Regulating satellite connectivity across different operating models

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 and capacity	Wholesale and partner-delivered services	Integrated partnership D2D	Direct provision to consumer and enterprise segments via satellite end-user terminals	Independently retailed D2D to globally connected terrestrial devices
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.