

LUMEN[®]

The Trusted Network for AI

INDUSTRY & FINANCIAL ANALYST FORUM



Forward-Looking Statement

Today's presentations contain forward-looking statements, which are based on current expectations, assumptions, and projections about future events and business performance and include among other things, statements about our strategy, transformation initiatives, product development, market opportunities, financial outlook and operational plans. These statements are not guarantees of future performance and involve risks and uncertainties that could cause actual results to differ materially from those expressed or implied. We undertake no obligation to update these statements, except as required by law. Please refer to our most recent SEC filings for a discussion of the risk factors that could affect our business.

LUMEN[®]

A Blueprint for Transformation

Kate Johnson, Chief Executive Officer



The Trusted Network for AISM

Our Leadership Team

Kate Johnson

President &
Chief Executive Officer



Chris Stansbury

Executive Vice President
& Chief Financial Officer



Ashley Haynes-Gaspar

Executive Vice President
& Chief Revenue Officer



Dave Ward

EVP, Chief Technology
& Product Officer



Ana White

Executive Vice President
& Chief People Officer



Kye Prigg

Executive Vice President
of Enterprise Operations



Ryan Asdourian

EVP, Chief Marketing &
Strategy Officer



Mark Hacker

Executive Vice President
& Chief Legal Officer



Wes Gibson

Executive Vice President
of Mass Markets



The War on Technical Complexity

CIOs are expected to deliver insight at the speed of thought in a sea of technical complexity:

- **AI-driven data proliferation** is real
- **Apps, data, and users are widely dispersed** across geographies
- **Hybrid architectures and multi-cloud environments** are here to stay
- **Intermediaries** add cost without innovation

Lumen is Simplifying the Complex

Removing friction.

Collapsing layers.

Unlocking speed.

Embedding security.

Reducing cost.

Our Market Opportunity

Cloud spending
projected to increase
~2x by 2030 to

\$1.12T

By 2030, US data center site
expansions are expected to
grow nearly 70%, which is

~1,600

\$15B

Cloudify Telecom TAM (~5% CAGR),
part of larger \$80B enterprise
connectivity opportunity

~85%

of customers are expecting
AI to drive bandwidth and
cloud demand

Sources: Cloud spending and data center expansion projections based on multi-source data prepared by 4MC Partners for Lumen analysis. TAM data based on IDC TAM Reports 2024 and 2025. 85% customer data based on Gartner, What's New in Artificial Intelligence, 2023 Gartner Hype Cycle, August 2023.

We navigated significant challenges...



...and emerged with strategic clarity.

**Corning and Lumen
partner on next-
gen fiber for AI**

Q3 2024

**Record-breaking
1.2 Tbps Wavelength
Service**

Q1 2025

**Google Cloud Direct
Fiber Access
announcement**

Q2 2025

**Surpassed
1,000 NaaS
customers**

Q3 2025

**\$8.5B in PCF
deals with
hyperscalers**

Q4 2024

**Awarded one of
America's Most
Innovative Companies
by Fortune**

Q1 2025

**Announced
sale of
consumer
fiber to AT&T**

Q2 2025

Momentum

**Financial
Freedom**

**Enterprise
Focus**

**Innovation
Engine**

Our North Star

PURPOSE

Unleashing the world's **digital potential**

MISSION

Igniting business growth by connecting **people, data and apps** - **quickly, securely and effortlessly**

CUSTOMER SOLUTION AREAS



Infrastructure Services



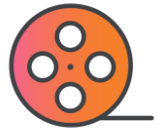
Connectivity Services



Security Services



Communication Services



Media and Entertainment Services

Connectivity Fabric

SUCCESS



Innovation that customers value



Delightful Experiences for employees, customers, and partners



Profitable **revenue growth**

CULTURE

We operate with **Teamwork, Trust, Transparency**

We infuse **Clarity, Customer Obsession, Courage, Growth Mindset, Respect** in everything we do

Our Long-Term Vision

Lumen is a **digital network services company** that delivers **ubiquitous, universal** connectivity to enterprises.

Our **high-bandwidth, low-latency, secure, resilient**, and **intelligent** fiber solutions are delivered digitally and **on-demand**, giving customers control over how they consume connectivity.

The Lumen Growth Strategy

1

Physical

Build the backbone for the AI economy

2

Digital

Cloudify and agentify the telecom industry with Lumen Connectivity Fabric

3

Ecosystem

Build the Lumen Connected Ecosystem

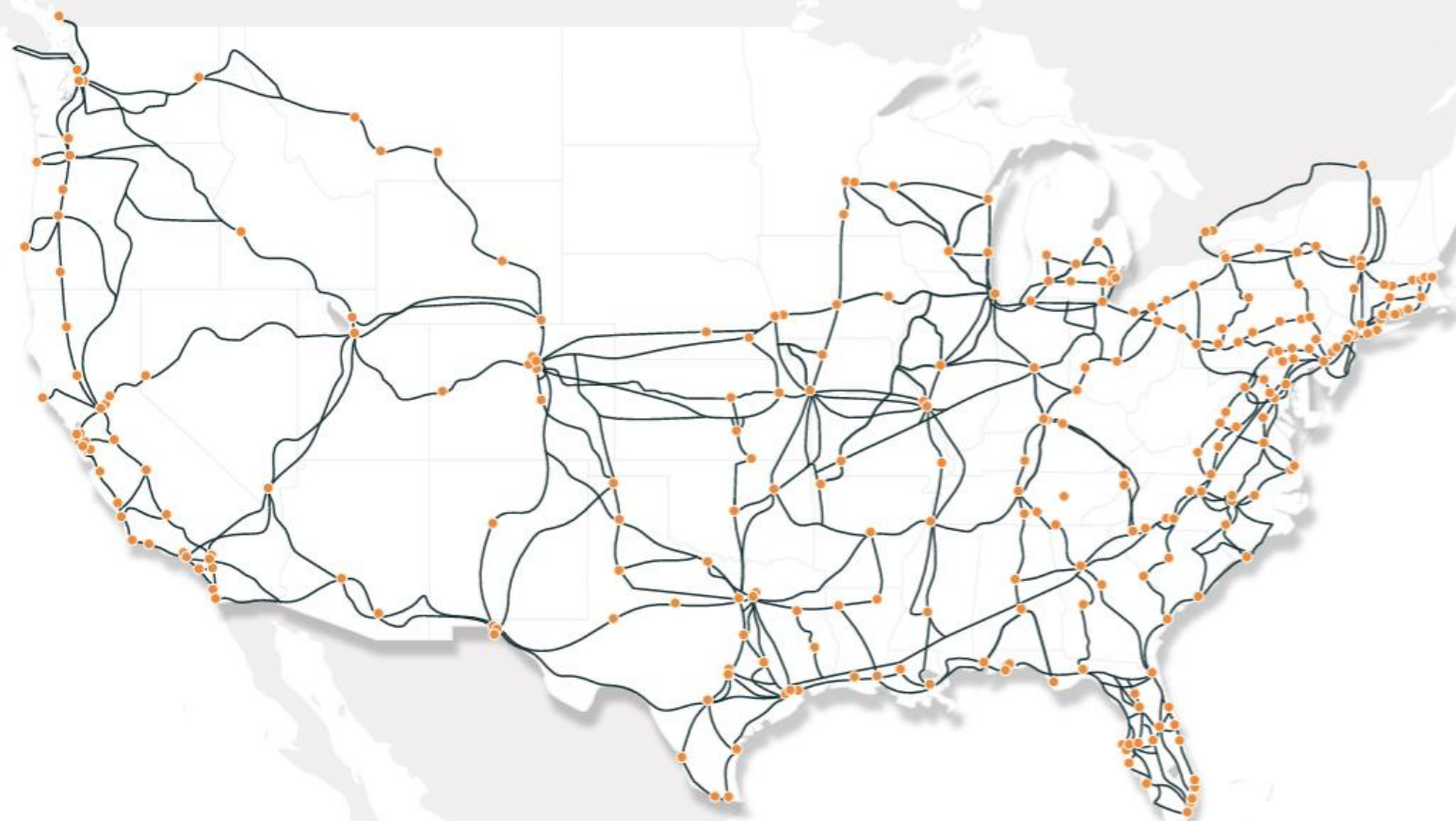
Business as Usual: Modernize & Simplify, Drive CNS growth, Secure the Base

Lumen 8: Teamwork, Trust, Transparency, Growth Mindset, Customer Obsession, Clarity, Courage, Respect

1

Physical: Lumen's Original Competitive Advantage

We own the network. We innovate the network. We are the network.



16.6M

Total projected intercity fiber miles by year end

5.9+ Pbps

Added total capacity to network to handle demands of AI and business

55 additional routes

Expanded conduit access across new routes, secures long-term rights to pathways

\$100M+ in upgrades allocated

To bring high-speed connectivity up to 400Gbps

Continued innovation

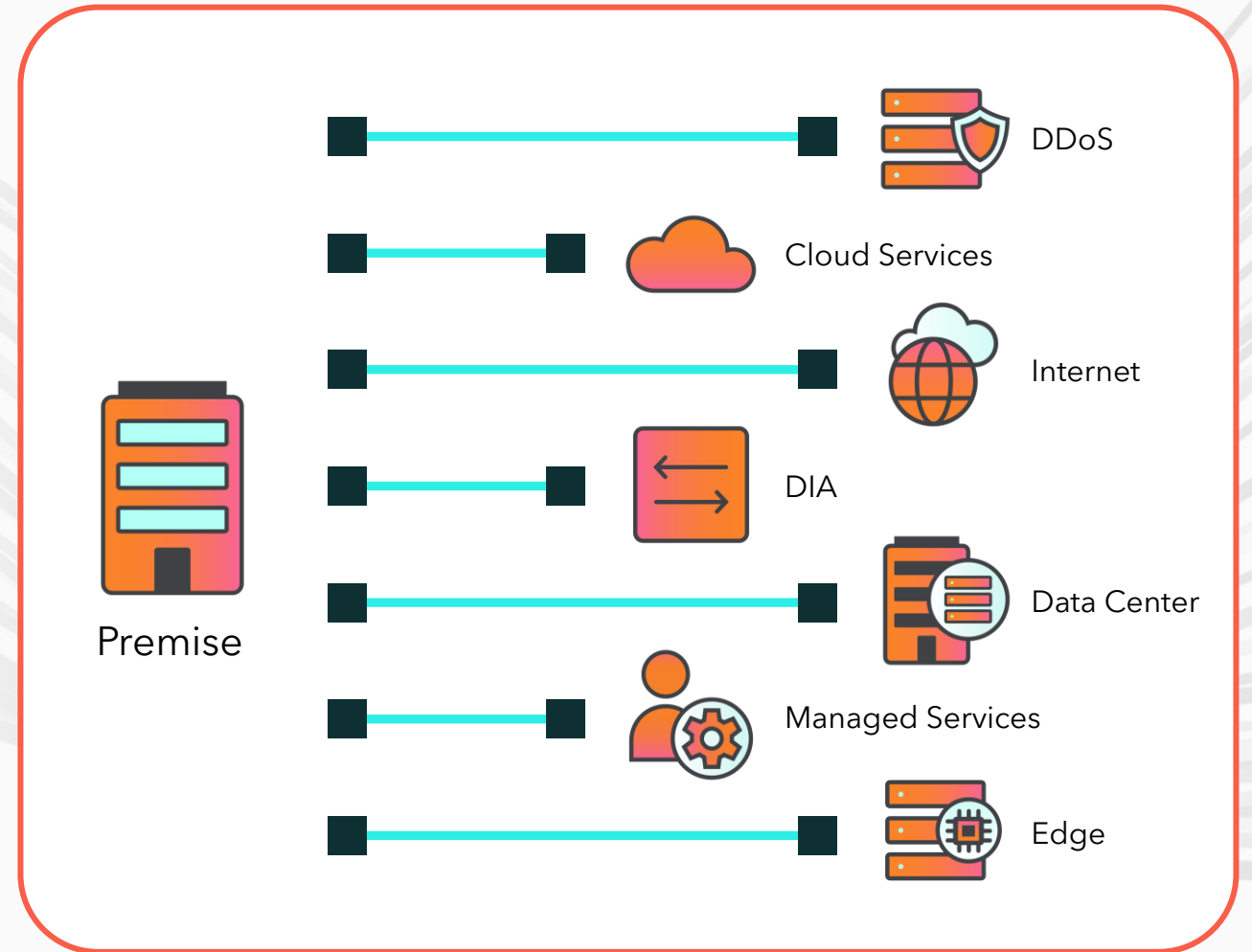
Multi-billion-dollar network expansion
34M+ intercity fiber miles planned to be laid

2 Digital: Frictionless Growth Potential

Legacy Telecom

Capital- and labor-intensive economics

- Static, point to point
- Analog CX, slow, and people-heavy
- Impeded growth often supporting 1 service per port
- Linear cost and revenue growth

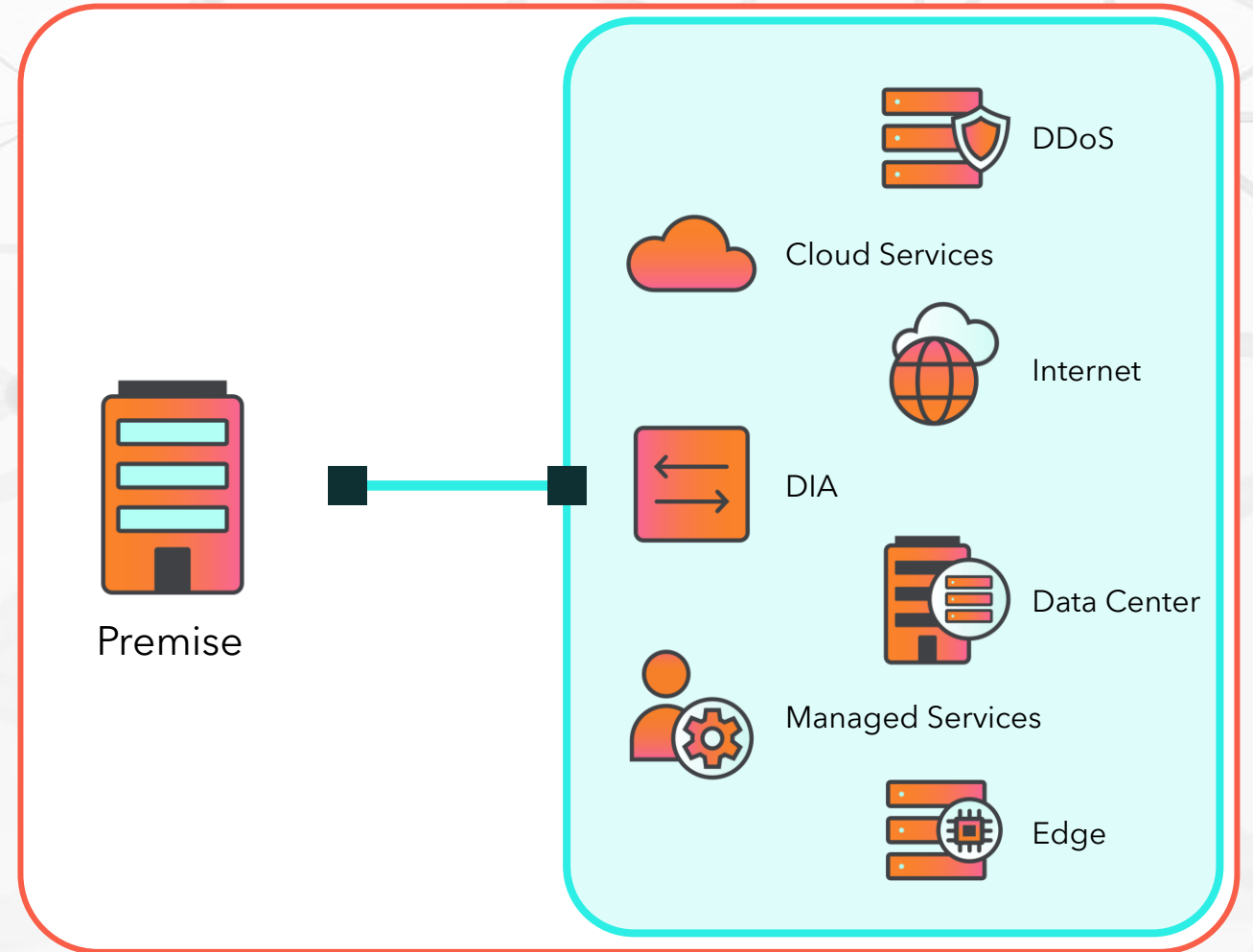


2 Digital: Frictionless Growth Potential

'Cloudified' Telecom

Key enablers

- Internet-on-Demand (IoD) Offnet
- Lumen Connect
- Project Berkeley



Some of Our 1,000+ NaaS Customers



3

Building Partnerships Across the Tech World

Leveraging our physical and digital assets to drive commercial scale

The LUMEN[®] Connected Ecosystem

Data Centers

Technology
Partnerships

Hyperscalers

Enterprise / Public
Sector Customers

Lumen Digital Platform

Quick, Secure, Effortless CX with direct fiber access & NaaS

Physical Network

Best backbone, unique routes, state of the art fiber

Lumen Technologies

is

Playing to
WIN

LUMEN[®]

