

14:55–15:35 | Panel: Inside the AI Infrastructure Boom – Building Highly Scalable, AI-Optimized Networks



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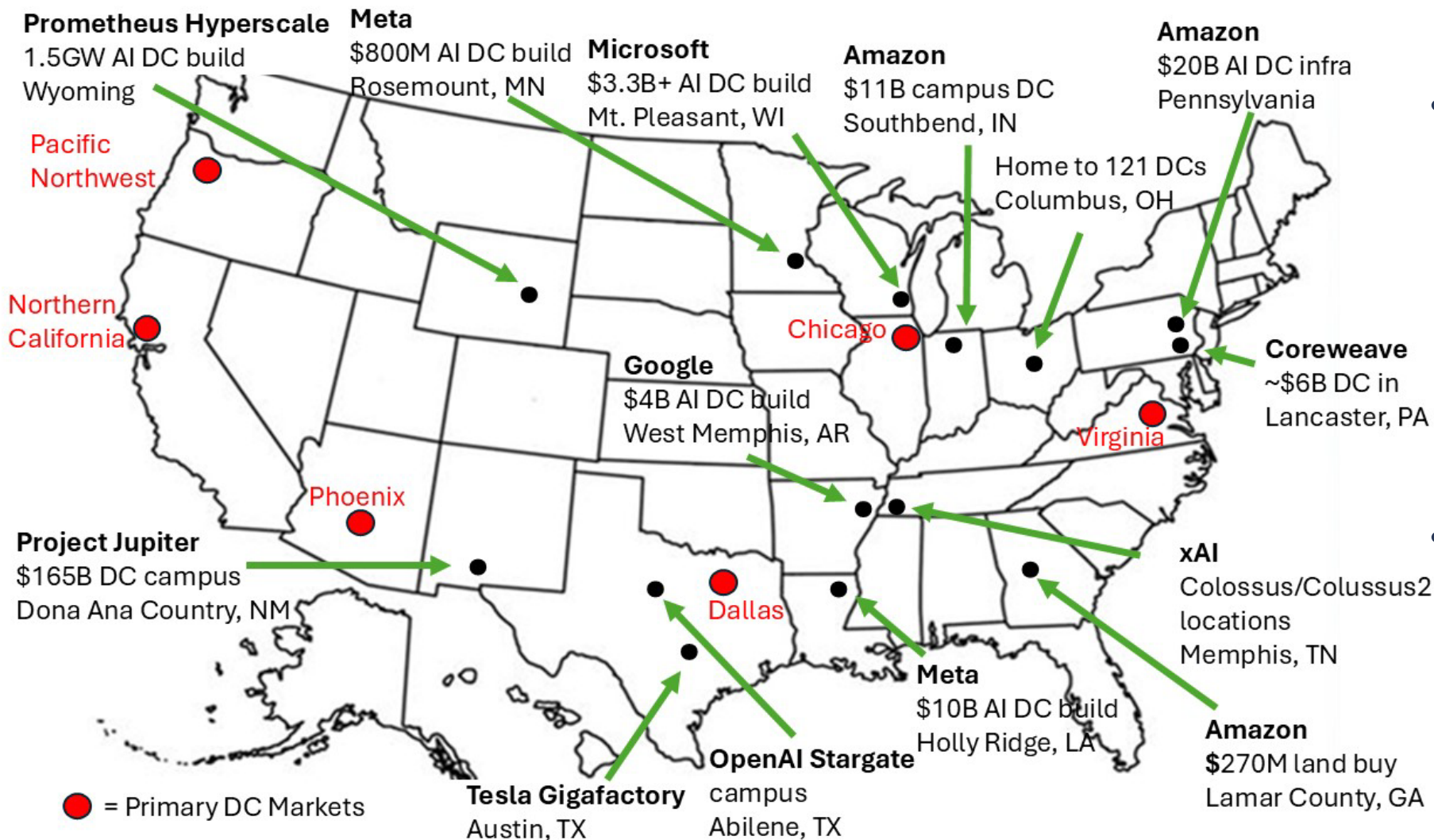


Inside the AI Infrastructure Boom – Building Highly Scalable, AI- Optimized Networks

Sterling Perrin | Senior Principal Analyst, Optical Networks & Transport



Energy Drives AI Data Center Decisions



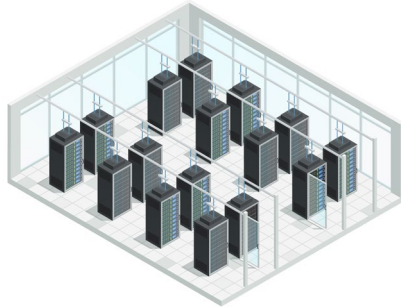
- GPU power consumption is primary factor in AI data center build decisions today:
 - Including locations outside tier 1 markets.
 - And distribution of facilities across multiple grids.
- AI WAN traffic will increasingly dictate CSP network architecture decisions.

