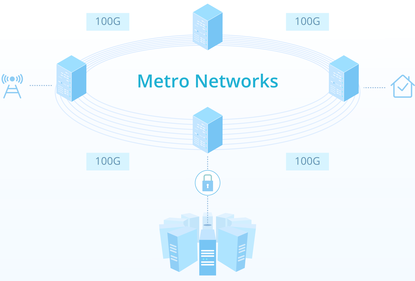
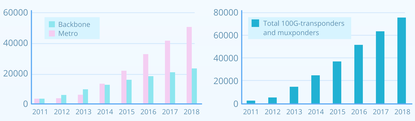
DEPLOYING 100G
IN METRO NETWORKS

Metro networks require a cost-effective way to expand capacity while reducing the cost per bit transported. 100G is the answer.



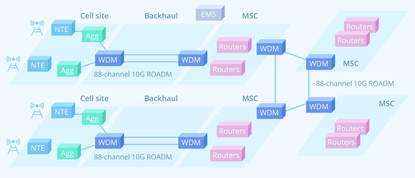
Growth in 100G Deployments



Surveys on network segments show that backbone deployment has taken the lead for 100G technologies. But 100G has seen a growing adoption in metro networks.

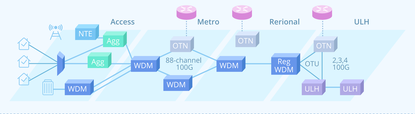
100G Metro Equipment Drivers

Mobile Backhaul



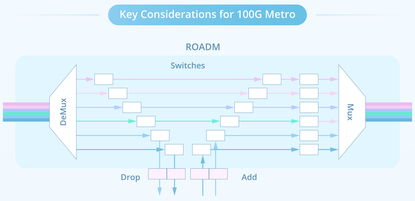
The growth of mobile devices and the introduction of LTE cell sites have influenced mobile backhaul requirements. Backhaul rates are migrating from 10G to 100G.

Network Architecture Changes

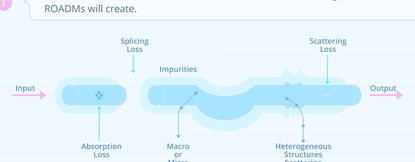


Network architecture keeps changing. Carrier Ethernet, IP virtual private network (VPN), and Optical Transport Network (OTN) capabilities have created new momentum to migrate from smaller separate networks to new unified optical backbones.

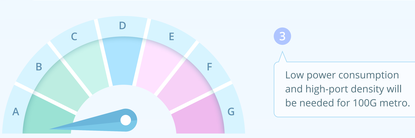
Key Considerations for 100G Metro



1. Metro networks have to handle the increase in loss that the large number of ROADMs will create.

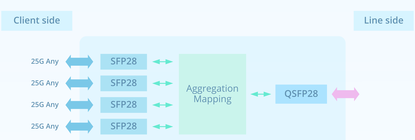


2. Older high-loss fiber may mean inconsistent transmission quality.

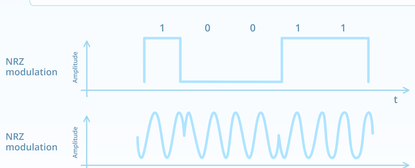


3. Low power consumption and high-port density will be needed for 100G metro.

4. 100G applications, among many other metro-centric use cases, demand low latency.



5. Client/line side universal slots and pluggability offer flexibility and therefore should be supported.



6. Standardized data-rate and modulation formats are required for interoperability.

Future of Metro Networks

As the emergence of new applicaitons is continually driving bandwidth demand, metro networks are moving towards 400G. Equipment manufacturers also strive to reduce cost, increase density, and drive metro rollout. But the scale deployment of 400G in metro networks still takes some time.