The Trusted
Network
for AISM

2025 ANALYST FORUM



The Industry's Legacy: A Cautionary Tale

1

Late 1990s/early 2000s, billions of dollars deployed to build new fiber networks

2

Supply outstripped demand; the industry was plagued by lack of financial scalability

3

To recoup sunk costs, commoditization ensued, price per bit plummeted, innovation slowed

4

Networks remained inflexible and static, every service requiring its own infrastructure / investment layer

5

Industry revenue declined; margins fell

6

Despite consolidation, companies protected the old versus selling the new for fear of cannibalization

7

Even during times of higher demand, cash was harvested and innovation suffered

8

And the cycle repeated itself

- **Dividends got paid despite shrinking Free Cash Flow (FCF)**
- **Debt soared making innovation financially impossible**
- **This continues across the enterprise telecom competitive landscape today**
- **No better example of that than Lumen (until now)**

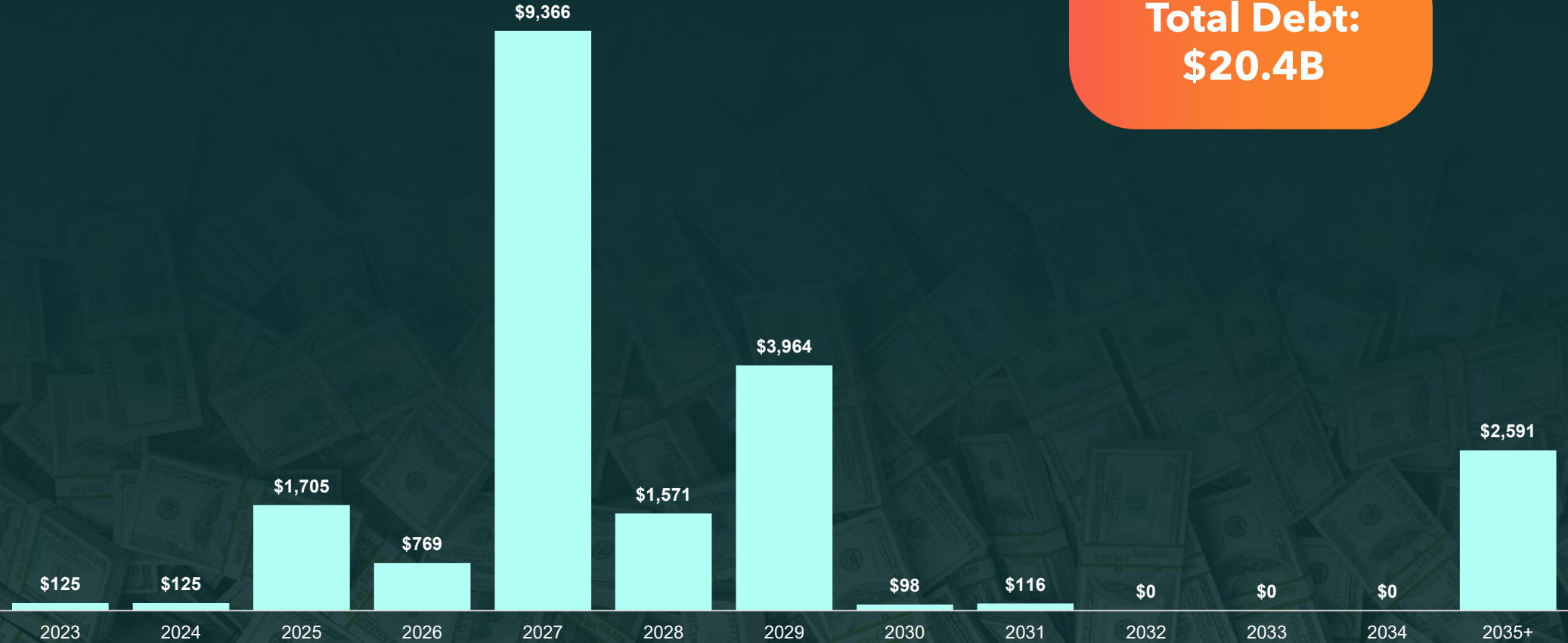
“You cannot overtake 15 cars in sunny weather...but you can when it's raining”

-Ayrton Senna

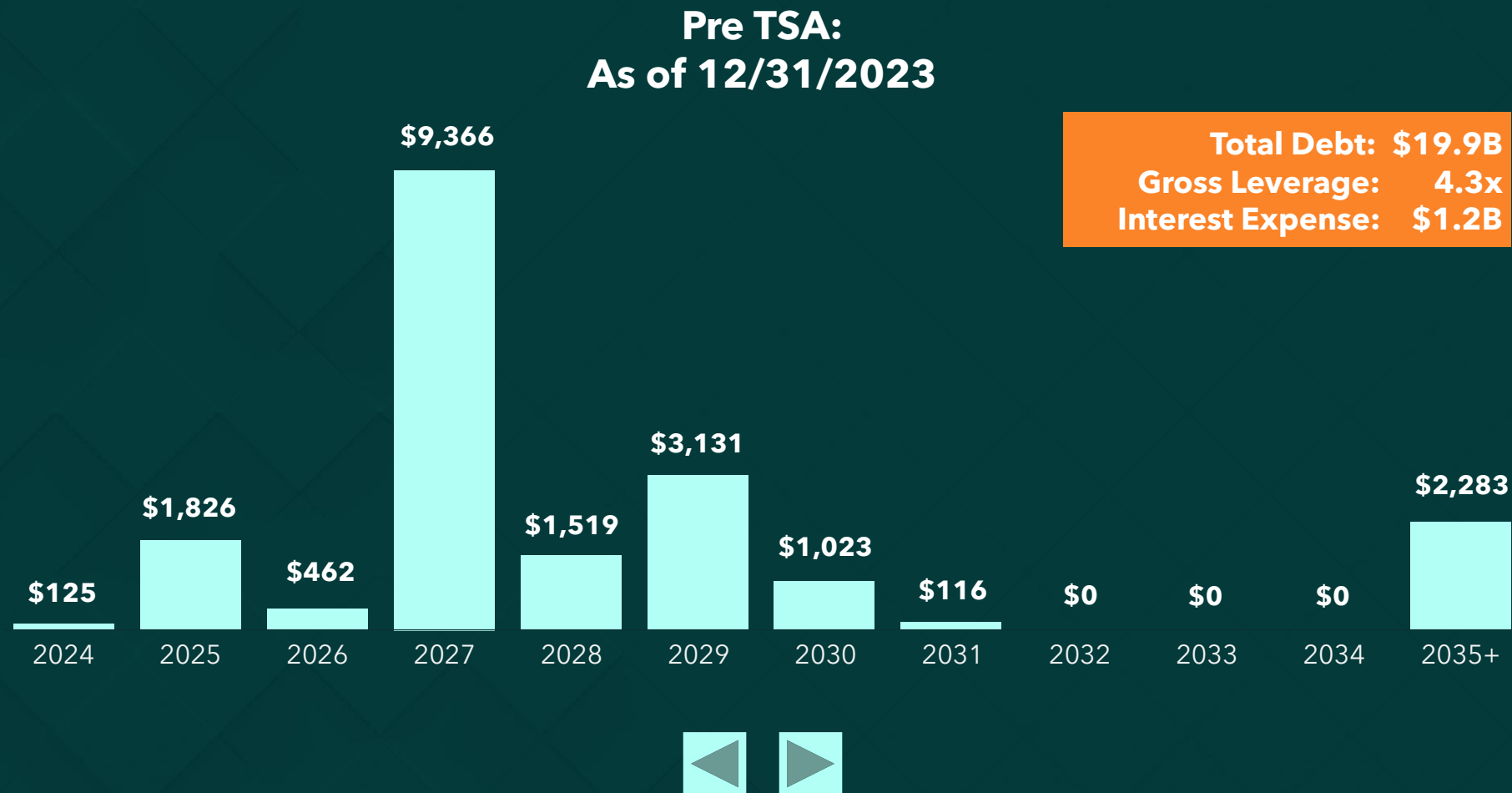
The Weight of the Past

As of 12/31/2022

Total Debt:
\$20.4B



Evolution of Lumen's Debt Maturity Profile (\$ in millions)

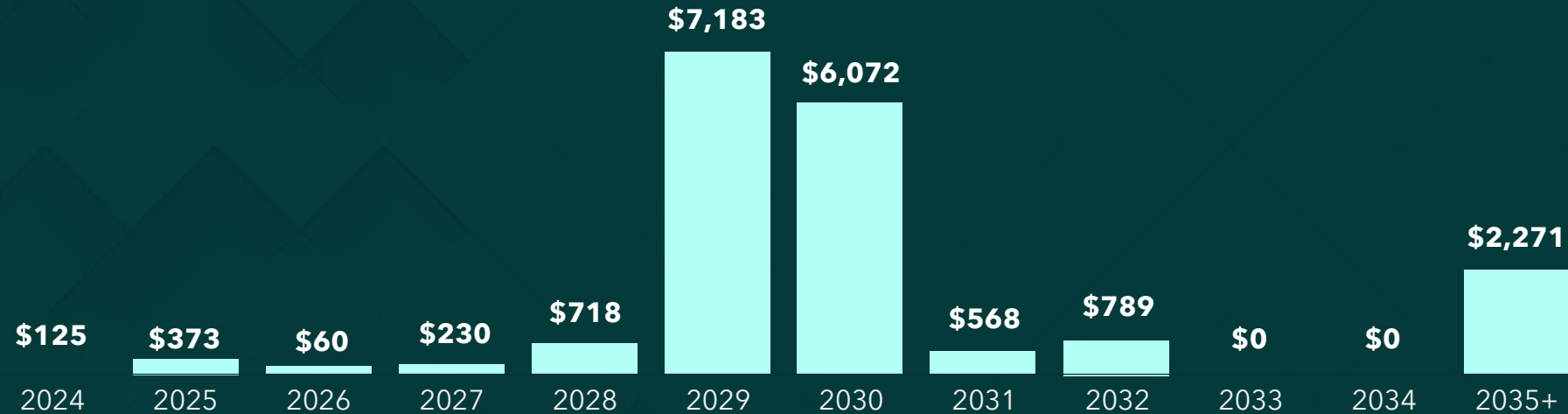


Note: Adjusted EBITDA excluding SI utilized for Leverage; includes only long-term funded debt
(1) Includes August LVL 7% 1L Issuance/September Add-on and associated paydown of LVL 11% & LVL 10.75%, and paydown of LVL 2L 10%
(2) Lumen SP paydown of \$4.8 billion following closing of announced sale of our Mass Markets FTTH business and associated reduction in aEBITDA.

Evolution of Lumen's Debt Maturity Profile (\$ in millions)

Post TSA:
As of 12/31/2024

Total Debt: \$18.3B
Gross Leverage: 4.6x
Interest Expense: \$1.4B

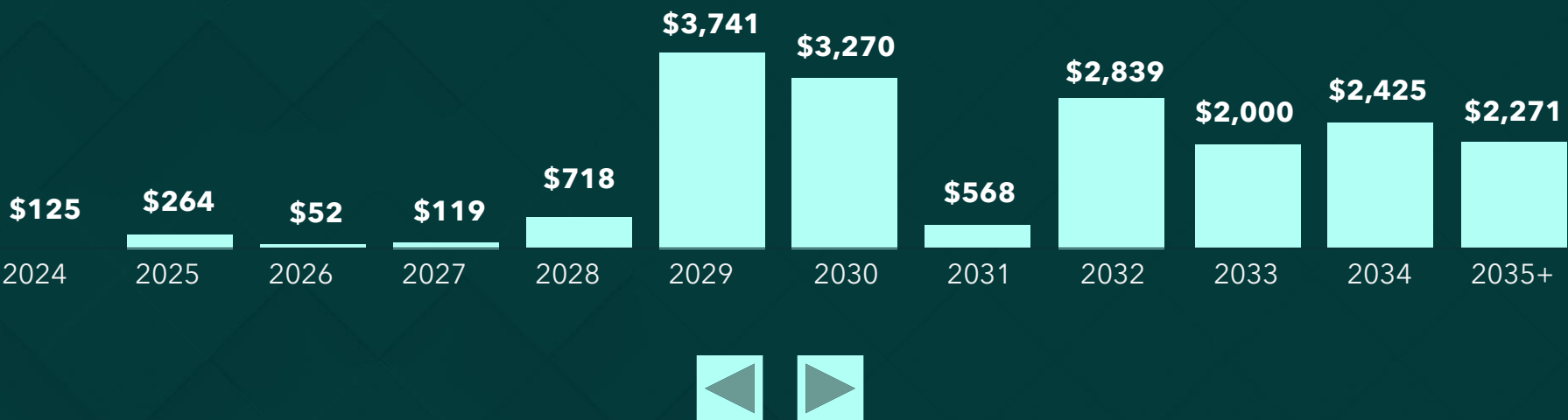


Note: Adjusted EBITDA excluding SI utilized for Leverage; includes only long-term funded debt
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(2) Lumen SP paydown of \$4.8 billion following closing of announced sale of our Mass Markets FTTH business and associated reduction in aEBITDA.

