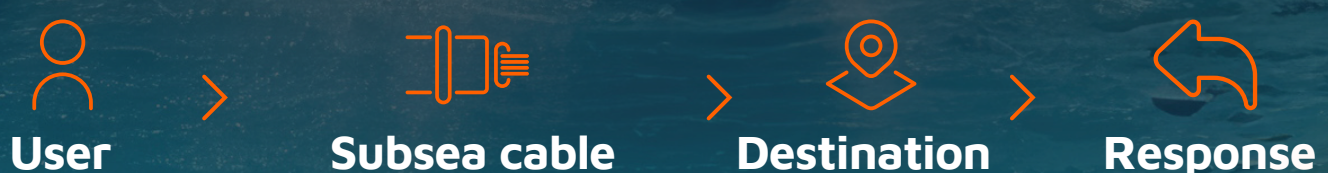


What is latency and why does it shape subsea connectivity?

When we talk about internet speed, what we are really talking about is time.

Invisible as it may seem, every digital request travels a physical distance that directly affects your organisation's experience, performance and competitiveness. That time has a name:

Latency: the time it takes a data packet to travel from a point of origin to its destination and back.



In subsea cables, information travels through fibre optics at close to 200,000 kilometres per second — roughly two thirds of the speed of light. Even under ideal conditions, every additional kilometre introduces an unavoidable minimum delay.

What determines latency in subsea networks?

Latency in subsea networks depends on physical and operational factors.



Distance

The greater the distance, the higher the latency.

1.000 km ≈ 5 ms

5.000 km ≈ 25 ms

10.000 km ≈ 50 ms

Latency is measured as a round trip (RTT), which doubles the base time.



Transmission medium

Data travels through fibre optics, which uses pulses of light to carry information.



Routes and hops

Every intermediate interconnection adds micro-delays. More transit points mean more processing.



Congestion

Heavy traffic can increase response times.



Physical architecture

Landing points and route design define the actual path the data follows.

Let's design your latency from the geography up

The location of subsea systems, route diversity and backbone design determine how long information really takes to arrive.

At Liberty Networks, we design infrastructure with a regional view, diverse routes and resilient architecture — because latency is not corrected after the fact. It is defined at the design stage.

Talk to our subsea infrastructure experts and discover what our 50,000+ km of regional fibre can do for your network's latency and resilience.