



Direct-to-Device



We make innovative technology work for the world.

Our mission is to make sure as many people as possible have access to transformative technologies without eroding competition or consumer choice.

We work with companies to enable and optimise their participation in markets across the globe and advise governments on how best to regulate existing and emergent technologies.

Our offices



6
Offices worldwide allow us to offer both a global and local perspective

200+
jurisdictions where we devise strategies to overcome technical, regulatory, and political barriers

140+
Employees with deep understanding of areas ranging from policy to legal and engineering

35
The number of languages, from Arabic to Mandarin, spoken by our teams



Different Deployment Models

MSS Model:

- Advancements in antenna and chipsets have enabled devices to communicate with satellites through MSS.

Advantages:

- The service is provided in bands in accordance with the ITU Radio Regulations and Table of Frequency Allocations.
- The service currently operates and provides connectivity globally on understood frameworks.

Disadvantages:

- Limited bandwidth and capacity
- Need for upgrades on the hardware/software of the device.

MS Model:

- SNOs gain access to mobile bands through partnerships with MNOs.

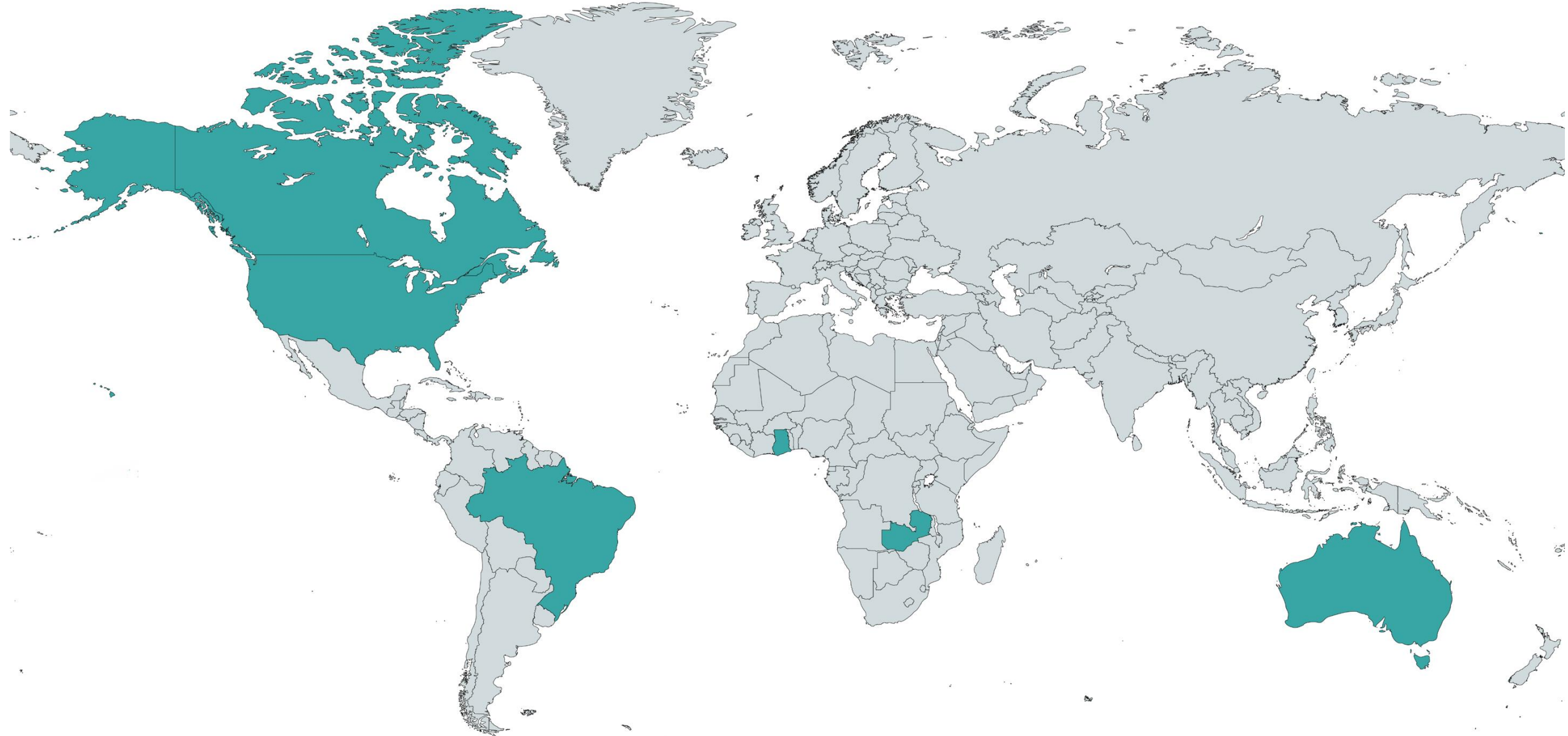
Advantages:

- Existing devices can use the technology with limited modifications.
- More capacity can be provided.