Evolution of Lumen's Debt Maturity Profile (\$ in millions)

Pro Forma Impact of LVLTL Refinancing⁽¹⁾: As of 6/30/2025

Total Debt: \$18.3B
Gross Leverage: 4.9x
Interest Expense: \$1.0B



Note: Adjusted EBITDA excluding SI utilized for Leverage; includes only long-term funded debt

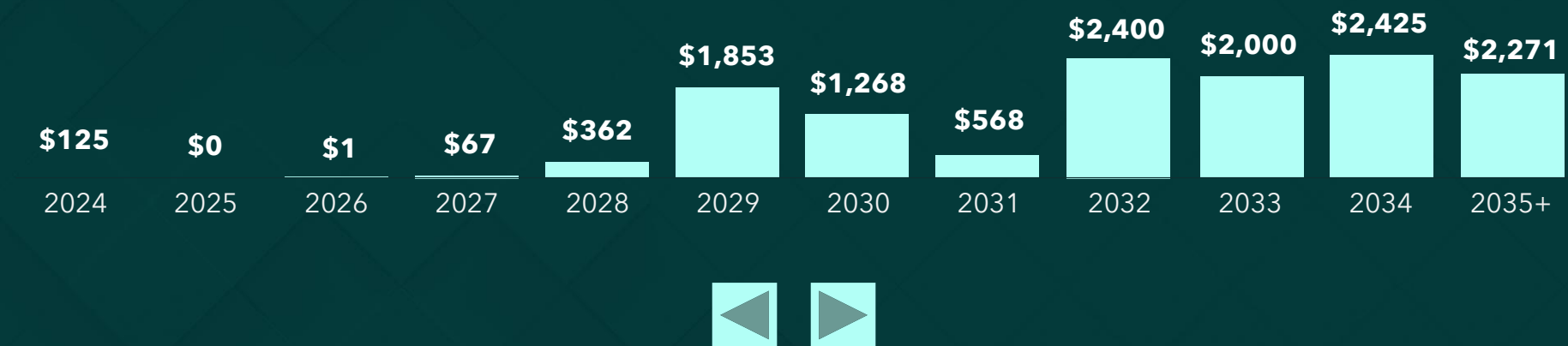
⁽¹⁾ Includes August LVLTL 7% 1L Issuance/September Add-on and associated paydown of LVLTL 11% & LVLTL 10.75%, and paydown of LVLTL 2L 10%

⁽²⁾ Lumen SP paydown of \$4.8 billion following closing of announced sale of our Mass Markets FTTH business and associated reduction in aEBITDA.

Evolution of Lumen's Debt Maturity Profile (\$ in millions)

Pro Forma Lumen SP Debt Paydown⁽¹⁾⁽²⁾: 2025YE

Total Debt: \$13.2B
Gross Leverage: 3.7x
Interest Expense: \$0.7B



Note: Adjusted EBITDA excluding SI utilized for Leverage; includes only long-term funded debt

⁽¹⁾ Includes August LVL 7% 1L Issuance/September Add-on and associated paydown of LVL 11% & LVL 10.75%, and paydown of LVL 2L 10%

⁽²⁾ Lumen SP paydown of \$4.8 billion following closing of announced sale of our Mass Markets FTTH business and associated reduction in aEBITDA.

Financial Freedom

**On path to return
Business Segment
Revenue growth in
'28**

**aEBITDA stabilizing
with inflection in '26**

**Capex investment to
deliver on growth**

Focused execution

Optionality

Breaking the Cycle

Growth

Our customers need higher speeds and the ability to connect to the cloud as fast, seamlessly, and securely as possible

Investment

We are focused on developing cloud on-ramps with hyperscalers, connections with Data Center Operators (DCOs), and customer migrations

Upgrades

We're already increasing speeds in our metro "Core" and creating optimized "express lanes" for Wavelengths

The Lumen Growth Strategy

1

Physical

Build the backbone for the AI economy

2

Digital

Cloudify and agentify the telecom industry with Lumen Connectivity Fabric

3

Ecosystem

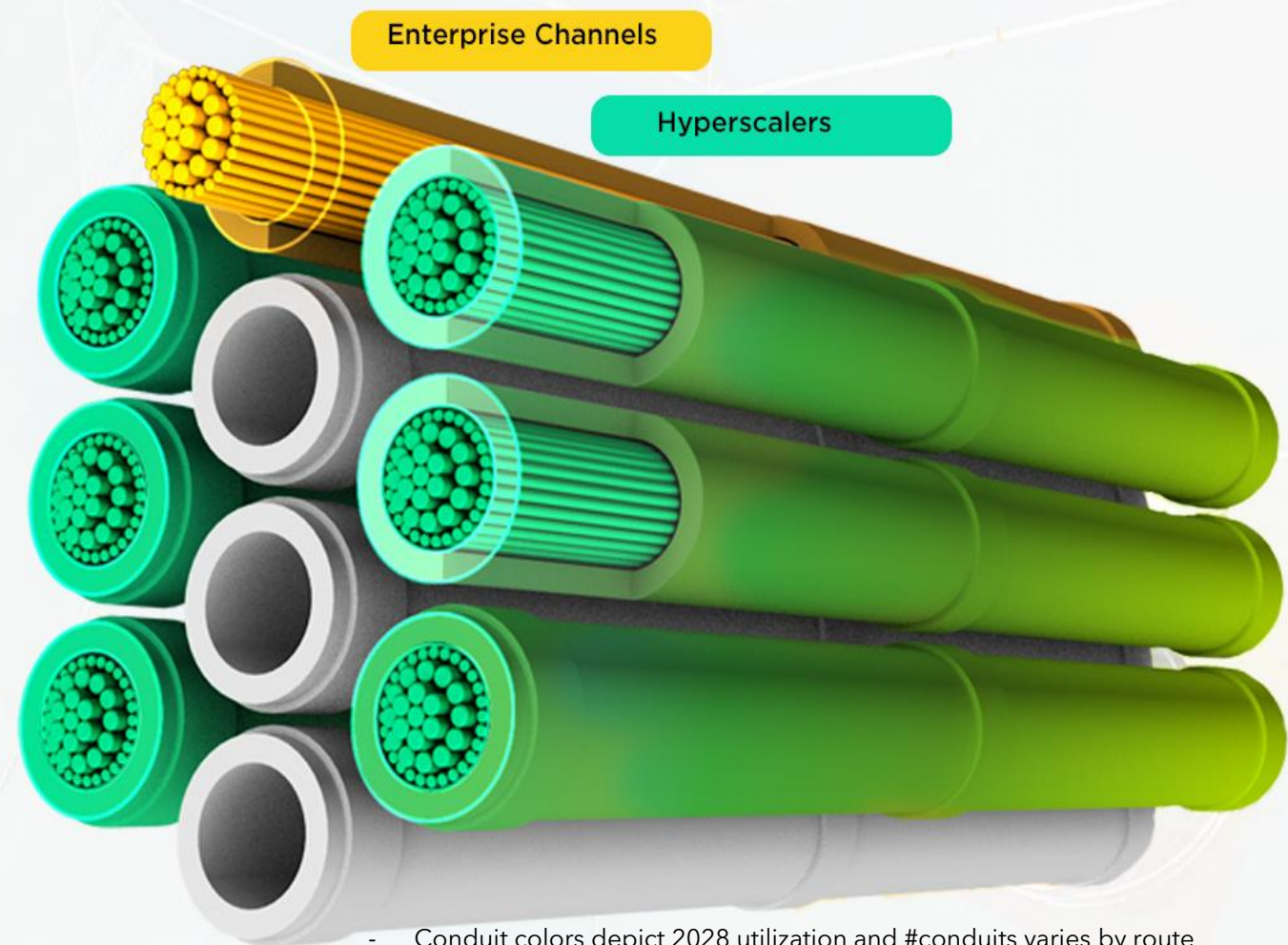
Build the Lumen Connected Ecosystem

Business as Usual: Modernize & Simplify, Drive CNS growth, Secure the Base

Lumen 8: Teamwork, Trust, Transparency, Growth Mindset, Customer Obsession, Clarity, Courage, Respect

Building the AI Backbone

Balancing Capacity and Utilization for Optimal Return on Investment



- Conduit colors depict 2028 utilization and #conduits varies by route
- Business rules in place to reserve capacity for all segments on each route

Stronger Overall Network Utilization			
Utilization (EOY)	2022 (Actuals)	2025 (Plan)	2028 (Vision)
Total Intercity Fiber Miles*	12M	17M	47M
Hyperscaler Utilization	30%	45%	57%
Enterprise Channels Utilization**	27%	19%	13%
Overall Network Utilization	↑ 57%	64%	70%
Available Capacity for Growth	↑ 5M	6M	14M

***Total Intercity Fiber Miles excludes ~22M expanding metro fiber miles today**
****Enterprise Channels include Commercial Enterprise, Public Sector, Wholesale, and Services**

