minister of Trade, Co-operatives, SMEs and Communications, Republic of Fiji

09:30 **Keynote address**
**Hon. Paul Scully**, Parliamentary Under Secretary of State, Department for Science, Innovation and Technology, United Kingdom

09:45 **Group photograph**

09:55 ***Networking break***

**NETWORKING BREAK (09:55–10:25)**

## Ministerial Caucus One

1. **Hon. Jean Pierre Doukaga Kassa**, Minister, Ministry of Communication and the Digital Economy, Republic of Gabon
2. **Hon. Ousman Bah**, Minister, Ministry of Communications and Digital Economy, Republic of the Gambia
3. **Hon. Ursula Owusu-Ekuful**, Minister, Ministry of Communications and Digitalisation, Republic of Ghana
4. **H.E. Professor Isa Ali Ibrahim Pantami**, Minister, Ministry of Communications and Digital Economy, Republic of Nigeria
5. **Hon. Mohamed Swaray**, Minister, Minstry of Information and Communications, Sierra Leone

## Ministerial Caucus Two

1. **Hon. Eliud Owalo**, Cabinet Secretary, Ministry of Information, Communications and the Digital Economy, Republic of Kenya
2. **Hon. Nape Nnauye**, Minister, Ministry of Information, Communication and Information Technology, United Republic of Tanzania
3. **Hon. Chris Baryomunsi**, Minister, Ministry of ICT & National Guidance, Republic of Uganda
4. **Hon. Minette Libom Li Likeng**, Minister, Ministry of Post and Telecommunications, Republic of Cameroon

# Ministerial Alliance for Digital Nations | Tuesday 21 February

**SESSION ONE (10:25-12:00)**

## Cellular solutions for nationwide connectivity

*Ministers will present their challenges in realising universal broadband and last-mile connectivity issues. Cellular industry leaders will address concerns and explain their ICT solutions for addressing them.*

10:25 **Moderator: Session introduction**
**Mr John Omo**, Secretary-General, Africa Telecommunication Union

10:30 **Ministerial Statements of Caucus One**

10:40 **Industry response**
**Mr Raphael Mushanawani**, Group Chief Executive Officer, NetOne Cellular (Pvt) Ltd, Zimbabwe

11:00 **Mr John Morris,** Co-founder and Executive Director, Geeks without frontiers

11:20 **Ms Eleanor Sarpong,** Director of Public Policy, Global Digital Inclusion Partnership

11:40 **Moderated Q&A and discussion**

12:00 ***Networking luncheon***

**SESSION TWO (13:00–14:45)**

## The roll-out of 5G

*Ministers will present 3G and 4G issues and the need to realise affordable universal broadband and last-mile connectivity issues. 5G Community leaders will discuss the rollout of 5G infrastructure and networks and its coordination with the continued rollout of 3G and 4G service.*

13:00 **Moderator: Session introduction**
**Mr George Michaelides**, Commissioner of Communications, Office of the Commissioner for Electronic Communications and Postal Regulation, Cyprus

13:05 **Ministerial Statements of Caucus Two**

13:15 **Industry response**
**Mr John Giusti**, Chief Regulatory Officer, GSMA

13:35 **Mr David Geary**, General Counsel, Caribbean and Central America, Digicel Group

13:55 **Ms Isabelle Mauro**, Director-General, Global Satellite Operator's Association (GSOA)

14:15 **Moderated Q&A and discussion**

14:45 ***Networking break***

**NETWORKING BREAK (14:45–15:10)**

## Ministerial Caucus Three

1. **Hon. Thulagano Merafe Segokgo**, Minister, Ministry of Transport & Communications, Republic of Botswana
2. **Hon. Nthati Moorosi**, Minister, Ministry of Information, Communications, Science, Technology and Innovation, Kingdom of Lesotho
3. **Hon. Mateus Magala**, Minister, Ministry of Transport and Communications, Republic of Mozambique
4. **Hon. Mohlopi Phillemon Mapulane**, Deputy Minister, Department of Communications and Digital Technologies, Republic of South Africa

