SCENARIO 2: PLATFORM POWER

Through the 2030s, undersea cable ownership gradually moved into the hands of only a few over-the-top (OTT) providers, which have now become cable operators. Control of this essential infrastructure shifted away from telecom carriers to a small group of companies in the private sector, the 'Cable Kings'. By the 2040s, decisions about establishing and maintaining international cable connections are driven primarily by private sector interests – a country's connection quality, access, and speeds are now determined almost completely by its commercial attractiveness to cable owners.

TURNING POINT

2037 – Influence of the "Cable Kings" exposed.

TECHNOLOGY BREAKTHROUGH

Cost-effective and sustainable satellite technology.

CONNECTIVITY PROFILE

- Excellent cable connections between commercially attractive jurisdictions – "hotspots".
- Privatised connectivity (big tech)
- Minimal regulation
- Rising inequality

Turning Point: Influence of the 'Cable Kings' Exposed

Through the 2020s, the integration of cloud computing and artificial intelligence rapidly increased consumer demand for higher bandwidth and faster connection. In the 2031 annual market reports, analysts were shocked to learn that four OTT service providers had consolidated ownership and now controlled more than 60% of the global cable market – traditional consortia models had been largely replaced by single company ownership. As legacy cables were retired, governments had become increasingly reliant on OTT providers (now cable operators) to build and maintain new cable infrastructure, giving them significant influence in international diplomacy. They became known informally as the 'Cable Kings'.

In 2037, two countries were vying for a significant cable bid to establish direct connectivity with multiple surrounding jurisdictions, essentially becoming a new data hub in the region. Surprisingly, the bid was won by the country that was a less favourable location for cable end points. Strict cabotage laws, or the law that a country's domestically owned vessels must carry out repairs and maintenance within their maritime zones, were widely blamed for losing the bid, as well as lack of readily available, affordable green energy. This undersea cable deal in 2037 exposed to the world how much power had shifted to the 'Cable Kings', who could favour countries that they viewed as having 'business-friendly' cable permit laws.

Several countries in the region were left behind in the cable network boom. They were forced to rely on foreign aid from economically advanced allies, who invested in advancing satellite technology to build it as a capability that was a competitive and viable alternative to undersea cable networks. The funding boost drove significant advancements in reusable rocket technology and mass production of micro-satellite components, which led to a more cost-effective launch and maintenance of low earth orbit (LEO) satellites. New companies began to invest in research and development of satellite technology in the 2020s, which increased significantly by the 2030s as countries wanted to supplement cables connectivity with satellite connectivity for greater coverage.

The World in 2045: Commercially Driven Network Growth

'I love being part of a satellite nation!

I can do all my schoolwork, play games, video chat with my friends from school really easily. It just sucks when I try to do metaverse meet-ups with my friends overseas who have that quantum cable connection. It's so slow at our end by comparison that they just get annoyed and hang up! But it's still pretty cool to be able to see all the satellites in the sky. At night, they look like giant stars, which makes for an amazing selfie background!'

School student, 15, in satellite network connected, geographically remote jurisdiction

In 2045, excellent high speed undersea cable network services are available to countries with strong markets, favourable regulatory environments, and ready access to low-cost renewable energy sources. Seventy percent of the global undersea cable infrastructure is owned by tech giants, resulting in 80% of new investments directed towards routes connecting strong economies across Asia and the United States. Across the region, operators concentrate their cable endpoints in a few countries – the United States, Indonesia, Singapore, and Australia – to reduce the cost of maintenance and energy requirements, turning them into central data hubs.

The rise of satellite networks to complement undersea cables and provide coverage in remote areas is seen as a worldwide success story. However, the digital connectivity gap continues to widen and worsen, as the 'Cable Kings' prioritise cable connectivity to commercially attractive countries while neglecting to build this infrastructure for other regions. This results in less commercially attractive countries to rely on satellites as their only way of connecting to data centres, which leads to slower connectivity speeds due to increased congestion and affect their ability to support advanced tech like smart cities and autonomous networked transport. The digital connectivity gap – lack of infrastructure to support increased demand on internet connectivity – is recognised by the United Nations as a major underlying cause of negative impacts on population health, education, and employment outcomes for people outside of core cable hotspots.

The increased reliance on cable infrastructure is leading to growing reluctance from governments of smaller economies to impose regulations on cable companies due to the fear of retaliation – such as their internet connections being deliberately slowed. Parties across the political spectrum in all countries are raising concerns about the erosion of state sovereignty and the shift in power to private companies.

Carbon emission targets are far more challenging to reach due to the energy requirements for the expected exponential growth of cable infrastructure. As such, some governments are incentivising innovation in satellite communications technology, related to the sustainability and carbon accounting of all network-related research, development, manufacturing, and operations, with sustainably produced batteries and energy sources, to reduce the amount of space debris and increase the longevity of the satellite.

'I just turned 18 and you would think I'd be excited about finally getting a right to vote.

It's true that I used to be excited about the possibility of having a say in who is elected to run our country. But what is the point in voting when it's not really governments who decide some of the most important stuff that controls how we live and talk to each other and how we access stuff we need like healthcare and transport and whatever. I wish I could cast my vote for one of the 'Cable Kings' instead. And, if I could, I'd vote for the 'Cable Kings' that are serious about finalising the full global transition to a decarbonised world economy. This is my future you are messing with.'

Frustrated teenager, 18, in a country dominated by the 'Cable Kings'