Scaling Smart: Margin & Capex Evolution

The LUMEN[®] Connected Ecosystem

Data
Centers

Technology
Partnerships

Hyperscalers

Enterprise /
Public Sector
Customers

Lumen Digital Platform

Quick, Secure, Effortless CX with direct fiber access & NaaS

Physical Network

Best backbone, unique routes, state of the art fiber



Financial Evolution

Revenue



Margins



FCF



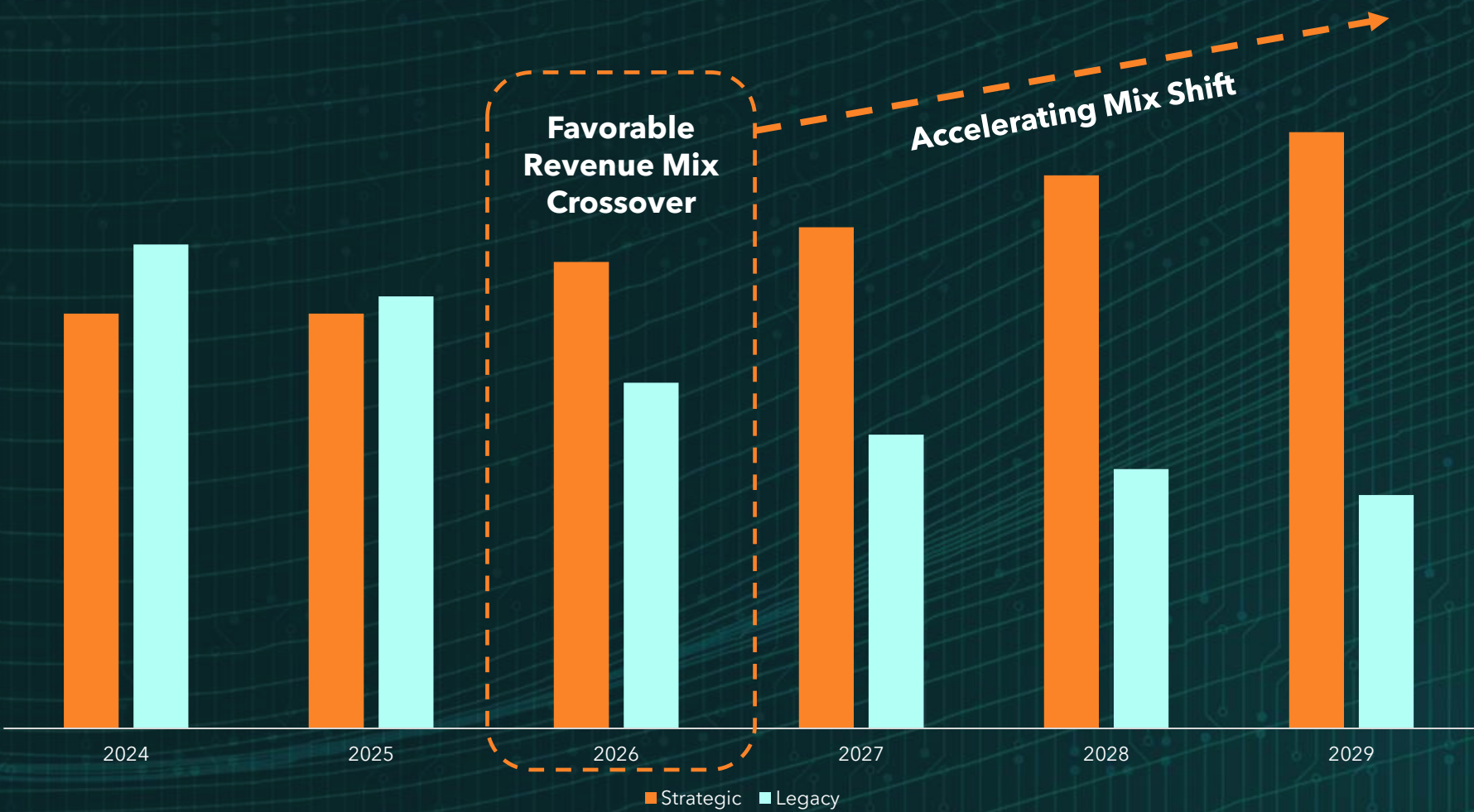
Capital
Intensity



Lumen Enterprise Revenue Transformation

Higher Growth Advanced Network Services Fuel Margin & Revenue Profile

Revenue | Strategic vs Legacy



>50% of Business Revenue From Strategic in 2026

Expected Positive aEBITDA Growth in 2026

On path to return Business Segment Revenue growth in 2028

Strategic Revenue Fuels Margin Expansion & Lower Capex Intensity

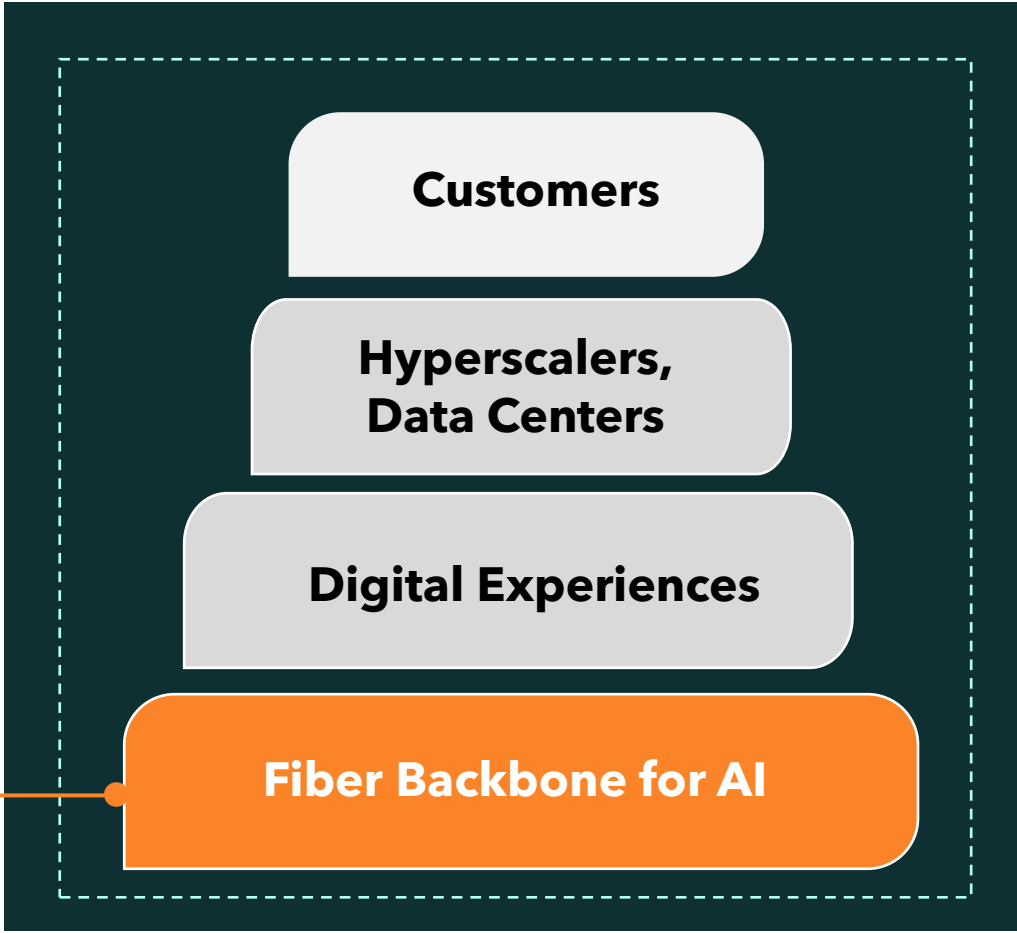
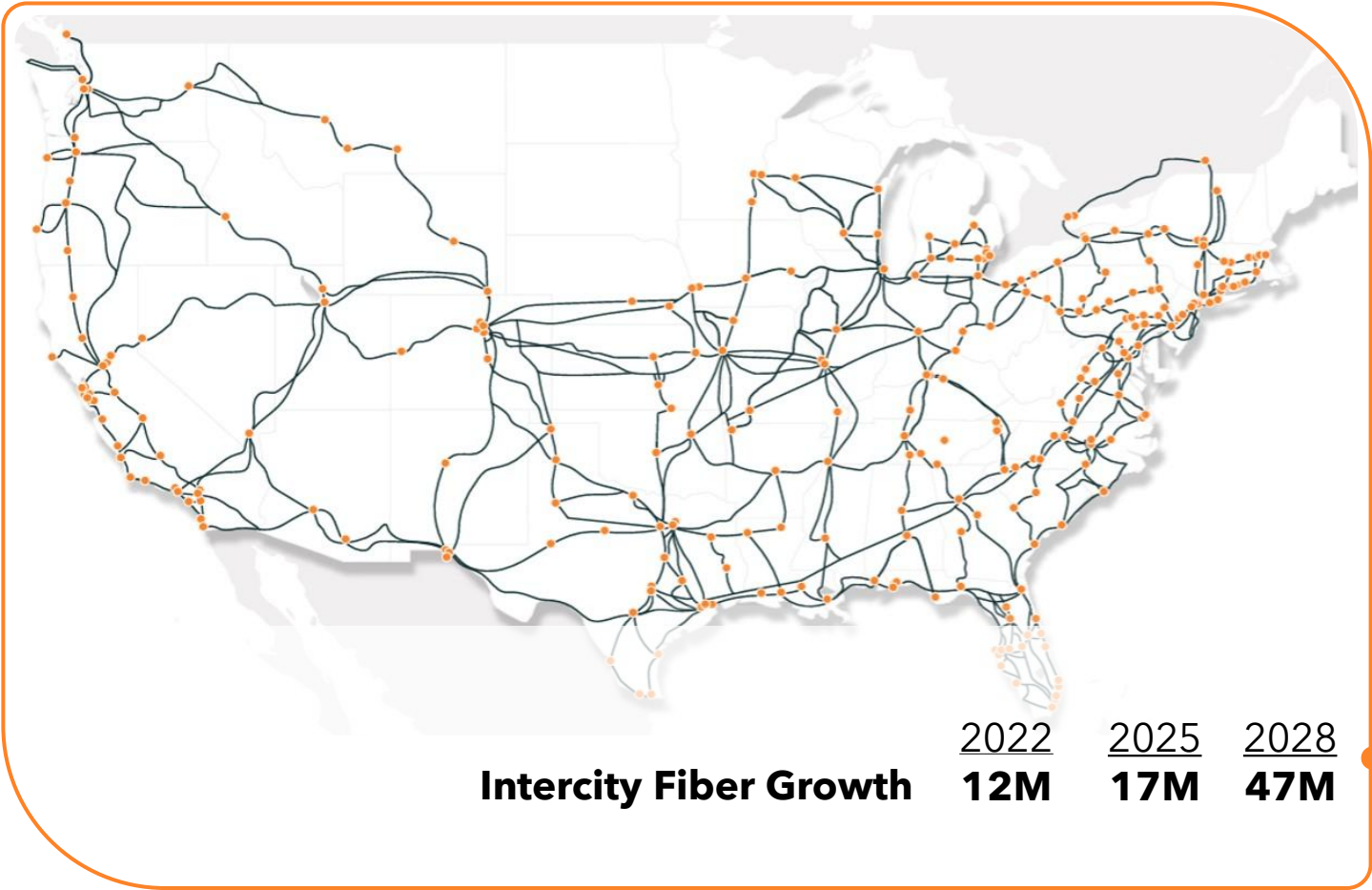
LUMEN[®]

Trailblazing the Future of Connectivity: Building the Backbone for the AI Economy

Kye Prigg, Executive Vice President of Enterprise Operations



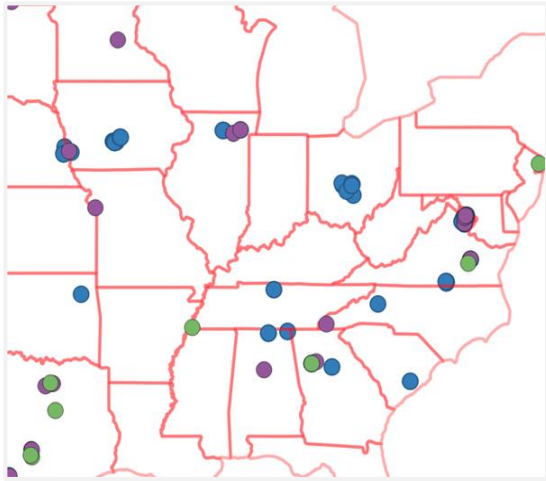
Laying the Foundation of Future-Ready Connectivity: Smarter Networks and Seamless Experiences



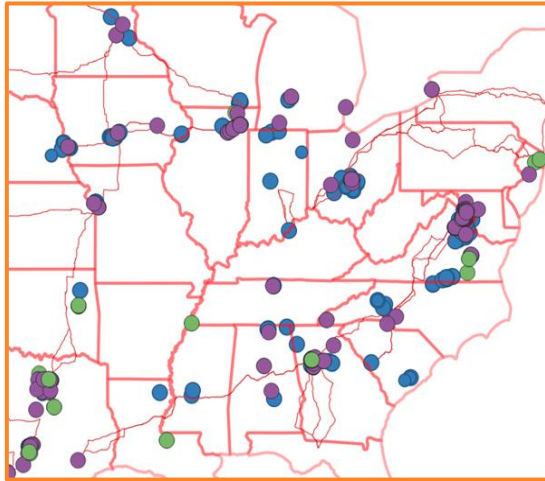
With ~\$9B PCF deals secured, Lumen is **The Trusted Network for AI**

AI Is Not Just Increasing Data Volume; It's Redistributing Where And How Infrastructure Must Be Built

TODAY



FUTURE



Further
Distribution

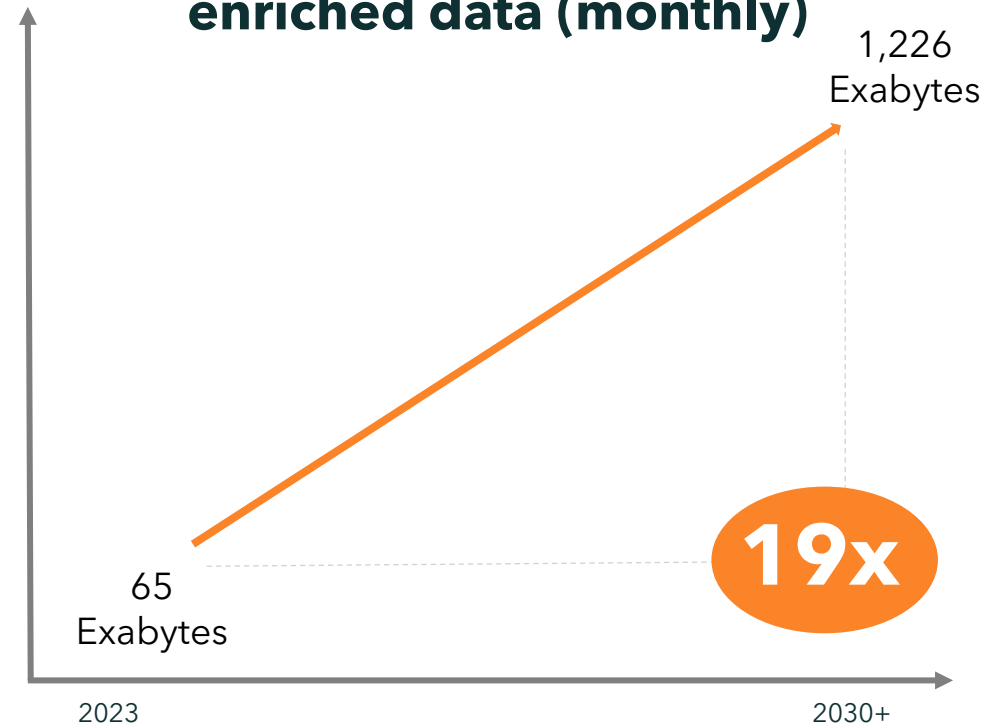


Further
Density



More Fiber
Connectivity

Global Network Traffic from AI
enriched data (monthly)



Source: Omdia Road to 2030: AI and the Future of Network Services - Traffic Outlook and Implications, 2024

Customers are seeking **secure, resilient networks** that can **connect** massive data sets and complex applications between data centers and clouds **quickly and effortlessly**.

LUMEN®

The Solution: Lumen® Private Connectivity FabricSM

A custom network architecture delivering high-performance network capacity for an AI-ready world and beyond.
AI requires data. Data requires data centers. Data centers require connectivity.



Co-location - Housing servers and other computing hardware in Lumen-owned or third-party data centers for enhanced security, infrastructure, scalability, cost efficiency and support.



Conduit - Provide the physical infrastructure that houses and protects fiber optic cables, to help ensure secure and reliable connectivity.



Managed & Professional Services - Deliver expert-led solutions that simplify complexity, reduce risk, and drive outcomes. Services such as, Operations & Maintenance services, Managed Optical Fiber Networks (MOFN), Technician as a Service, and Advanced Activations.



Dark Fiber - Allows our customers to stay ahead of bandwidth demands by providing connectivity and network ownership without building the network themselves.



Security Protecting data, people, and business processes at every layer

Building the Foundation of the AI Infrastructure

Dedicated Organization

Purpose-built team driving fiber deployment, vendor coordination, & execution

Process & Tools Transformation

Streamlined planning, tools, and execution frameworks for scale and speed

Enhanced Vendor Ecosystem

Strategic partnerships enabling rapid deployment, innovation & geographic reach

Next-Gen Fiber Infrastructure

Delivering high-capacity, low-latency fiber infrastructure to power AI workloads & future-ready networks

Outpacing the Industry: Faster, Smarter and AI Ready

Lumen's Leadership, Speed, and Future-Proof Infrastructure Are Driving Long-Term Value Creation

Team Established Record Time

Established **a fully operational organization within nine months**, onboarding 200+ top-tier professionals, 65% new to Lumen

Massive Deployment Underway

Nearly 3K fiber miles complete across 26 routes, **laying the foundation for future - proof infrastructure**

Market Leadership

With \$9B+ in PCF deals signed and strategic wins with hyperscalers like Google, Meta, and AWS, **Lumen is setting the pace for next-gen connectivity**

Next-Gen AI Enablement

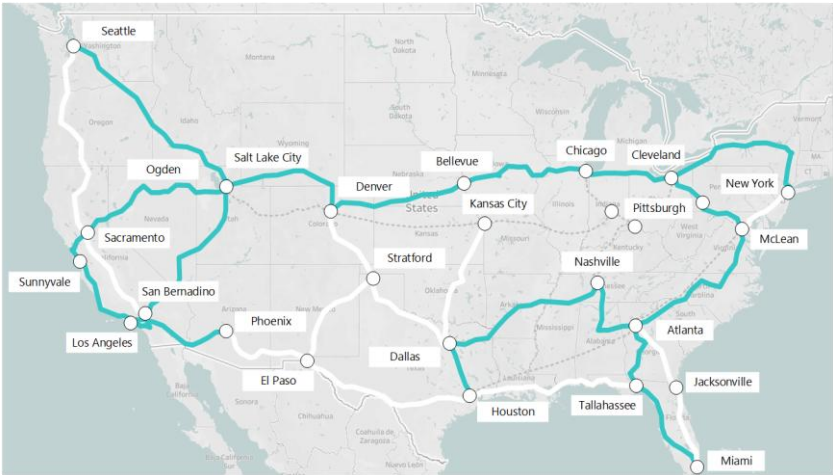
Agentic Operations and Self-Healing Networks enable Lumen's AI-ready infrastructure to **autonomously adapt, act, and resolve issues** with minimal oversight

Lighting it Up Faster: Investing in Fast-Tracking Route Builds and Data Center Expansion Through Advanced Wave Innovation



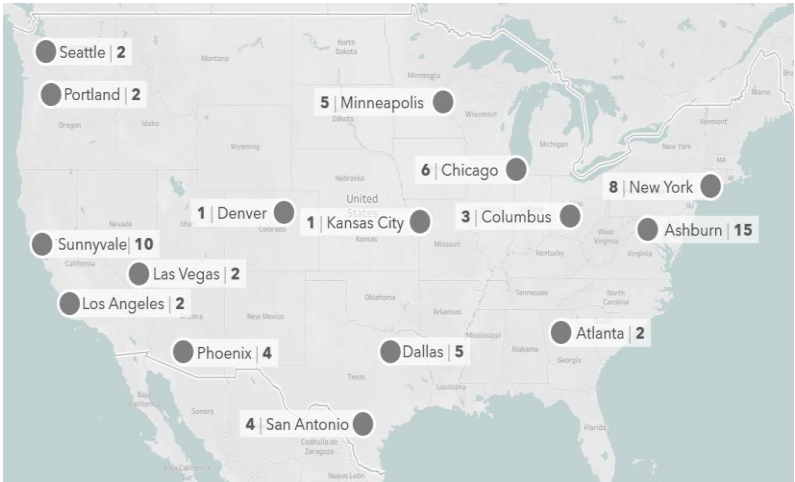
RapidRoutes

Expanding 400G capacity on key growth routes to reduce service delivery activation lead time.



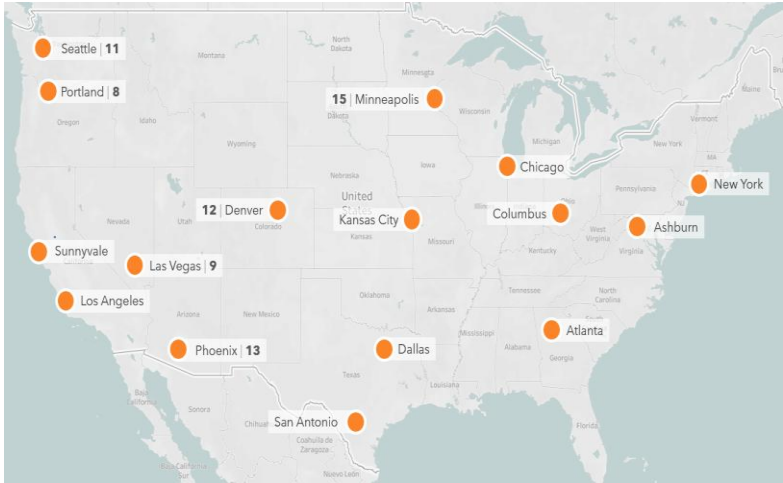
Data Center Expansion

Enabling up to 400G Ethernet-IP services and cloud on-ramp services at key data centers.