## Ministerial Caucus Four

1. **Hon. Warren Kwame Eusi McCoy**, Minister, Office of the Prime Minister, Republic of Guyana
2. **Hon. Samuel Joseph**, Minister, Ministry of Communications, Works, Labour & Energy, Montserrat
3. **Hon. Toelupe Poumulinuku Onesemo**, Minister, Ministry of Communication and Information Technology, Independent State of Samoa
4. **Senator the Hon. Hassel Bacchus**, Minister, Ministry of Digital Transformation, Republic of Trinidad and Tobago
5. **Hon. Otis Morris**, Minister, Ministry of Home Affairs, Transportation and Communication, Turks and Caicos Islands

**SESSION THREE (15:10-17:00)**

## Wi-Fi possibilities

*Ministers will present their Wi-Fi availability concerns. Industry leaders will explain advances in Wi-Fi technologies for a new generation of Internet Innovation applications.*

15:10 **Moderator: Session introduction**
**Mr Chris Woolford**, Director, International Spectrum Policy, Ofcom, United Kingdom

15:15 **Ministerial Statement of Caucus Three**

15:25 **Industry response**
**Mr Dave Wright**, Head of Global Wireless Policy, Hewlett Packard Enterprise

15:45 **Ms Aline Mourao**, Global Spectrum Policy Manager, Meta

16:05 **Mr Frank McCosker,** Senior Advisor, Microsoft Airband Initiative

16:25 **Moderated Q&A and discussion**

16:50 **Summary**
**Professor Tim Unwin**, Master of Ceremonies and Chairholder, UNESCO ICT4D

17:00 **CTO Partnership MoU signing ceremony**

17:30 ***Reception hosted by the Government of the United Kingdom***

19:00 **End of Ministerial Alliance day one**

# Ministerial Alliance for Digital Nations | Wednesday 22 February

**OPENING SESSION (09:00–09:05)**

## Welcome

09.00 **Opening remarks**
**Professor Tim Unwin**, Master of Ceremonies and Chairholder, UNESCO ICT4D

**SESSION FOUR (09:05–10:45)**

## Satellites — connecting the world

*Ministers will present concerns and challenges for reaching remote and isolated rural communities of remote rural communities. Representatives from the satellite industry will present their solutions for addressing challenges identified and discuss the importance of Satellite technologies in connecting the unconnected.*

09:05 **Moderator: Session introduction**
**Ms Aarti Holla-Maini**, Former Secretary-General, GSOA

09:10 **Ministerial Statement of Caucus Four**

09:20 **Industry response**
**Mr Christopher Casarrubias**, Head of Regulatory & Government Affairs (Latin America and the Caribbean), OneWeb

09:40 **Mr Mario Neri**, Director, Spectrum Strategy & Innovation, Telesat

10:00 **Ms Amy Mehlman**, Vice-President, Global Affairs and Stakeholder Relations, E-Space Inc

10:20 **Moderated Q&A and discussion**

10:45 ***Networking break***

**NETWORKING BREAK (10:45–11:15)**

## Ministerial Caucus Five

1. **H.E. Sir Joe Bossano**, Minister, Ministry for Economic Development, Enterprise, Telecommunications & the Gibraltar Savings Bank, Gibraltar
2. **Hon. Jenfan Muswere**, Minister, Ministry of ICT, Postal and Courier Services, Republic of Zimbabwe
3. **Hon. Kye Rymer**, Minister, Ministry of Communications and Works, Virgin Islands
4. **Hon. Moses Kunkuyu**, Minister, Ministry of Information and Digitalization, Republic of Malawi

**SESSION FIVE (11:15–12:30)**

## Emerging technologies

*Ministers will present concerns and challenges for acquiring emerging technologies for digital governments and closing the digital divide. Industry leaders would explain the potential of their technologies to accelerate digital transformation.*

11:15 **Moderator: Session introduction**
**Mr Lacina Koné**, Director-General/CEO, Smart Africa Secretariat

11:20 **Ministerial Statement of Caucus Five**

11:30 **Industry response**
**Ms Nina Beebe**, Senior Advisor International Regulatory Affairs, Project Kuiper, Amazon

11:45 **Mr Tim Clark**, Industry Relations Director, Motorola Solutions

12:00 **Mr Ryan Johnson**, Senior Director, Global Market Access & Government Affairs, Viasat, Inc

