

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



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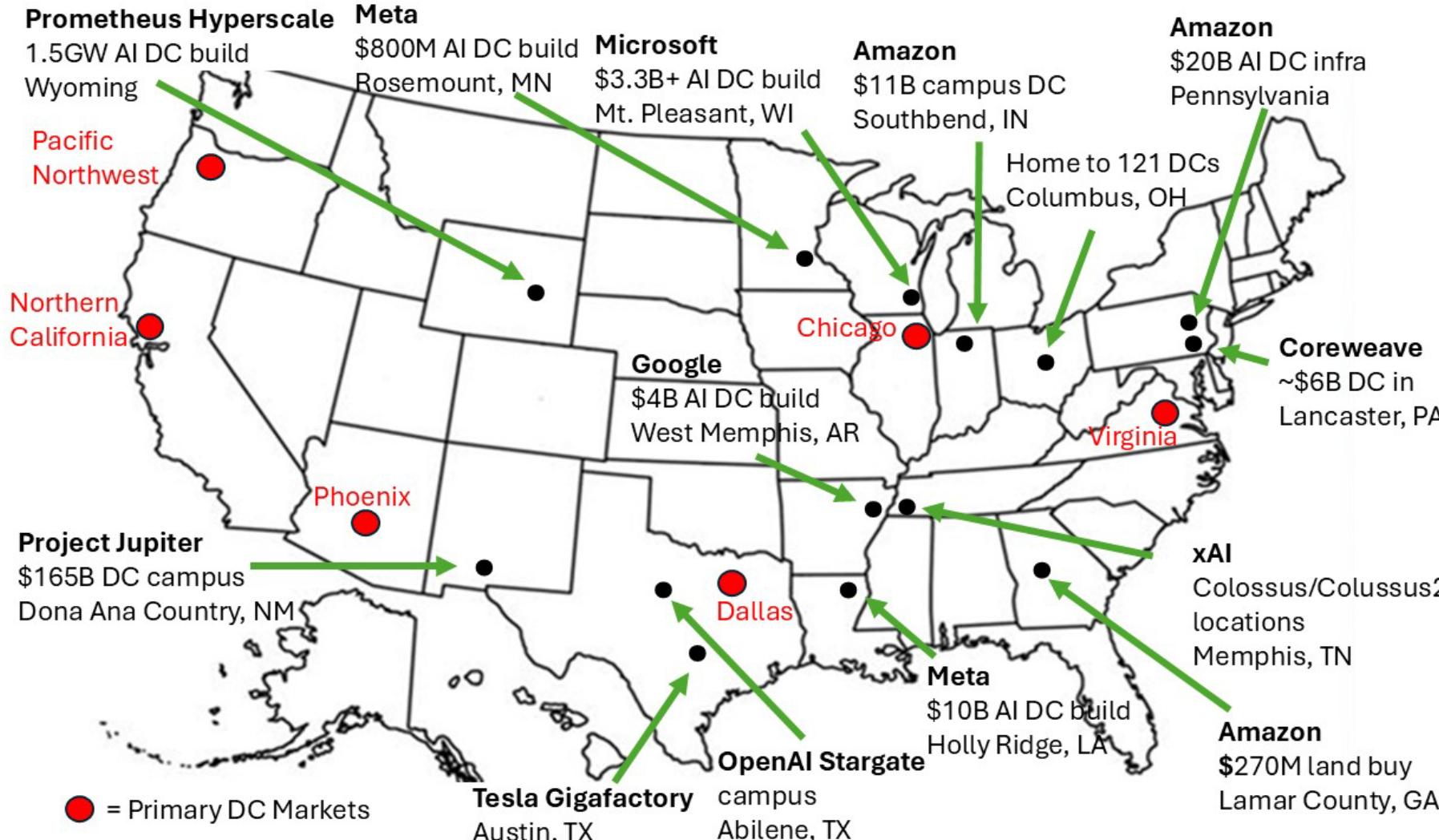


Inside the AI Infrastructure Boom – Building Highly Scalable, AI- Optimized Networks

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.