Disadvantage:

- Lack of regulatory stability,
- risk of interference to incumbent services,
- possible sudden cessation of service

Regulatory Proposals





Annex



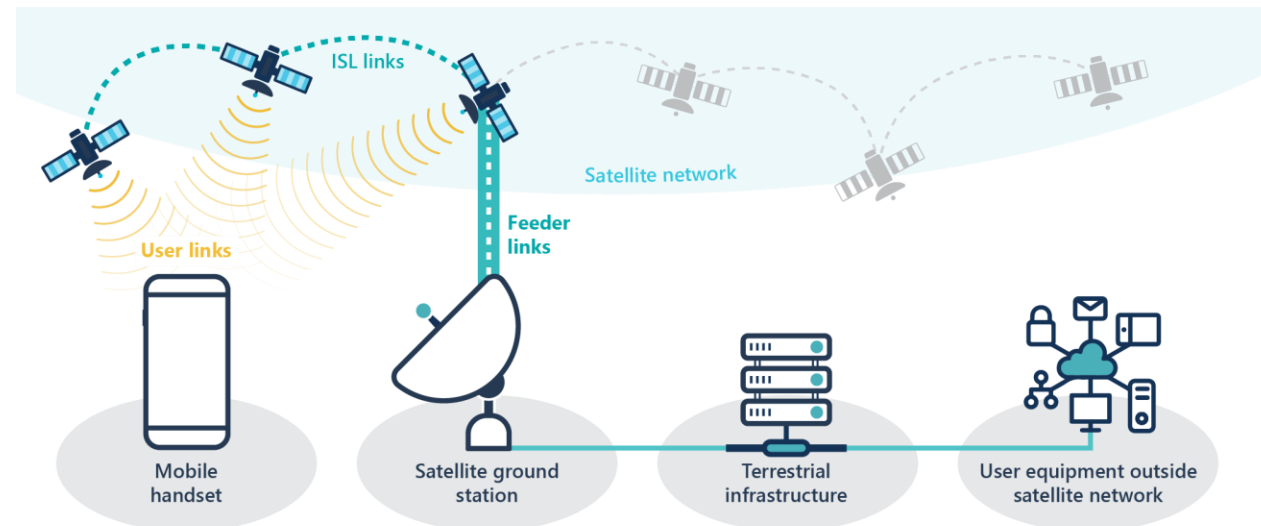
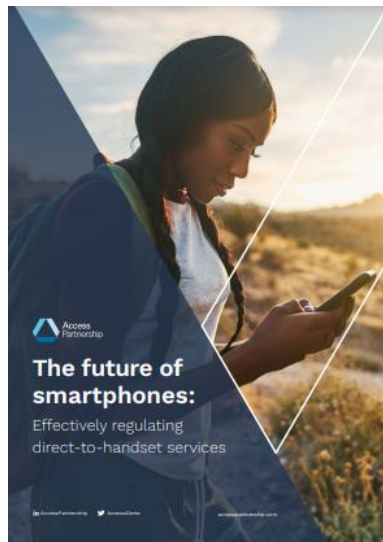
2023 – release of “The Future of Smartphones”

Dubbed direct-to-handset, this paradigm brings satellite capability to smartphones:

- The impact of the emerging D2D market goes beyond just connecting people.
- It has the power to transform economies, boost GDP, and increase productivity.

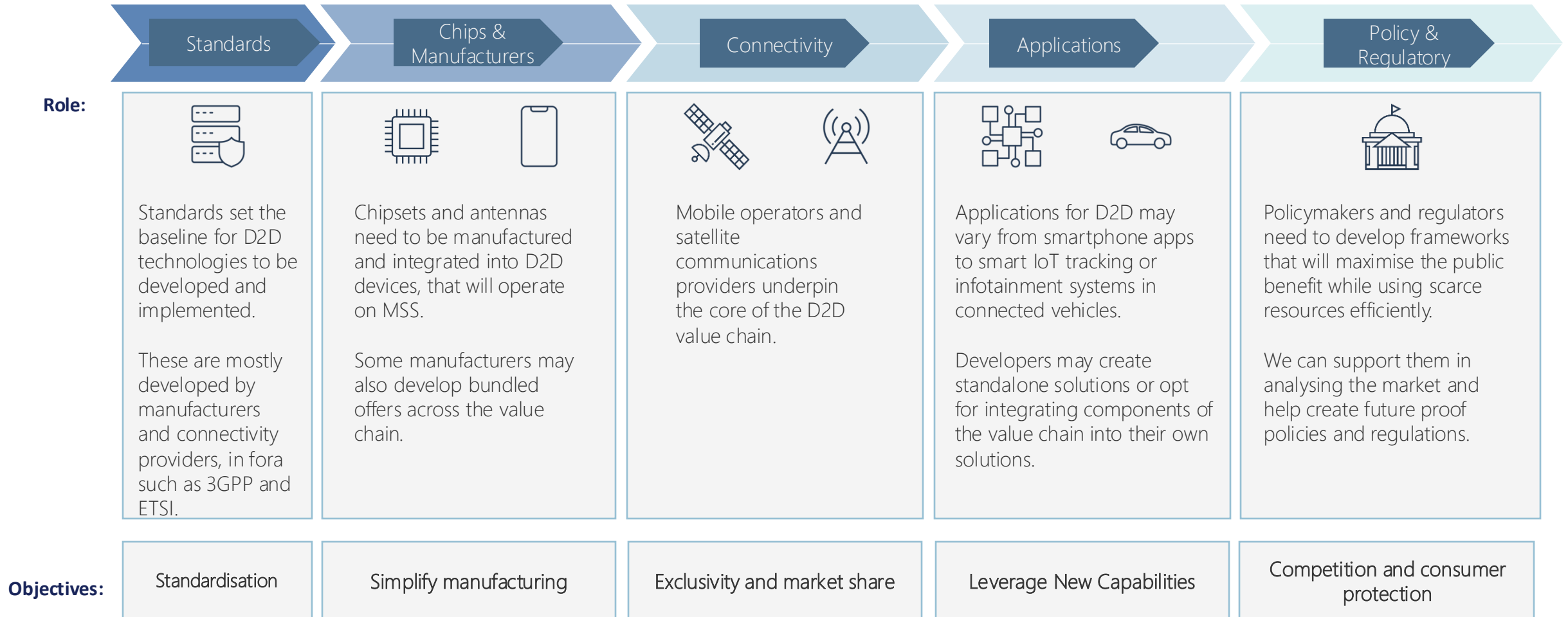
The communication journey in a D2D context follows:

- a user initiates communication via satellite
- the satellite relays the transmission to a ground station; which
- processes and routes it to a global destination.





D2D stakeholders have differing interests, and so you need to take an active stance



D2D Benefits and Implications



Emergency Communications

D2D services can provide essential connectivity during crises, allowing real-time communication even when terrestrial networks are compromised or unavailable, enabling efficient disaster response and recovery.



Supplemental Coverage

D2D helps bridge the connectivity gap in remote or underserved areas by supplementing terrestrial network coverage. It overcomes economic and geographic challenges faced by traditional mobile networks. In addition, spectrum can be used more efficiently, given that bands can be exploited in all geographic locations, as opposed to specific residential or high-density areas.



Lower Infrastructure Costs

With more reliable mobile internet infrastructure, consumer costs towards fixed infrastructure with high upfront costs can be redirected toward cheaper NTN services (including D2D and Satellite IoT). Individuals would also be able to participate in the digital economy, promoting increased consumption of digital and digitally-enabled goods, while administrations would achieve their coverage goals with a reduced amount of investment.



Emerging and Future Applications

The continuous advancement in D2D technology opens up possibilities for innovative future D2D applications. This includes substantial potential in enabling Massive IoT across various sectors, Telemedicine, Smart Agriculture, etc. fostering equitable access to digital resources.



Mobility

D2D can promote decentralization by providing a low-cost, reliable means of communication, especially beneficial for regions without traditional cellular network coverage. This technology will also improve mobility, as it is a low-cost decentralized means of communication.



Regulatory Developments

The United States of America - FCC:

- **Supplemental Coverage from Space Framework.**

FCC established the supplemental coverage from space framework. The purpose is to facilitate connectivity through D2C services, in rural and remote areas where no terrestrial coverage is available.

SNOs and MNOs must enter a commercial agreement where the MNO leases licensed, flexible use spectrum within a specified geographic area to the SNO. The MNO and SNO may then apply to the FCC for authorisation.

Alongside the identified bands, the FCC is expanding secondary allocations for MSS.

The FCC has opened an additional round of consultations for comment on emergency communications and the protection of radio astronomy services as it is currently unclear what emergency communications obligations apply to the SNOs.

Technical limitations to protect incumbents in-country/cross-border not defined.

Expected to operate under RR Art. 4.4.



Regulatory Developments

Europe - The Electronic Communications Committee:

- **FM44 Direct-to-Cell (D2C) communications via existing available smartphones.**

FM44 is investigating the possible regulatory impacts and considerations for D2C connectivity.

The report intends to explore the current D2C partnerships, current European frequency allocations, and the regulatory considerations, including:

- Concerns on possible widespread use of ITU-R Radio Regulations Rule 4.4
- The nature of the leasing and bilateral sharing agreements
- Interference considerations including cross-border interference
- Radio Astronomy protection
- Lawful interception
- The role of D2C in emergency communications



Regulatory Developments

Brazil – ANATEL:

- **D2C Regulatory sandboxes.**

The sandbox relaxes the rules contained in the Regulation on Authorization for Temporary Use of Radiofrequency and grants temporary use of spectrum for over 60 days and permits the creation of a pilot project in an experimental regulatory environment.

- **Public Consultation to update the National Frequency Table.**

Considers secondary MSS allocations to bands under 2700 MHz with mobile identification. The goal is to facilitate D2D services in the select frequency bands.

Technical limitations to protect incumbents in-country/cross-border not defined.

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