Metro Expansion

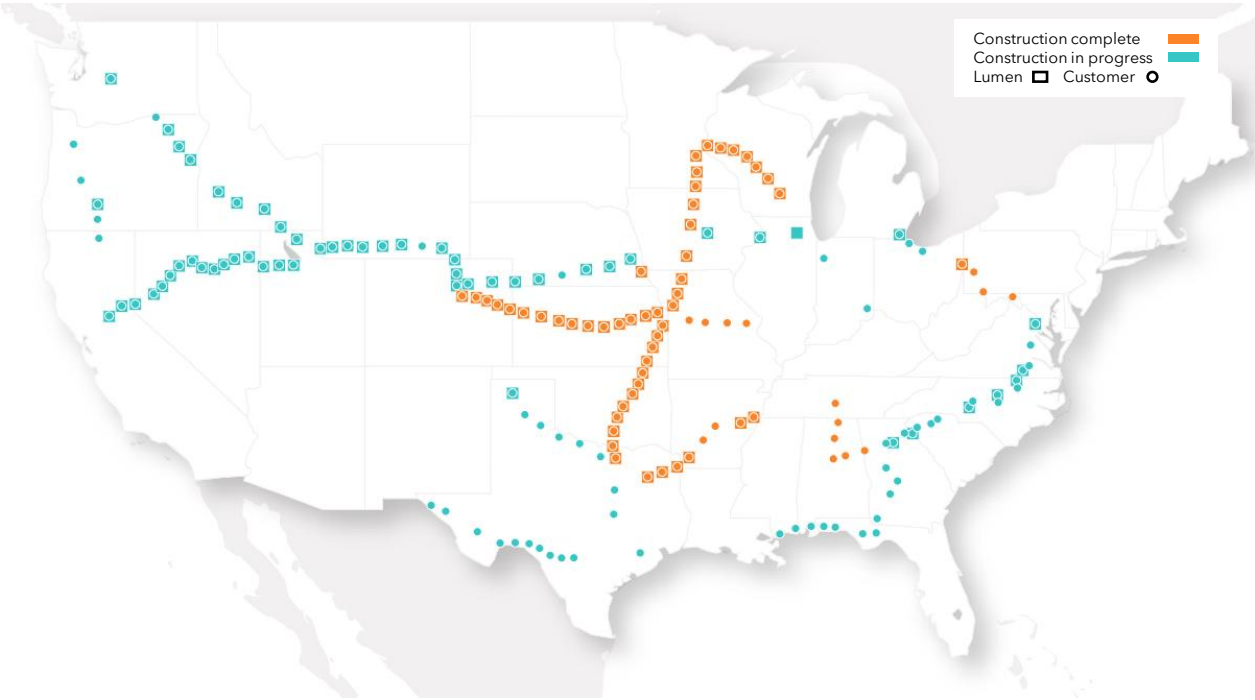
Enabling high speed Ethernet services in key metro markets and reducing Ethernet service delivery cost.



Execution Engine: Ahead of Pace to Deploy PCF Nationwide

Shelter Deployment

Scope: 553 Shelters



Today

144 Shelters Complete | **145** Shelters in Construction

Network Overpull

Scope: 73 Routes / 23K Miles (27K Fiber Miles)



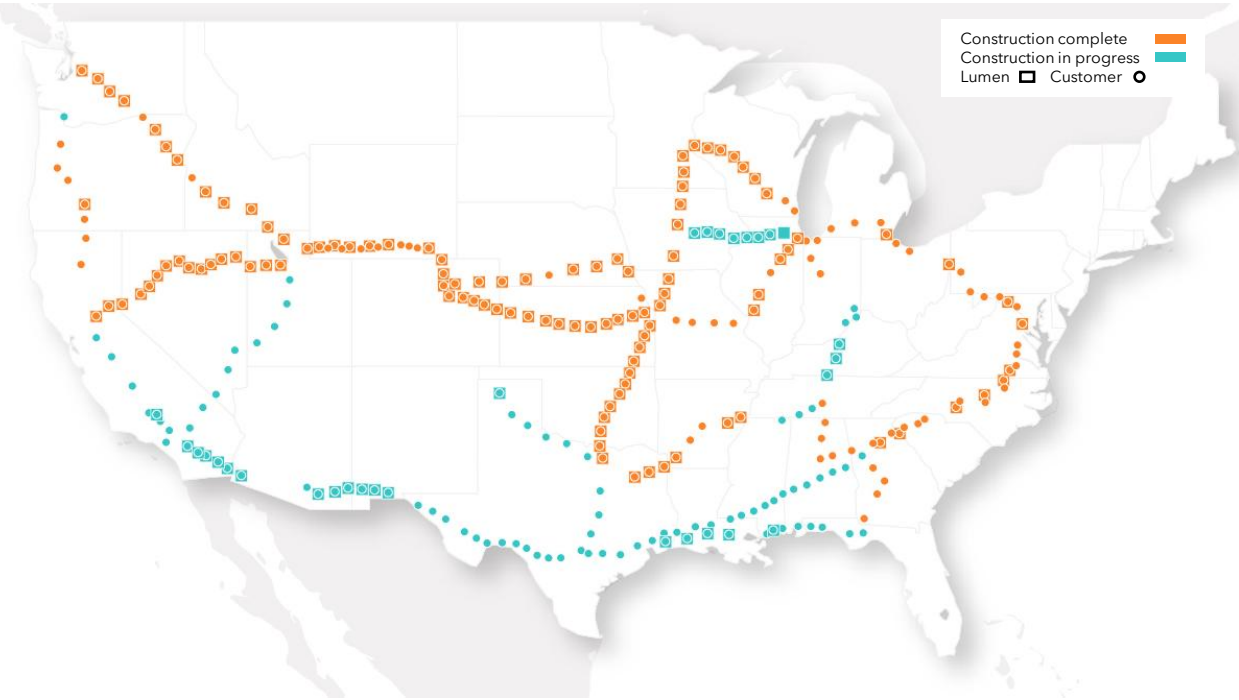
Today

~2.6K Fiber Miles Complete | **26** Routes in Construction

Execution Engine: Ahead of Pace to Deploy PCF Nationwide

Shelter Deployment

Scope: 553 Shelters



EOY 2025
289 Shelters Complete | **52%** of Scope

Network Overpull

Scope: 73 Routes / 23K Miles (27K Fiber Miles)



EOY 2025
~4K Fiber Miles & **5** Routes Complete | **32** routes in Construction

Execution Engine: Ahead of Pace to Deploy PCF Nationwide

Shelter Deployment

Scope: 553 Shelters



EOY 2026
543 Shelters Complete | **98%** of Scope

Network Overpull

Scope: 73 Routes / 23K Miles (27K Fiber Miles)



EOY 2026
~15K Fiber Miles & **30** Routes Complete | **35** routes in Construction

Execution Engine: Ahead of Pace to Deploy PCF Nationwide

Shelter Deployment

Scope: 553 Shelters



EOY 2027

553 Shelters Complete | **100%** of Scope

Network Overpull

Scope: 73 Routes / 23K Miles (27K Fiber Miles)



EOY 2027

27K Fiber Miles Complete | **73** Routes Complete

Powering Connectivity Through Precision Deployment

Shelter & In-Line Amplifier (ILA) Deployment



Enables dark fiber along existing routes, enhances signal strength & network reliability

Network Overpull



Increases network capacity by deploying additional state of the art fiber along existing routes

New Route Build



Expands network coverage by creating new routes

Partnered with Corning to Maximize Conduit Utilization & Enable High-density, Scalable Deployments

Legacy long-haul cable deployments were limited to 432 fibers or less. Through our collaboration with Corning, we've introduced three advanced fiber counts:

864

Fiber Count

Doubling Capacity

versus previous
deployments

1,152

Fiber Count

Largest Cable Count
in our 1 ¼
inch conduits

1,728

Fiber Count

Largest Cable Count
in our 1 ½ to
2 inch conduits

This advancement helps us meet growing capacity needs while making the most of our existing infrastructure!



Corning Fiber: Capacity for a Smarter Network

Lumen-Dedicated Facility

Corning established the Trivium Cable Plant in Hickory, NC, exclusively for Lumen production & initial shipments have been dispatched.

Game-Changing Custom Fiber Design

Custom fiber solutions engineered to maximize capacity within existing ducts, ideal for legacy infrastructure upgrades without costly overhauls.

Real-World Scalability & Deployment Readiness

High-density fiber configurations that showcase deployment-ready solutions designed for scale.

Your Network, Your Way

Empowers customers to design and scale their networks with flexibility, control, and alignment to their unique operational goals.



Playing to Win – And We're Just Getting Started

We are trailblazing the future of connectivity: powering smarter networks and seamless experiences for our customers

1

Teams are up and running A fully operational organization was built in just 9 months, onboarding 200+ top-tier professionals, 65% new to Lumen.

2

AI-ready infrastructure is real Lumen is delivering high-capacity, low-latency fiber to power AI workloads and future-proof networks.

3

We're ahead of schedule & our execution engine is humming Shelter and fiber deployments are outpacing targets, with 2.6K+ fiber miles already complete and 144 shelters built, with another 145 under construction.

4

Innovation is tangible We're fast-tracking routes and expanding data centers with advanced wave innovation. Custom fiber, Corning collaboration, and agentic ops are modernizing legacy networks into scalable, autonomous systems.

Cloud 2.0: The Network for the AI Economy

Dave Ward, Executive Vice President & Chief Technology & Product Officer

Spin Up Your Propeller Hat ...We're Gonna Go Deep!

1

**Shift from
Cloud 1.0 to
Cloud 2.0**

2

**AI regions &
structural
transformation**

3

**Cloud 2.0
must haves**

4

**How Lumen is
creating value**

Rarely a Mention of the Network Yet it's the Cornerstone

Data Centers

\$2T

AI Factories

AI Chips

\$4T

**Compute
Infrastructure**

**Power and
Transmission**

\$0.5T

**Power &
Transmission**

**Network
Infrastructure**

\$0.5T

**Strategic
Adjacencies**

AI is Driving the Shift of Cloud 1.0 to 2.0 – Networks Must Keep Up

Cloud 2.0 Demands a Network Reset

AI is redefining the data center footprint, which is growing 10x from 2025 to handle exabyte-scale demand

Legacy networks were designed for voice, internet and VPNs - **not bandwidth heavy AI**

Cloud 1.0 connectivity with internet overlays and carrier-neutral facilities **has hit its limits**

Without purpose-built connectivity, billions spent on GPUs, SaaS, and hyperscale **underdeliver**

Cloud 2.0 demands a reset, AI will overwhelm legacy network architecture

Business Imperatives:

1

Plan for architectural shift, more than incremental upgrades

2

Evaluate how to evolve the enterprise WAN for AI

3

Prepare for Cloud 2.0, enabling on-demand fabric and new NaaS services

4

Move beyond "flat" WAN, explore stratified layers and DCI at the core

AI is Driving Explosive Data Center Growth

~1B

Sq. ft. U.S. DC footprint
by 2030¹ up from 120M built
2020-2024

DC footprint growing

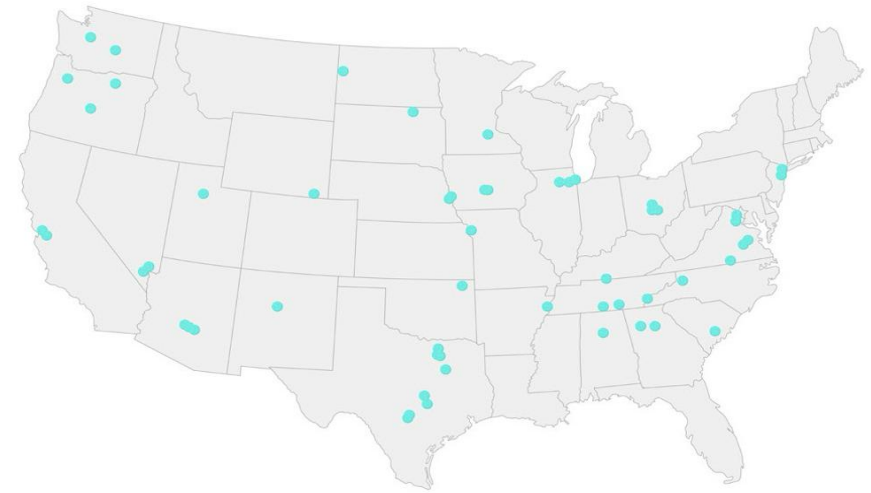
10x 2025-2030²

1. Of which ~700M more speculative (from ecosystem primers) 2. Projects may include multiple data center buildings on one campus
Source: Multi-source data prepared by 4MC Partners for Lumen analysis

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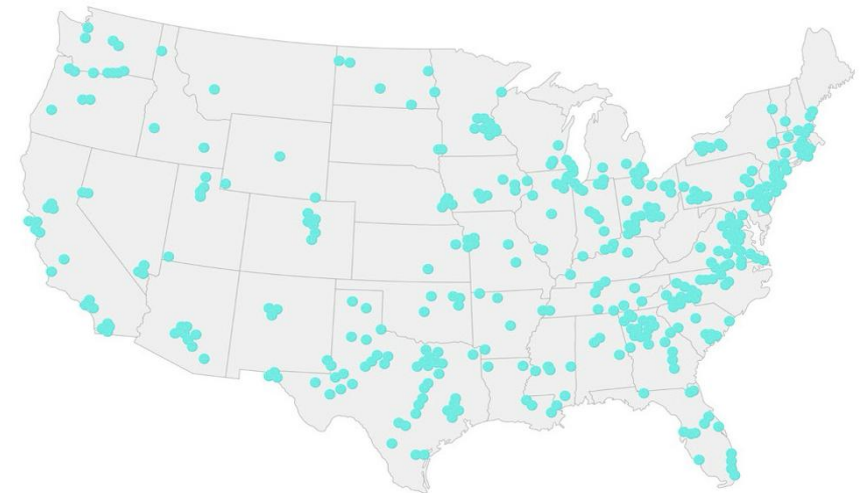
DC Market All Segments 2024

Data center projects² in 2024



DC Market All Segments 2030

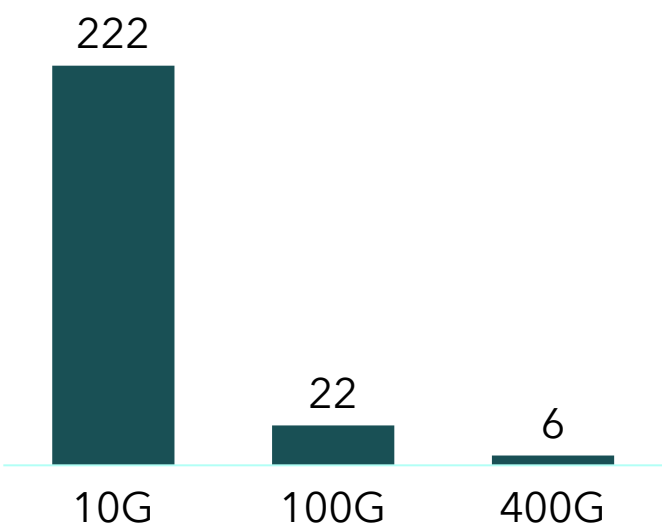
Data center projects² in 2030



Without Bandwidth to DCs, GPU Sit Idle and Enterprises Can't Transform to AI

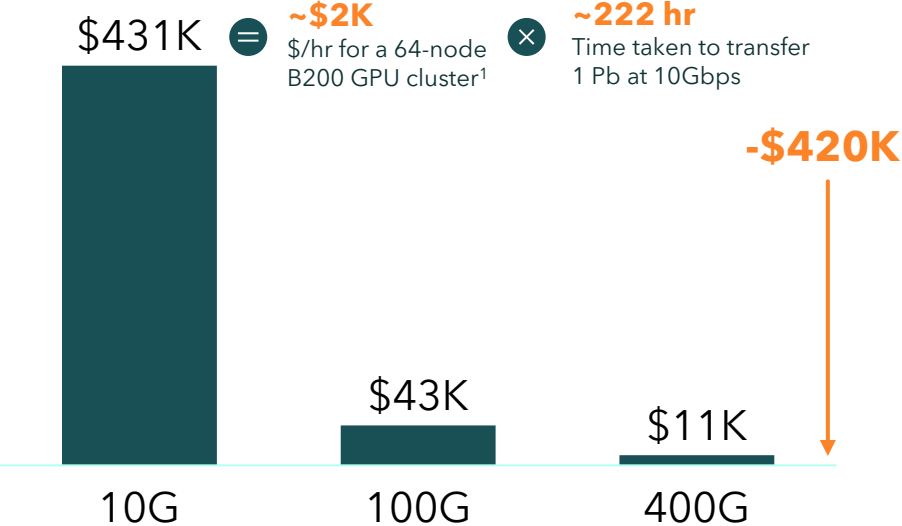
Enterprise network bandwidth has a significant impact on AI training cost...