12:15 **Moderated Q&A and discussion**

12:30 ***Networking luncheon***

**SESSION SIX (13:30–15:00)**

## Spectrum matters

*Mobile communications technologies depend on radio frequency spectrum to deliver services. This session will consider trends in spectrum use and what governments and regulators need to do to ensure spectrum availability.*

13:30 **Moderator: Session introduction**
**Mr Martin Fenton**, Director of Spectrum Analysis, Ofcom, United Kingdom

13:55 **Questions from Ministers**

14:00 **Lightning presentation 1**
**Dr Martha Suarez**, President, Dynamic Spectrum Alliance

14:10 **Lightning presentation 2**
**Mr Jonas Eneberg**, GSOA Spectrum Matters, Vice-President of Regulatory Engineering, Inmarsat

14:25 **Lightning presentation 3**
**Mr Christopher Casarrubias**, Head of Regulatory & Government Affairs (Latin America and the Caribbean), OneWeb

14:40 **Moderated Q&A and discussion**

15:00 ***Networking break***

## Ministerial Alliance for Digital Nations | Wednesday 22 February

**SESSION SEVEN (15:15–16:20)**

### Accelerating digital transformation

*This session will highlight next steps that Ministers can initiate for accelerating digital transformation.*

15:15 **Moderator: Session introduction**
**Ms Jurate Soviene**, Chairwoman, Lithuanian Communications Regulatory Authority, Lithuania

15:25 **Energy and power in accelerating digital transformation**
**Mr Ian McFadyen**, Chief Executive Officer, Mwabu, Republic of Zambia

15:40 **Lightning presentation 1**
**Ms Vashti Maharaj**, Adviser Digital Trade Policy, The Commonwealth Secretariat, Commonwealth Connectivity Agenda, Trade Oceans and Natural Resources Directorate

15:50 **Lightning presentation 2**
**Mr Bengt Mölleryd**, Chairman, Working Party on Communication Infrastructures and Service Policy, Organisation for Economic Co-operation and Development

16:00 **Lightning presentation 3**
**Mr Bevil Wooding**, Director, Caribbean Affairs, American Registry for Internet Numbers

16:10 **Lightning presentation 4**
**Mr Areeq Chowdhury**, Head of Policy (Data and Digital Technologies), The Royal Society

**CLOSING SESSION (16:20–17:00)**

### Thank you

16:20 **Discussion and wrap-up**
**Professor Tim Unwin**, Master of Ceremonies and Chairholder, UNESCO ICT4D

16:40 **Vote of thanks**
**Ms Bernadette Lewis**, Secretary-General, CTO

16:50 **Closing remarks**
**Hon. Manoa Kamikamica**, Chair of the Commonwealth Telecommunications Organisation and Deputy Prime Minister and Minister of Trade, Co-operatives, SMEs and Communications, Republic of Fiji

17:00 **Close of Ministerial Alliance**

COMMONWEALTH TELECOMMUNICATIONS ORGANISATION

CTO Human Resources and ICT Forum 2023

Digital transformation

**Building a future-ready HR**

17–18 May 2023 | United Republic of Tanzania

**The objectives of the forum are to:**

- Explore success factors for formulating and implementing digital transformation strategies.
- Explain the role of HR in digital transformation and how technology is transforming HR.
- Consider the impact of emerging technologies on HR and the wider business.
- Share practical steps on alignment of the HR strategy to the business digital strategy
- Present practical examples of businesses that successfully transformed digitally.
- Highlight HR interventions and initiatives essential for fostering digital transformation.
- Provide HR expert insights on digital transformation programmes.

*Hosted by the*
**Tanzania Communications Regulatory Authority**

For more information please contact the CTO Events Team on **events@cto.int**

*Backed by a 54-year legacy of engineering excellence, reliability and industry-leading customer service, Telesat is one of the largest and most innovative global satellite operators. Telesat works collaboratively with its customers to deliver critical connectivity solutions that tackle the world's most complex communications challenges, providing powerful advantages that improve their operations and drive profitable growth.*

Continuously innovating to meet the connectivity demands of the future, Telesat Lightspeed, the company's Low Earth Orbit (LEO) satellite network, will be the first and only LEO network optimised to meet the rigorous requirements of telecom, government, and enterprise customers.