Connecting to AI Data Center Infrastructure

AI DC connectivity

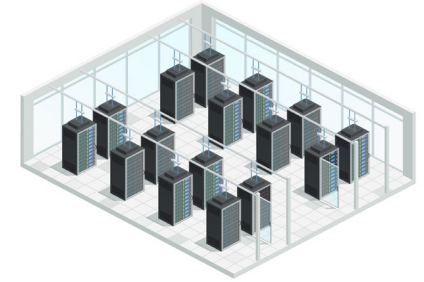
- Interconnecting hyperscaler/neocloud DCs
- Dark fibers, MOFNs, 400G+ waves

AI training DC

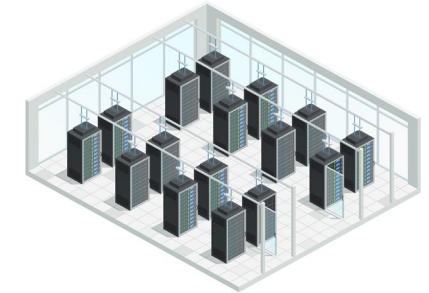


Campus/Metro/Regional/Long haul

AI training DC



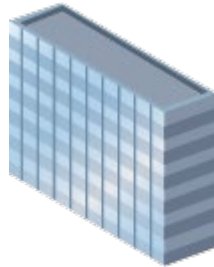
AI training DC



Enterprise AI model training

- Connecting enterprise data and cloud AI training platforms
- 400/800G waves

Enterprise “data lakes”

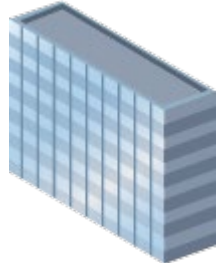


Metro/Regional/Long haul

Enterprise inference

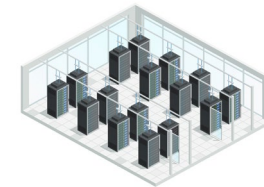
- AI model consumption with low latency needs
- 100G+ connectivity to edge inferencing DCs

Enterprise users



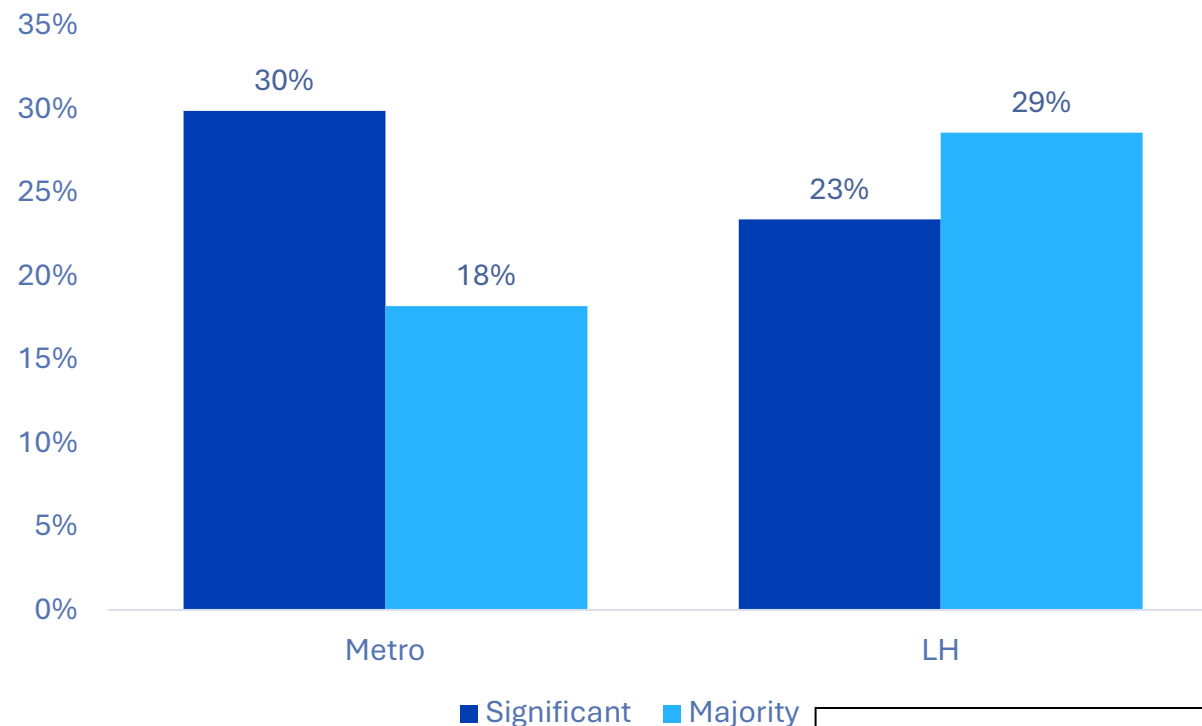
Access/Metro/Regional

Edge inferencing DC



Expected AI Share of Total Traffic Demand

Q: Over the next 3 years, what share of total traffic demand do you expect will be from AI in your metro and long-haul network?