Hours to egress 1 PB of training data



...and transferring 1 petabyte of data for training can reduce cost by **~40x** with 400G vs. 10G

Enterprise Cost before training can start (\$K)



Bandwidth is a key driver for efficient GPU usage with AI.

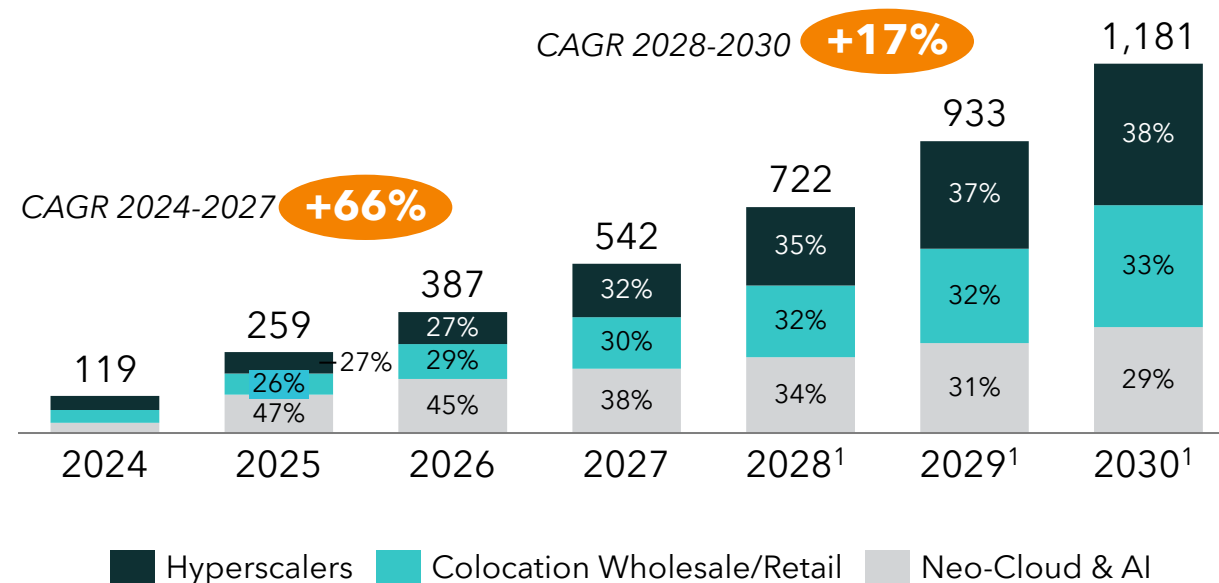
At petabyte/exabyte scale, the network - not GPUs - sets training time and cost.

Cloud 2.0 requires enterprise networks built for exabyte-class moves; 400G+ is starting point and need for 800/1.6T obvious.

Source: Multi-source data prepared by 4MC Partners for Lumen analysis, RBC 2025 AI Market Analysis

A billion square feet of new data centers are coming but **today's infrastructure isn't ready.**

US cumulative data centers Sq. Ft. (2024-2030)



2025-2028: Surge absorbs slack, reliable builders add capacity at 40-60% CAGR

Ecosystem check: Real estate, power, water, cooling, semis, servers grow at ~17% CAGR

2028-2030: Market aligns to ~17% CAGR, reliable projects already filling the 3-yr pipeline

1. 2028-2030 values estimated accounting for a CAGR 17% in annual Sq.Ft. growth, in line with DC real estate, power, water, cooling, semis, servers;

Sources: Multi-source data prepared by 4MC Partners for Lumen analysis, North America Data Center Trends H2 2024 by CBRE

A New Geography Will Support AI and Cloud Workloads

Three structural shifts

Densification:

Tier 1 hubs (Northern Virginia, Dallas, Phoenix, etc.) are doubling or tripling, driving extreme pressure on power and bandwidth.

Diversification:

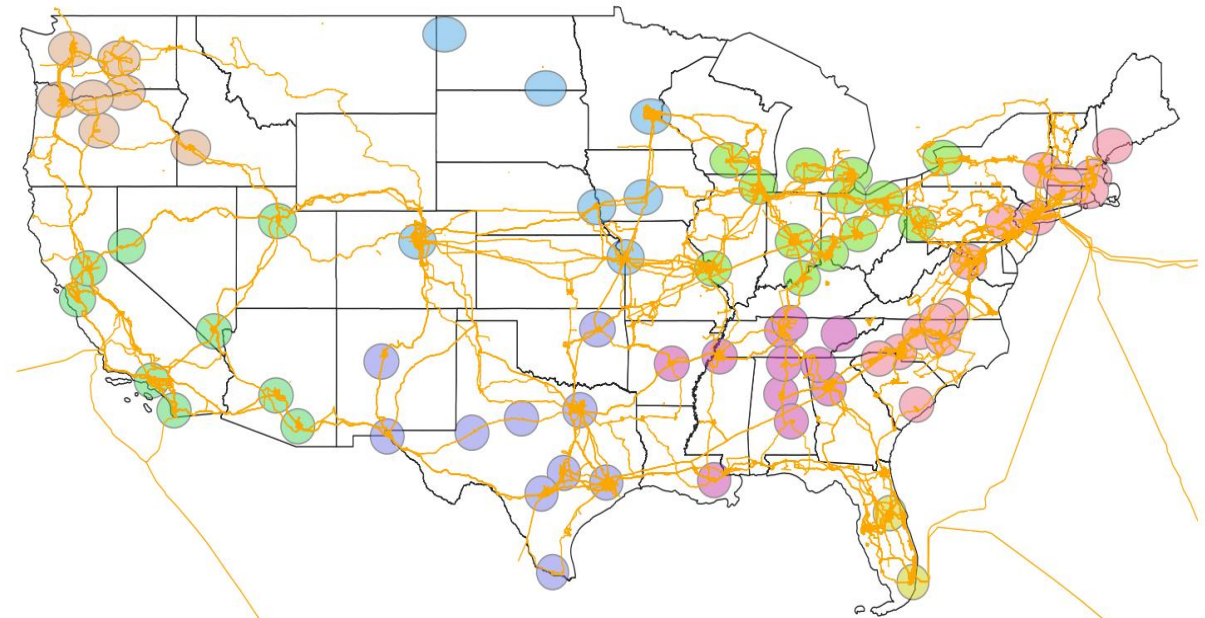
Growth is spilling into new AI regions across rural regions (e.g., Western Pennsylvania, North Carolina, West Texas) where latency and scarce dark fiber become critical.

Disaggregation:

The “flat” WAN is breaking apart into three distinct strata – cloud access edge, data center interconnect (DCI), and hyperscale back-end fabrics.

Cloud 2.0 is redrawing the network map, new AI regions will emerge with new corridors

Analysis of AI traffic and medoids



— Key AI routes

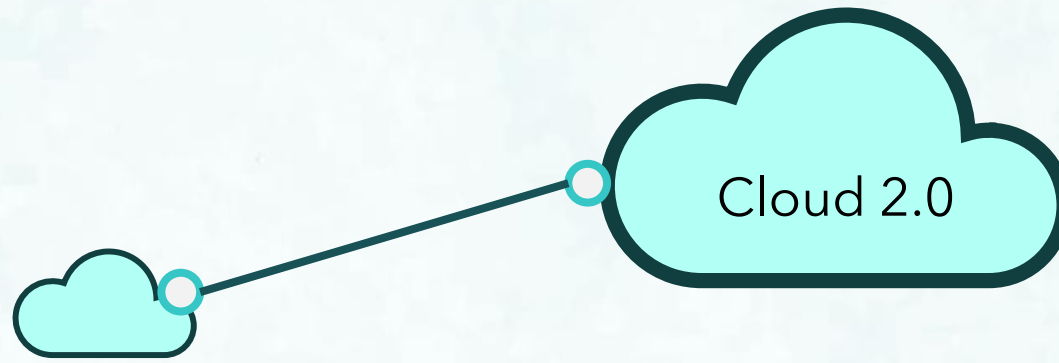
○ Medoids

Color coding by AI region

Source: Multi-source data prepared by 4MC Partners for Lumen analysis

What is Cloud 2.0?

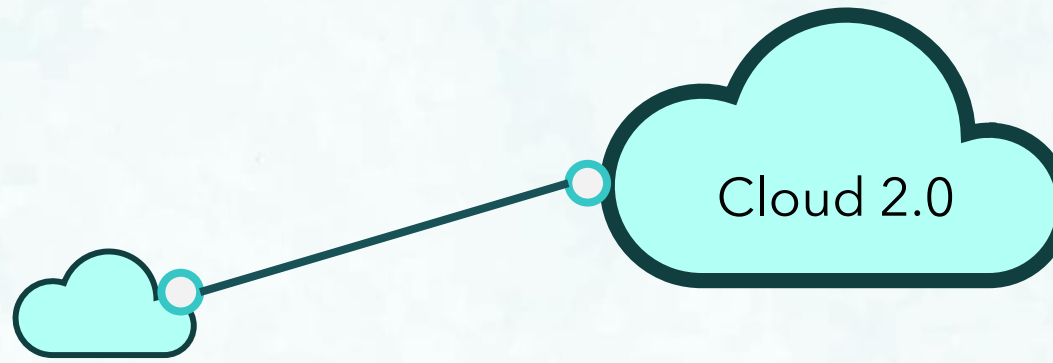
A transformation of cloud and enterprise core requiring 5 new capabilities



- 1 Extreme bandwidth and low latency** – Scale from 400G toward 1.6T to use GPUs most cost-effectively
- 2 Data Center Interconnect (DCI) foundational element** – Power the multi-cloud fabric
- 3 Expansion into AI corridors** – Extend fiber and optical into areas where power exists and DCs planned
- 4 Distributed on-ramps** – Programmable, high-bandwidth cloud, AI on-ramps, landing stations pre-lit to Lumen
- 5 Programmable, API-first networks** – Deliver on-demand fabrics, integrated into marketplaces

Lumen Powers Cloud 2.0

Enterprise agility and control without the burden of ownership



Innovating

Ecosystem

- 1 **Driving ecosystem integration** - co-developed Lumen Validated Designs with partners to deliver ready-made AI and enterprise solutions

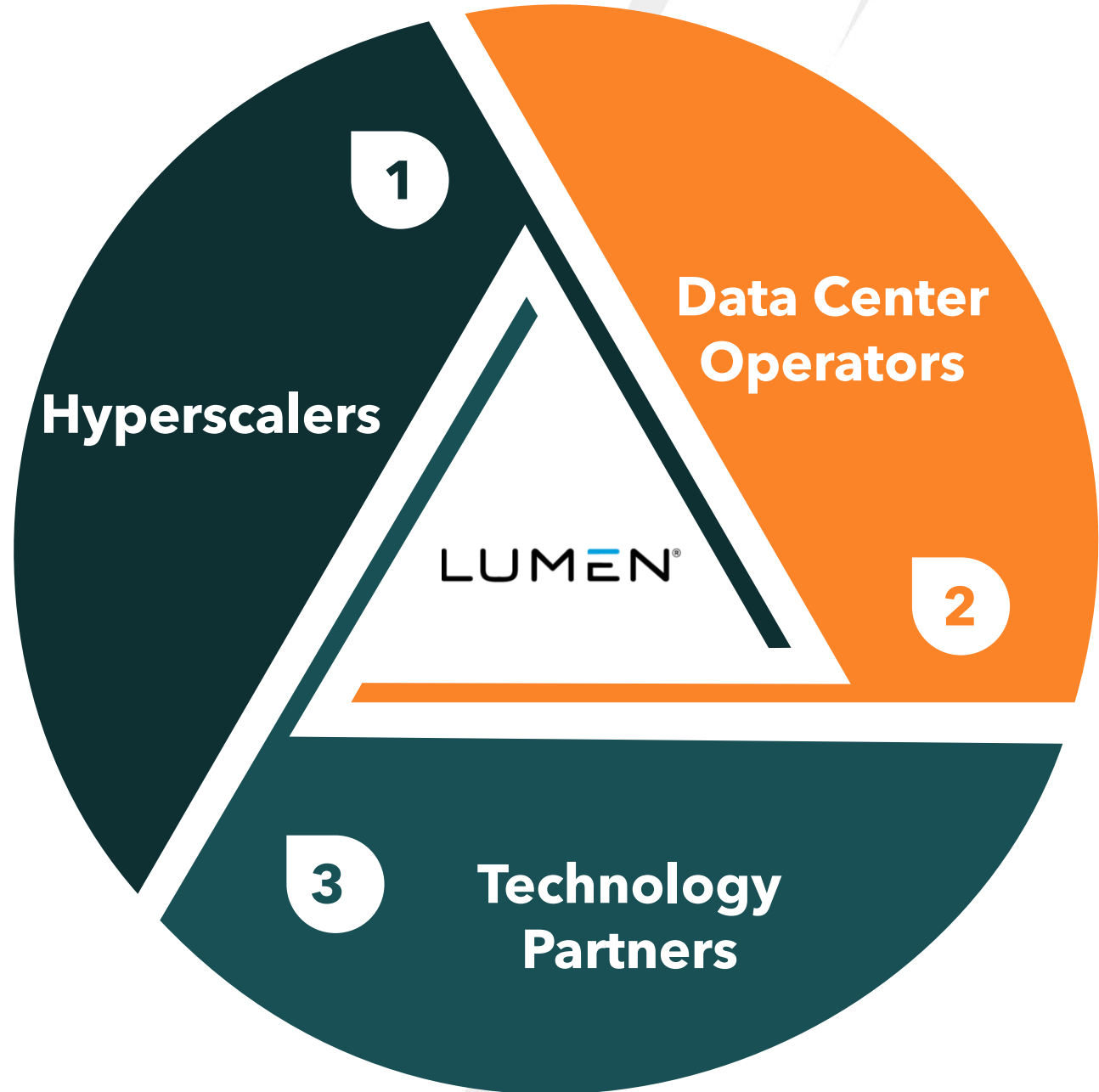
Digital Platform

- 2 **Building programmable fabrics** - Lumen Connectivity Fabric and Lumen Connect allow on-demand, API-driven provisioning across data centers, clouds, enterprises
- 3 **Future-proofing for AI** - re-architecting network products - from flat VPNs to stratified fiber /DCI/IP layers - to meet exabyte transfers, ultra-low latency, and distributed AI

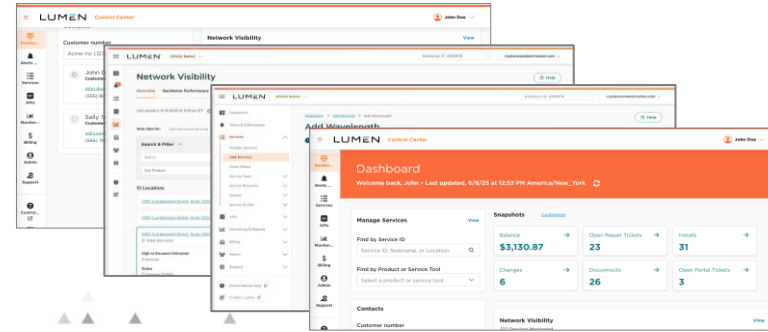
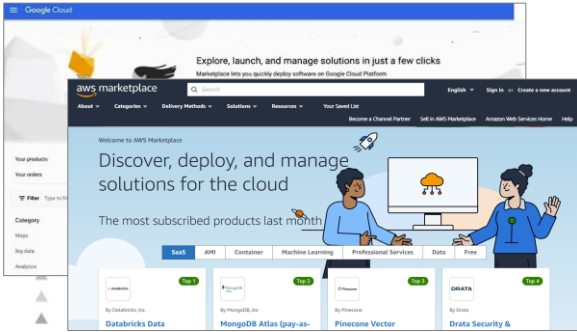
Physical Network