Telesat is a leading global satellite operator with a fleet of 15 geostationary ("GEO") satellites and one LEO satellite. Telesat's existing GEO satellite fleet and ground infrastructure provide powerful video distribution and direct-to-home (DTH) capabilities in North America and mission-critical enterprise and government services business, including for backhaul, corporate networks, maritime and aero services, throughout the world.

In addition to Telesat's GEO services, the company is also focused on disruptive new satellite architectures to capture a sustainable competitive advantage in the global broadband connectivity market. Drawing on its deep market knowledge and innovation history, Telesat intends to transform global satellite communications with the Telesat Lightspeed network.

The Telesat Lightspeed Network is comprised of 188 state-of-the-art LEO satellites along with a tightly integrated terrestrial infrastructure. The Telesat Lightspeed Network will offer an unsurpassed combination of capacity, speed, affordability, security and resiliency, with latency that is equal to the most advanced terrestrial networks. Able to serve the entire globe, the Telesat Lightspeed network will satisfy many of the world's most challenging communications requirements.

Telesat Lightspeed will bridge the digital divide in rural and remote communities, set new levels of performance for broadband connectivity on land and in key maritime and aeronautical markets — which are among the fastest growing in today's satcom industry — and enable highly secure and resilient government applications.

With almost half of the world's population lacking access to affordable, high-speed internet, Telesat Lightspeed was designed to provide complete community connectivity. The network is comprised of large carriers that can backhaul over 15 Gbps of data traffic into a single remote area, allowing telecom operators to deliver consumer, enterprise and government broadband and LTE/5G to the entire community.

Providing universal access to high-speed connectivity requires a combination of telecommunications technologies that ensure not only the availability, quality, and reliability of the service, but also its affordability. In remote communities, this is hard to achieve with terrestrial technologies due to the poor business case for fibre and microwave backhaul. Telesat Lightspeed helps overcome this challenge.

For example, the Government of Canada signed a capacity agreement with Telesat to secure dedicated, heavily subsidised capacity on Telesat Lightspeed to connect underserved communities in Canada's North. The Telesat Lightspeed capacity pool enables telecom operators to close the rural connectivity business case to expand their networks while delivering an affordable, accessible service to end users. This innovative model can easily be replicated with governments and telecom operators globally.

**telesat.com**

# Why we need to make space sustainable, inclusive and smart

*E-Space is a global space company focused on bridging Earth and space to make connectivity from space sustainable, universally accessible, and actionable to advance humanity, improve the planet and enable smarter business operations through automation.*

**By Amy Mehlman, Vice-President, Global Affairs & Stakeholder Relations, E-Space**

## Space sustainability

According to the European Space Agency, there are more than one million space debris objects between one and 10cm and 36,500 that are 10cm and larger. All of that adds up to more than 10,000 metric tons of debris in orbit, and that number is constantly rising. The more crowded space becomes, the more likely collisions are to occur. Each collision creates exponentially more debris, starting a chain reaction of destruction that could eventually prohibit the launch of new satellites altogether. E-Space is focused on setting a new standard in space sustainability at low Earth orbit (LEO), by building the most sustainable satellite system in the world using the following space safety design tenets—design satellites that fail safe; offer 100% demise; have small cross-sections; are low mass; do not release components if impacted; and, ultimately, have the ability to entrain and de-orbit harmful space debris. E-Space encourages all space companies to deploy these new space safety practices to responsibly empower a safer space domain.

## Space inclusion

"Space inclusion" may be an unfamiliar phrase to some, but for E-Space, it means ensuring everyone has an opportunity to access the space domain to grow and thrive. That includes nations, enterprises, small businesses, communities and people. Inclusion also means addressing the exclusionary actions of the past and of today, to enable inclusivity of the domain for all. E-Space believes satellites are the great space equaliser due to their ability to reach across the planet. But to offer universal accessibility, the cost of space entry must be lowered. E-Space is focused on democratising space and empowering governments, businesses and communities around the world to harness the power of space —with minimal local expertise — and for significantly less cost when compared to other LEO systems.