n=77

Volume of Traffic:

- Significant = 31-50%
- Majority = >50%

CSPs expect significant traffic demand from AI in both metro and long-haul networks.

In Metro:

48% expect AI traffic to be at least significant share of volume.

18% expect AI to account for majority of all traffic.

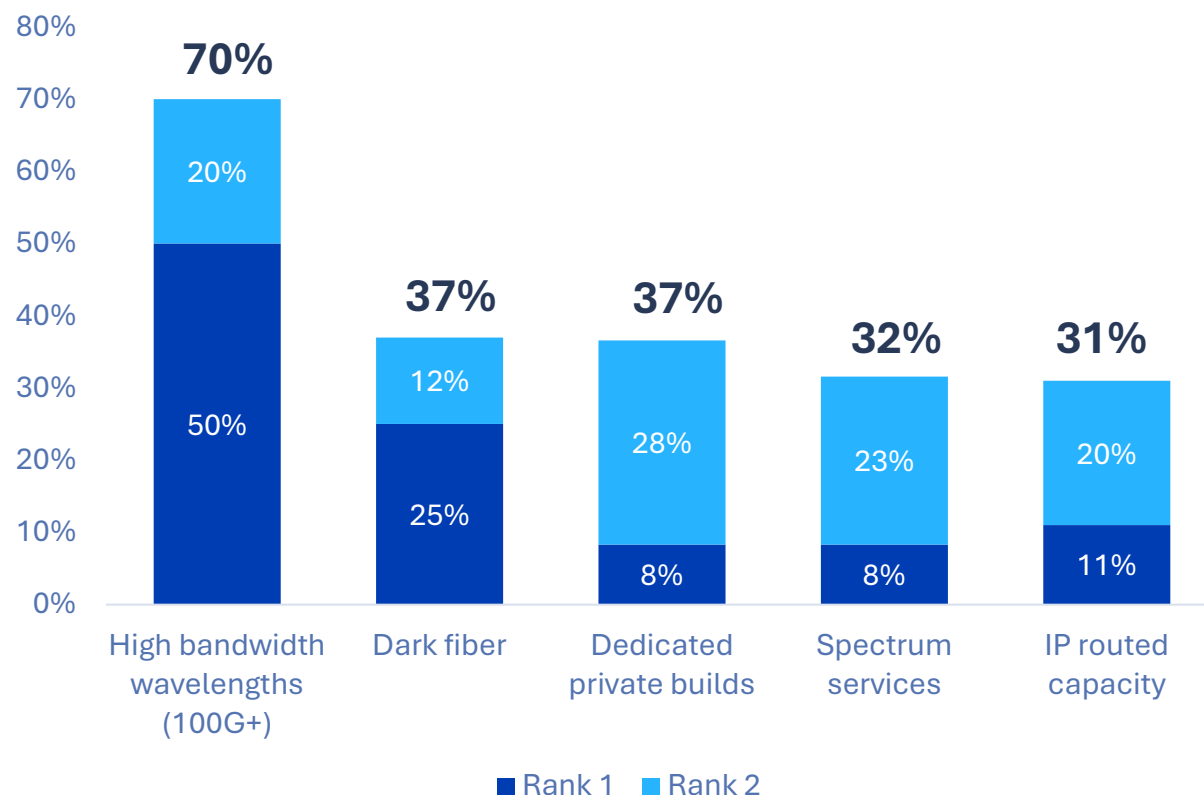
In long-haul:

52% expect AI traffic to be at least significant share of volume.

29% expect AI to account for majority of traffic.

Connectivity Services for the AI WAN

Q: Which connectivity services will experience the most growth from AI traffic over the next 3 years? (Top 2 Ranking)



n=77

While dark fiber will remain important, CSPs see growth in other connectivity services.

Expectations highest (by far) for wavelength services:

- Ranked No.1 or No. 2 by 70% of respondents.
- Ranked No. 1 by 50%.

Dedicated fiber builds also ranked highly (in addition to dark fiber).

Wavelengths and dedicated builds bode well for CSP revenue growth and profits.



Global NaaS Event