- 4 **Expanding fiber backbone** - growing intercity and metro fiber to support 400G-1.6T links, dark fiber, and wavelength services at AI scale
- 5 **Enabling multi-cloud** - seamless on-ramps, multi-cloud gateways, and service fabrics (e.g., security, AI inference) that integrate with hyperscaler marketplaces

Lumen is Building a Cloud 2.0 Ecosystem of Partnerships to Fuel Innovation and Power New Digital Marketplaces



Delivering a Frictionless Digital Experience with Lumen Connect



Unlock and integrate partner platforms as a channel

APIs integrated with marketplaces

Launch new services faster than before using **scalable, cloud-native** architecture

Integrate programmable connectivity with digital marketplaces

Offer end-to-end purchasing experience

Fully digital controlled services

Design flexible networks at all endpoints for speed, on-net and off-net

Price dynamically, both connectivity and services

Order auto-generated based on selected configuration

Drive ubiquitous digital consumption model

Primary way to consume services

All legacy product features moved to Lumen Connect; **single-portal for all CX**

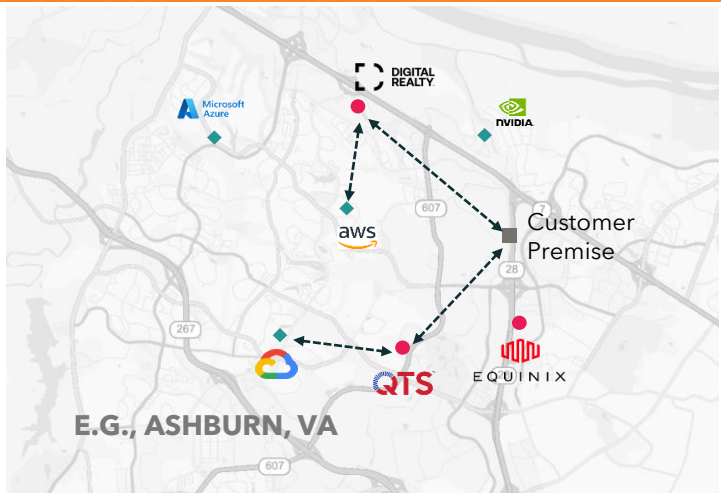
Ability to **provision Waves on demand**

Physical Network: Lumen is Building the Backbone for the AI Economy

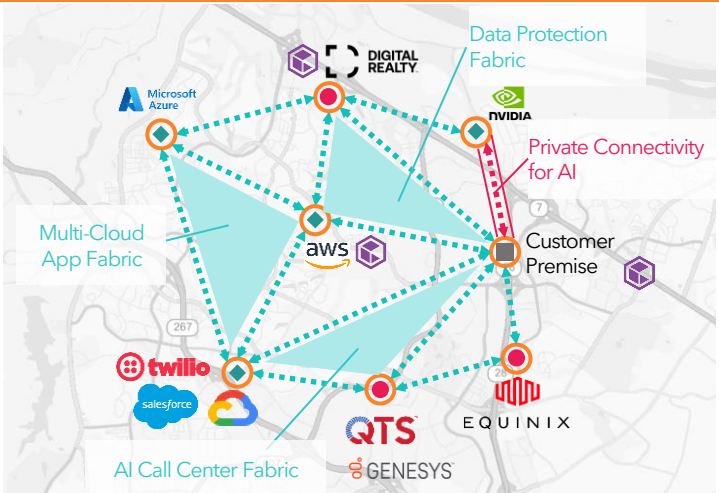
Legend

- Data Center
- ◆ Hyperscaler
- Enterprise Premise
- Fabric Port enabled
- ⋯ Point-to-point connectivity (<100G)
- Point-to-point connectivity (100G+)
- ⋯ Lumen Connectivity Fabric (400G+ enabled)

Exemplar Cloud 1.0



Vision for Cloud 2.0



Illustrative,
future state
vision

Topology & Speed

Hub-and-spoke, Tier-1 metros, point-to-point circuits

Location pattern

Centralized in Tier-1 metros, rural areas were underserved and far from metro on-ramps

Scale of data

Workloads in gigabytes, data moved north-south or user to data center

Meet-me rooms

Connectivity to carrier-neutral facilities (CNF), public IP access and peering dominated

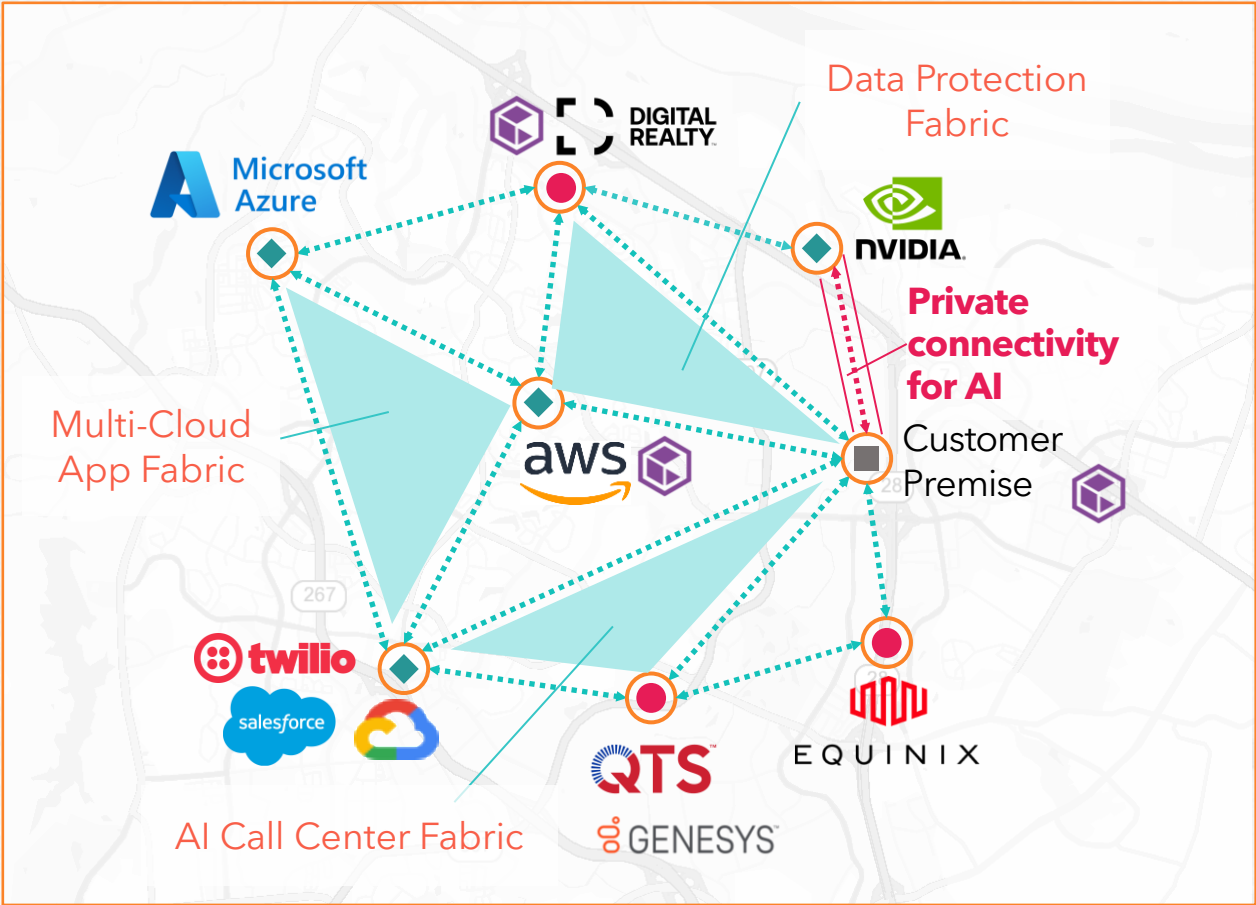
Any-to-any fabric across many metros, distributed data center interconnect (DCI) and virtual meet-me rooms (MMRs)

Explosive geographic sprawl with new corridors and clusters beyond metros (in rural areas with land and power)

Exabyte-scale transfers between "AI factories", often requiring 400G and 1.6T links

Public cloud direct connect with distributed DCI

Enterprises can **design and control** their network without owning, managing and operating assets



Illustrative, future state vision

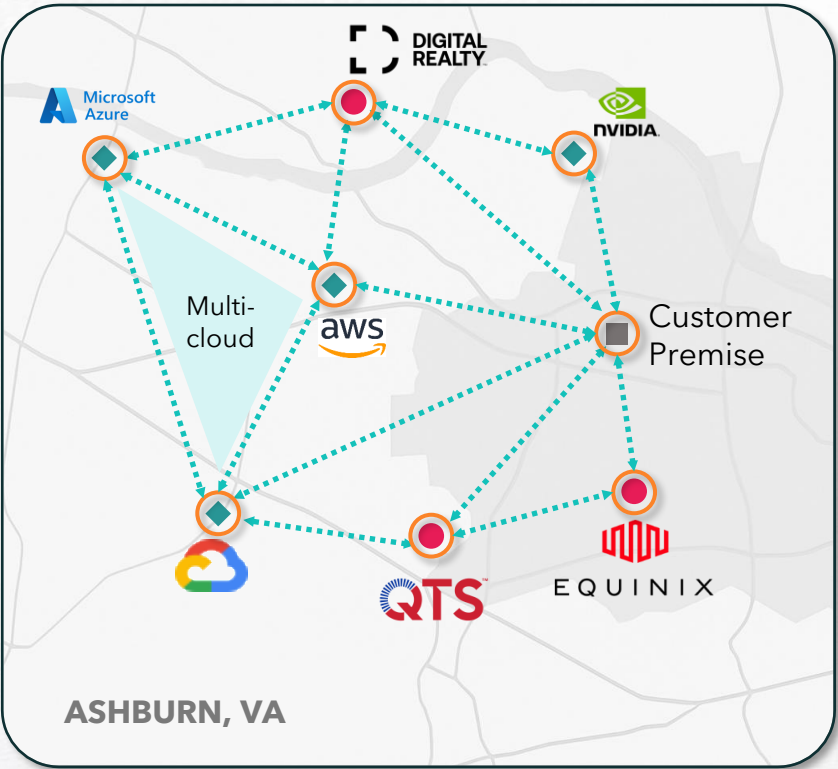
Legend: Network components

- Data Center
- ◆ Hyperscaler
- Enterprise Premise
- Fabric port enabled
- Lumen Connectivity Fabric (400G+ enabled)
- Private AI connectivity
- Fabric

Fabric Ports Bring the New Digital Consumption Model to Life



Fabric port advantage: enabling fully digitally controlled customers



Illustrative, future state vision

- Legend**
- Fabric ports
 - Data Center
 - ◆ Hyperscaler
 - Enterprise Premise
 - Lumen Connectivity Fabric

Universal and service-agnostic: One port supports multiple services dynamically, consolidating multiple ports used today into one

Frictionless sales experience: Services can be changed or reconfigured without the need for physical service/activation (including no truck-roll)

Scalable 'consumption' model, where customers can access, activate, and scale multiple services rapidly through a single connection

Future-ready: Supports modern service delivery such as on-demand services, self-provisioning, multiple pricing models, etc.



Fabric port will help drive digital consumption and new scalable, consumption model that flexes as enterprises require



***How can Enterprises
transform to Cloud 2.0
without missing a step?***

Cloud 2.0 Enabled by Project Berkeley



Allowing to reach 10M+ off-net buildings: Enabling Lumen services over any access network

The value to our clients

Virtualized underlay at the enterprise edge: Extends Lumen Fabric into customer sites; universal port for connectivity and services

All access types & off-net reach: Brings Lumen Fabric and its services into off-net buildings, for all access types

Zero-touch provisioning: Turn-up, resize, and repurpose of services within minutes – no truck rolls required

Digital control: Managed end-to-end in Lumen Connect, with APIs and telemetry for real-time visibility and control

Marketplaces: Allows Lumen's connectivity service offerings to be procured and scaled in hyperscalers' marketplaces

Ecosystem: Unlocks partner-driven solutions on Lumen's virtualized underlay to build integrated offers

Secure: Multi-sec encryption, hardened

Imagine if accessing Cloud 2.0 was as simple as turning on a switch?

Project Berkeley

Intelligent
Instant
Everywhere

The differentiation of the platform

Intelligent w/ Digital Twin. Lumen Digital Twin technology w/ embedded AI cloudifies the port creating an intelligent, cloud orchestrated on-ramp into Lumen Connect & extended networks

Instant, Agile. Turn-up, resize of all digital services all via Lumen Connect instantly w/ API driven control for faster time-to-value

Consistent Experience, Everywhere. Connect to copper, fiber, Ethernet, satellite, fixed wireless, 5G and beyond. Growing to 400G and beyond. Available to over 11 million offnet locations.

Future Proof: AI-integrated monitoring & self-healing insights - Functional Digital Twin, AI on the edge, AI on the device and AI in the cloud

Partner Ready: Procure and scale Lumen and partner connectivity service offerings on any marketplace

**Turning dumb pipes into smart pipes
with cloud-like agility for enterprise networks**

Lumen Drives Significant Benefit for Enterprises



Programmable fabric connecting clouds, data centers, and AI regions to transform enterprise operations



High-speed, secure and low latency connectivity allowing firms to participate in the AI economy



API-led activation across marketplaces, with activation and delivery within minutes, helping firms to save time

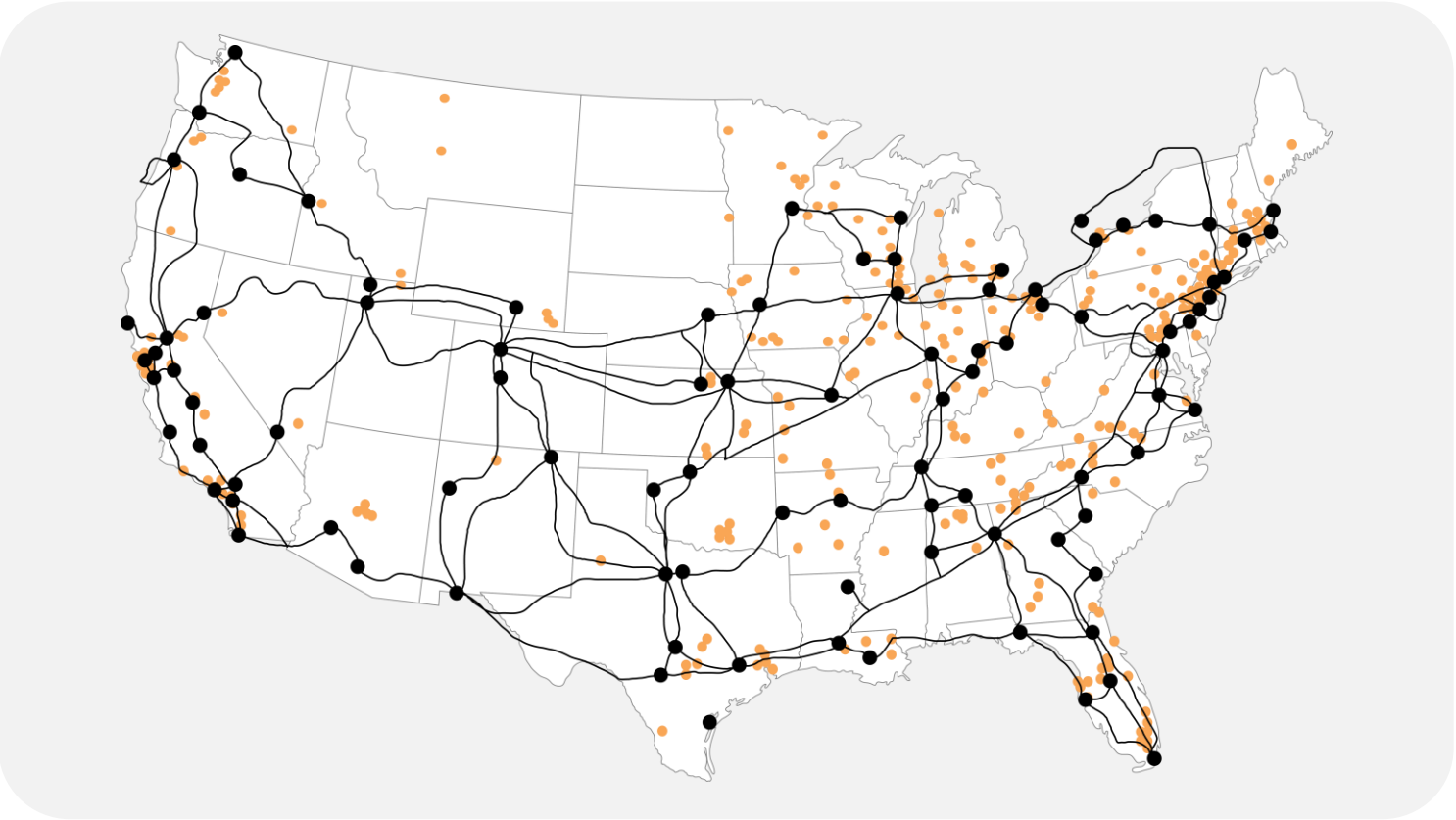


Build-in safe, redundant, and reliable connectivity, reducing business disruptions and IT bottlenecks