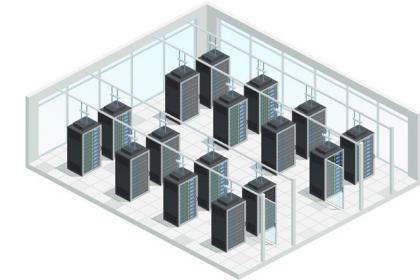
Connecting to AI Data Center Infrastructure

AI DC connectivity

- Interconnecting hyperscaler/neo cloud DCs
- Dark fibers, M0FNs, 400G+ waves



AI training DC

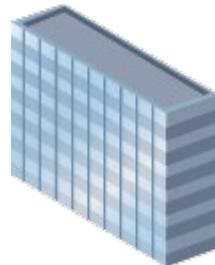


AI training DC

Enterprise AI model training

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

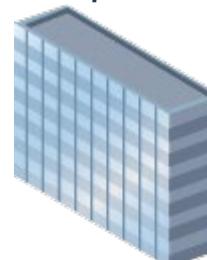
Enterprise “data lakes”



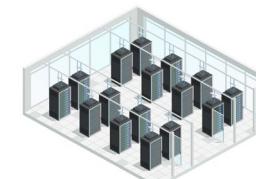
Enterprise inference

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

Enterprise users

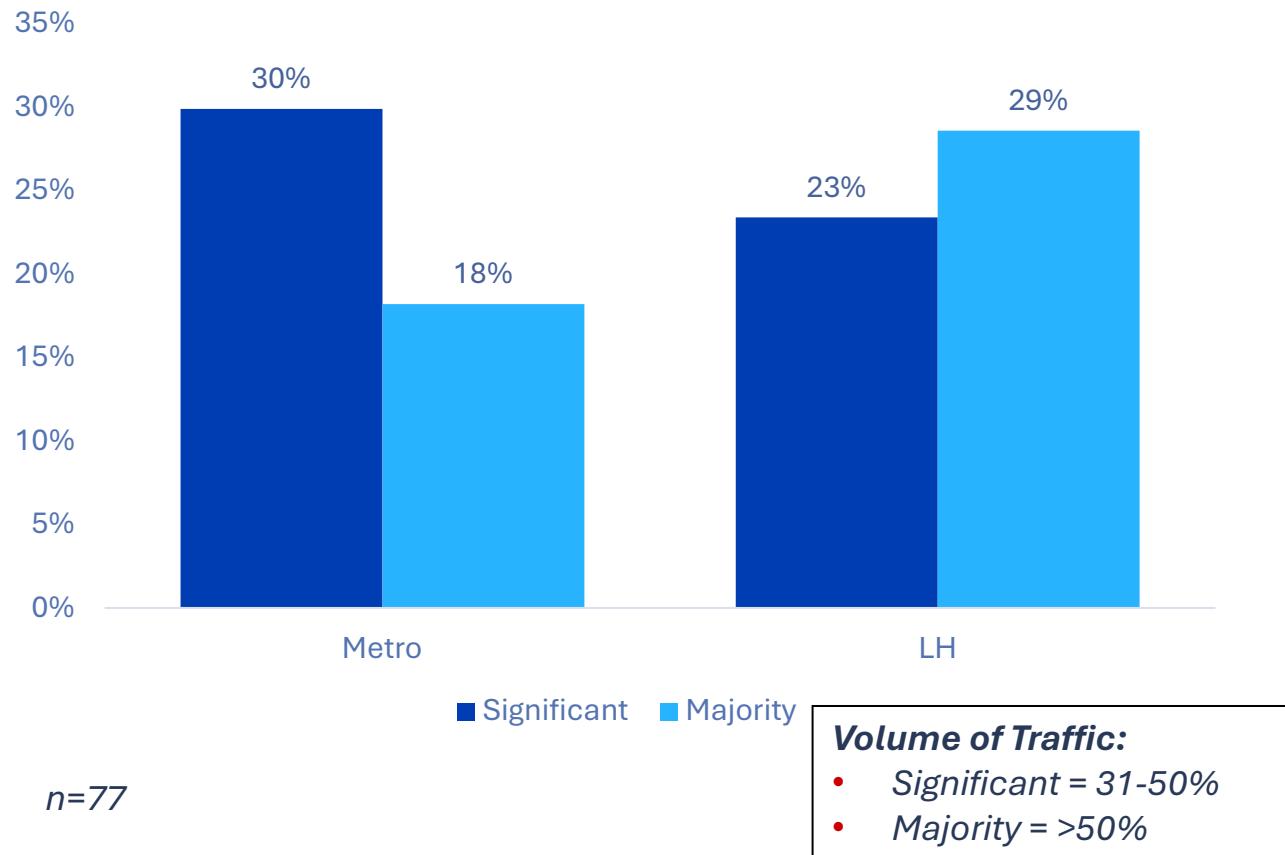


Edge inferencing DC



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?



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.

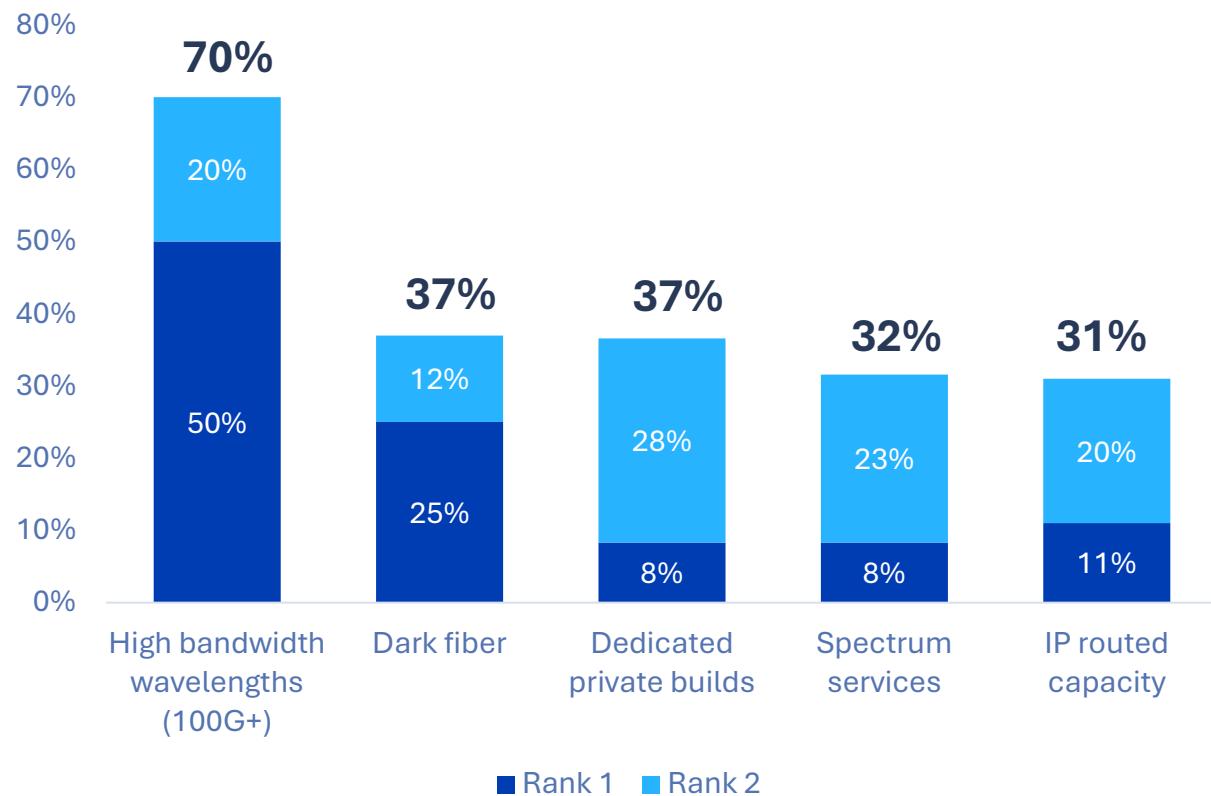
In long-haul:

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