## Space-based Smart-IoT

The Internet of Things (IoT) is a broad term that encapsulates billions of devices connected to the internet that collect and share data around the world. It's estimated there are over 12 billion IoT connections in service today, with the number expected to grow to 27 billion by 2025. While the various uses and applications for these devices are almost limitless, they all share one thing: the need for connectivity. To-date, space-based IoT has only scratched the surface on how to use collected data to make a sizable impact on Earth or in business. The concept behind what E-Space is doing is to transcend the limitations of terrestrial networks and traditional satellite systems by fundamentally changing the design of legacy LEO space systems to deliver entirely new satellite capabilities at a fraction of the cost. By developing a global communications platform, optimised with edge-based AI, E-Space can enable a new class of ubiquitous, real-time communications and IoT services, where the real-world implications are full of possibility, especially when it can be made affordable in the developing world.

History is full of examples where people, big corporations and nations have rushed in to grab resources at the expense of others. The story follows a familiar pattern: wealthy parties take advantage of being first in, then freeze out less-advantaged parties. E-Space looks forward to changing the dynamics of space accessibility, affordability, and sustainability to ensure that not only the wealthy can economically, socially and digitally benefit from the power of space technology. ■

The traditional terrestrial model of connectivity focused on areas of populous. Because of expense, more remote areas are characterised by poor service delivery and the inability to benefit from technological trends and business innovation. There is a growing awareness of satellite technology's potential to move from a backup system to a mainstream connectivity tool and address this divide. Modern technologies and customer expectations (driven by the recent pandemic) commands for good connectivity and resulting services that require continuous or on-demand data.

By using satellite technology, rural communities and remote industries are no longer left in a technological void, reliant on slow and expensive terrestrial network development to improve their connectivity. This levelling-up of global communications could not have happened at a better time: the optimisation of world-wide resources is critical to most of the challenges that humanity now faces.

Connectivity solutions have extended to maximise the technology experience. Today, satellite technology not only connects people and IoT, it also connects infrastructure. The interplay of infrastructure monitoring with data inputs from the surrounding environment (connection everywhere) has become an essential component to mitigate risks, and for contingency planning in modern business and climate change diagnostics. From environmental watch groups, logistic providers, educational institutions, public transport, to the financial sector; every conceivable industry is engaging with satellite data to make better decisions and connect instantaneously with their stakeholders.

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E-SPACE

Bridging Earth and Space

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Building The World's Most Sustainable Satellite System

Sustainable

Setting the standard in space sustainability with a constellation resilient enough to withstand a collisional cascading event and designed to avoid one.

Accessible

Democratizing space and lowering the cost of entry to ensure everyone has an opportunity to access space to grow and thrive.

Smart

Introducing space-based Smart IoT, blending artificial intelligence with the Internet of Things to enable actionable insights, intelligence and automation.

Follow us

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# *Overview of the* **Commonwealth Telecommunications Organisation**

**The CTO is the oldest and largest Commonwealth information and communication technologies (ICT) organisation. Established as the Pacific Cable Board in 1899 to complete a global telegraph network, in its latest manifestation the CTO is an international treaty organisation, dedicated to facilitating effective adoption ICT and accelerating digital transformation and sustainable development in the Commonwealth and beyond.**

In 2020 the CTO charted a new course to support its members by streamlining the Secretariat's activities to help its members in every step of their digital transformation programme. Through the provision of technical advice, consultancies in digital development, capacity building and training, the Secretariat will be working with each member country to formulate and execute digital transformation plans that have a measurable impact on the lives of citizens. In the current environment of rapid technological innovation, the CTO is committed to helping Commonwealth countries leverage the potential of information and communication technologies (ICT) to accelerate digital transformation and achieve the United Nations 2030 Sustainable Development Goals.

## FULL MEMBER COUNTRIES

*Bangladesh*
*Barbados*
*Botswana*
*Cameroon*
*Fiji*
*Gabon*
*Gambia*
*Ghana*
*Grenada*
*Guyana*
*India*
*Jamaica*
*Kenya*
*Kingdom of Eswatini*
*Kingdom of Lesotho*
*Malawi*
*Mauritius*
*Mozambique*
*Nigeria*
*Pakistan*
*Rwanda*
*Samoa*
*Seychelles*
*Sierra Leone*
*St. Kitts and Nevis*
*Tanzania*
*Tonga*
*Trinidad and Tobago*
*Tuvalu*
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*United Kingdom*
*Vanuatu*
*Zambia*

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