Regulating satellite connectivity across different operating models

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Satellite brings distinct characteristics, and plays a key role in improving connectivity

Satellite has differentiated characteristics from terrestrial



Constellations provide coverage across regional or global footprints



Ground infrastructure cannot feasibly be deployed in every country served



Connectivity is delivered through a range of operating models, which are evolving



Upfront investment requires returns from multiple markets

New technology and use cases are driving growth

Satellite connectivity complements terrestrial networks as well as serving important use cases that terrestrial networks cannot provide for (e.g. maritime, aeronautical, global IoT, underserved areas)

Regulation should remain flexible enough to accommodate evolving satellite technology and the emergence of new operating models, particularly where regulatory outcomes can or are already met through other means

Satellite connectivity is delivered through a wide array of existing and emerging operating models

Operators may use multiple operating models within and across countries, with new models, variations and types of partnerships continuing to emerge. This table below illustrates how delivery differs across five such models:

	Wholesale backhaul / capacity	Wholesale and partner-delivered services	Integrated partnership D2D	Direct provision to niche consumer and enterprise segments	Independently retailed D2D
Space segment	● ■ Provided by satellite operator	● ■ Provided by satellite operator	● ■ Provided by satellite operator	● ■ Provided by satellite operator	● ■ Provided by satellite operator
Spectrum	● ■ Internationally coordinated satellite FSS/MSS	● ■ Internationally coordinated satellite FSS/MSS	○ □ May use satellite MSS or partner IMT spectrum	● ■ Satellite FSS/MSS for dedicated terminals	● ■ Satellite MSS or other authorised spectrum
Ground-based network	○ ■ Regional gateway; customer network	○ ■ Regional gateway; partner network	○ ■ Regional gateway; partner core	○ ■ Regional gateway; own core	○ ■ Regional gateway; own core
Customer relationship	■ Customer is or serves end-user	■ Retail partner serves customers	■ Terrestrial partner holds relationship	● ■ Satellite player holds relationship	● ■ Satellite player holds relationship
Scale of market activity	Depends on customer sites/networks served by capacity	Depends on retail partners' reach and take-up	Broad subscriber eligibility; limited satellite usage	Direct, take-up often in underserved areas or for niche use cases	Nascent, uncertain take-up, potentially broad reach

Key

- ● Significant involvement for satellite operators
- ○ Some / potential involvement for satellite operators
- ■ Significant involvement for partners
- □ Some / potential involvement for partners
- ■ No / limited involvement

Regulation should focus on outcomes rather than replicating terrestrial measures designed for other contexts, which may be unsuitable. Deployment-specific considerations should inform the need for, and shape of, measures such as:

- Telecoms-related licensing
- User terminal licensing
- Lawful access and localisation
- Cyber security
- Corporate entity requirements
- Sectoral fees and contributions
- Quality / consumer protection
- Emergency service provisions

National authorities should adhere to key principles and account for distinct satellite characteristics

National authorities should test proposed regulatory measures against key principles using a four-step process

1. **Necessity:** Do existing measures or technical alternatives already deliver desired outcomes?
2. **Possibility:** Are proposed measures technically feasible for operators in scope to comply with?
3. **Proportionality:** Does the regulatory burden fit the scale of an operator's market activity?
4. **Balance:** Would the measure introduce risks to market entry, coverage and service innovation?

Applying these principles effectively requires policymakers to have a sufficiently detailed understanding of:

The distinct characteristics of satellite networks and technology and their role in improving connectivity

The range of existing and emerging satellite operating models relevant to the jurisdiction

Source: Analysys Mason, *Regulating satellite connectivity across different operating models* (2026).
Analysys Mason engaged with selected GSOA members as part of the research informing this analysis.
All findings and conclusions reflect Analysys Mason's independent views.