Single Platform to design, price, order, provision and monitor services without owning everything

From network to ecosystem: Lumen's Cloud 2.0 journey



Legend

- Enterprise headquarters
- Lumen nationwide infrastructure

Physical

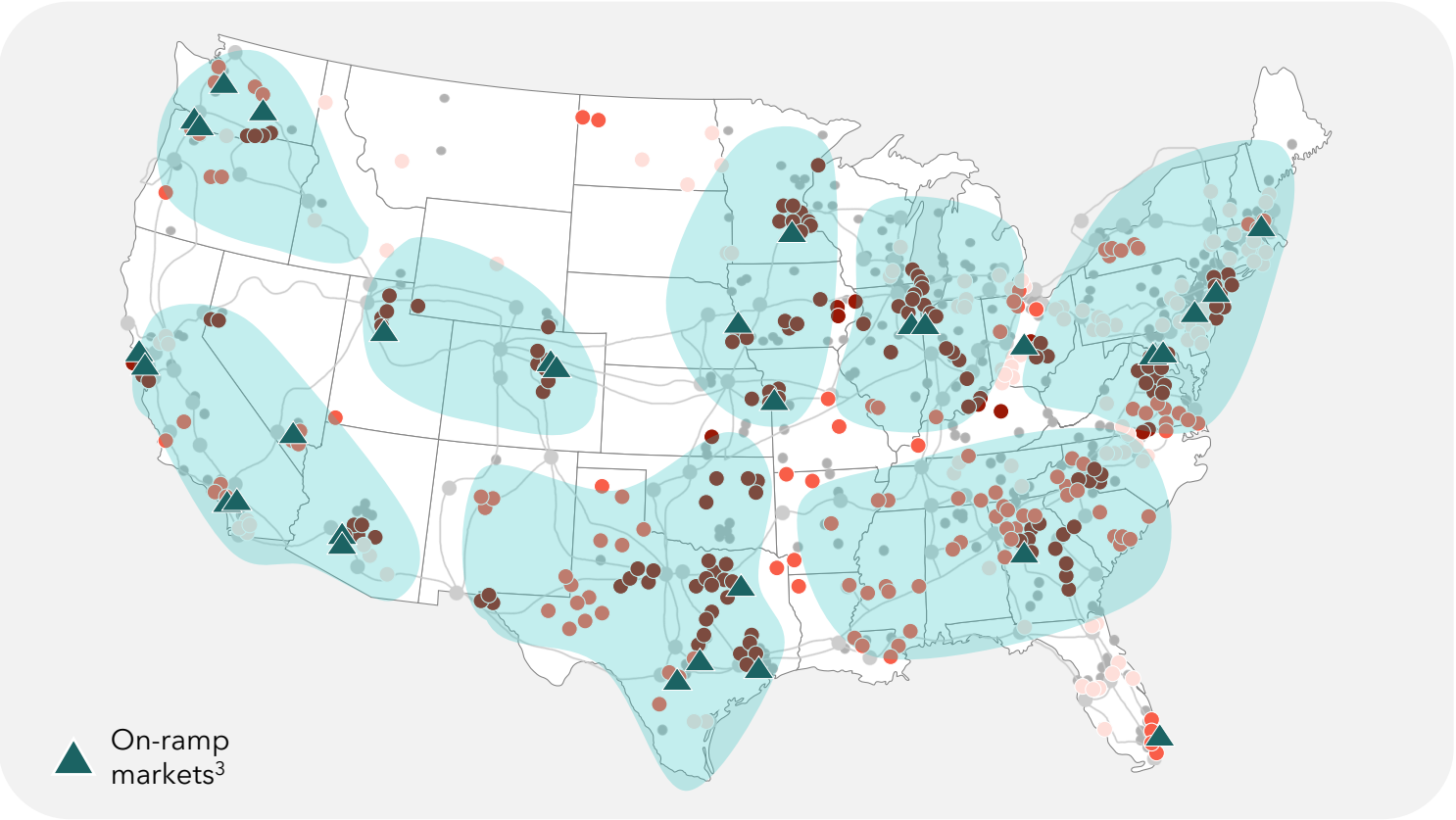
Digital

Eco-
system

Enterprises extend their reach with Fabric Ports to:

- Off-net locations
- On-ramps
- Lumen Connect
- Marketplaces

From network to ecosystem: Lumen's Cloud 2.0 journey



Legend

● Enterprise headquarters

— Lumen nationwide infrastructure

Data center projects by data gravity¹:

● High density

● Medium density

● Low density

AI regions based on Lumen Infrastructure²

Physical

Enterprises extend their reach with Fabric Ports to:

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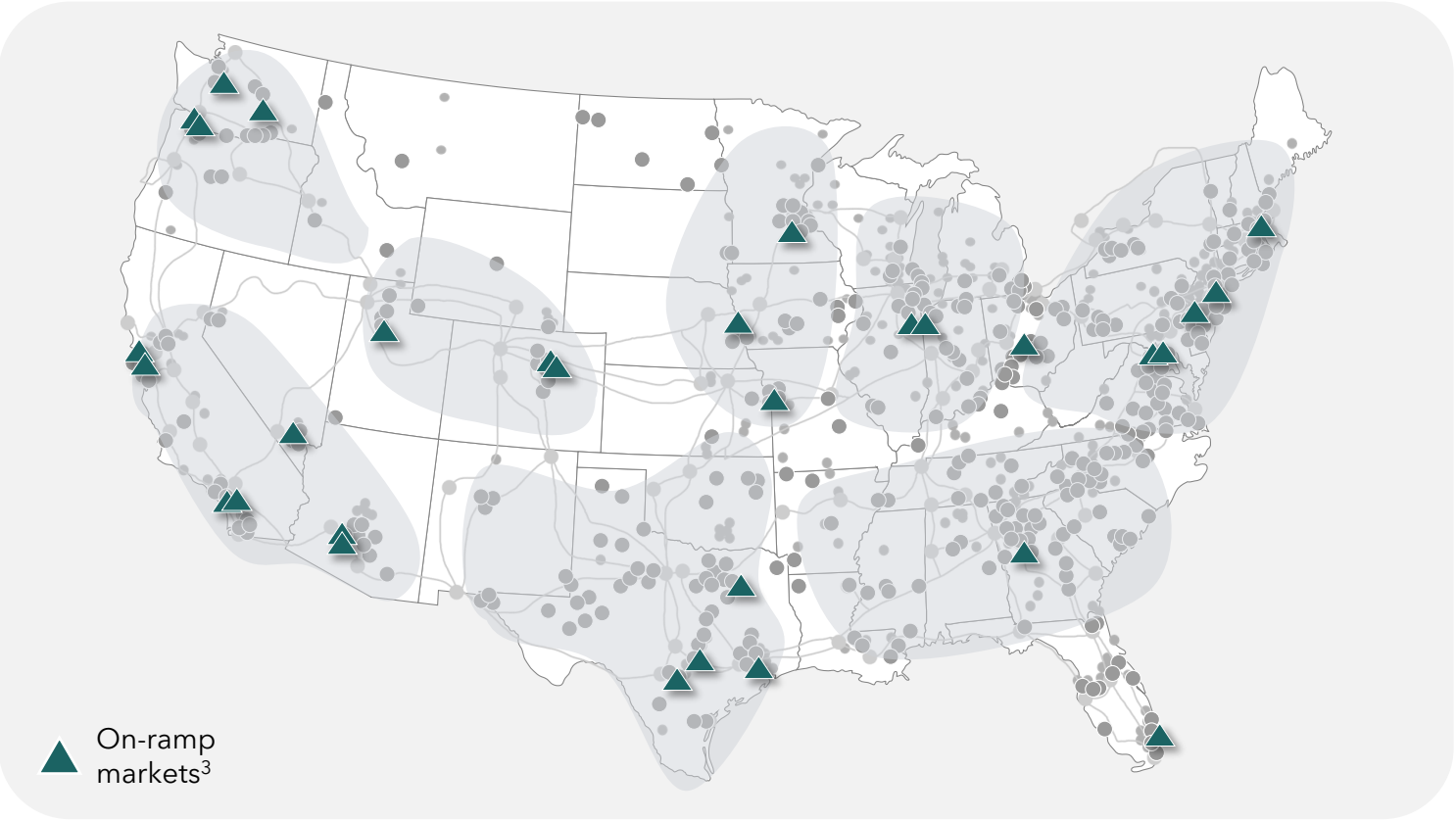
Digital

Design & control via digital platform allows access to:

- On-ramps in 100+ markets for the major cloud vendors
- ~3.8K total DCs by 2030
- AI-regions throughout the US

Eco-system

From network to ecosystem: Lumen's Cloud 2.0 journey



Legend

- Enterprise headquarters
- Lumen nationwide infrastructure
- Data center projects by data gravity¹:
 - High density
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Digital

Design & control via digital platform allows access to:

- On-ramps in 100+ markets for the major cloud vendors
- ~3.8K total DCs by 2030
- AI-regions throughout the US

Eco-system

Ecosystem partners unlock new layers of value:

- Security partners
- SASE
- AI
- Storage cloud
- Extranets

1. Projects may include multiple data center buildings on one campus. Data center projects color coded based on density of data flows around medoid points or gravity of data around DC projects. High density: 8.95M sq ft + for medoid; Medium density: 1.6M - 8.95M sq ft for medoid; Low density <1.6M sq ft for medoid. 2. Potential AI regions estimated based on medoid methodology which clusters using data center development data according to gravity of data flows, adjacency to Lumen long-haul fiber, and economic viability of optical interconnection without amplification; 3. Each AI-on ramp market includes multiple data centers & on-ramps today, likely to grow exponentially with data

Source: Combined Lumen-internal data and multi-source data prepared by 4MC Partners for Lumen analysis

**Enterprises
will be
defined as
leaders or
laggards:**

**Cloud 2.0
Won't Wait**

Enterprises are going AI-native: Cloud-first isn't enough, inference, privacy, multimodal workflows demand expansion across multi-cloud. First movers define Industries.

Networks need to change fast: Exabyte transfers and real-time inference will overwhelm today's overlays - Cloud 2.0 change will happen 10x faster than Cloud 1.0

Programmable fabrics to be enabled: DCI-centric, on-demand connectivity flexes with AI workloads through self-serve, secure, zero-touch platforms

Customer experience must be digitized: From static catalogs, manual provisioning to API marketplaces, self-serve fabrics, click-to-buy and zero-touch turn-up

Lumen's Roadmap to 2030

David Shacochis, Vice President Product Management

Market is Demanding More Speed, Digital Control & Partner Ecosystem

Unprecedented
demand for **data**

3.2X

expected growth in data center
interconnection bandwidth by
2029¹

Digital Control

~80%

of Lumen customers interviewed
value single pane of glass to
control their network²

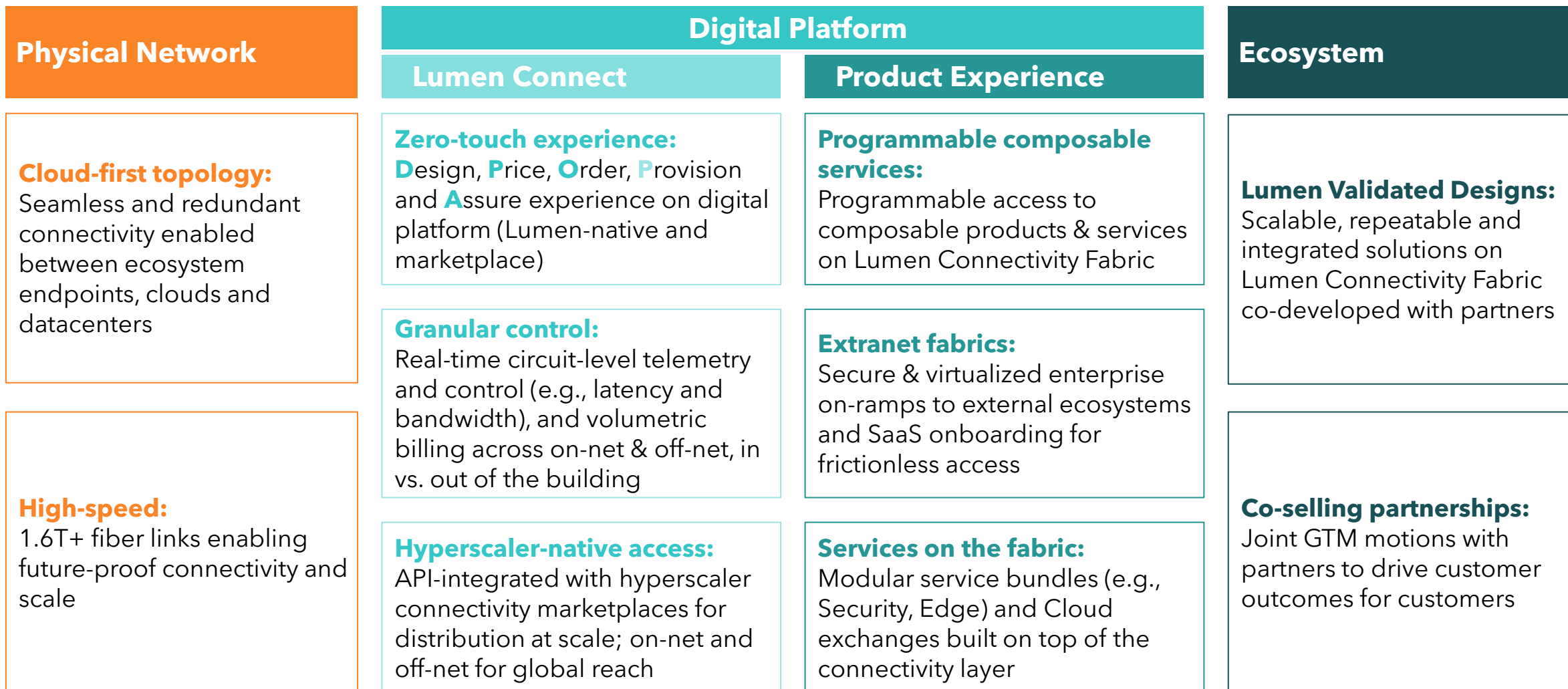
Ecosystem

70%+

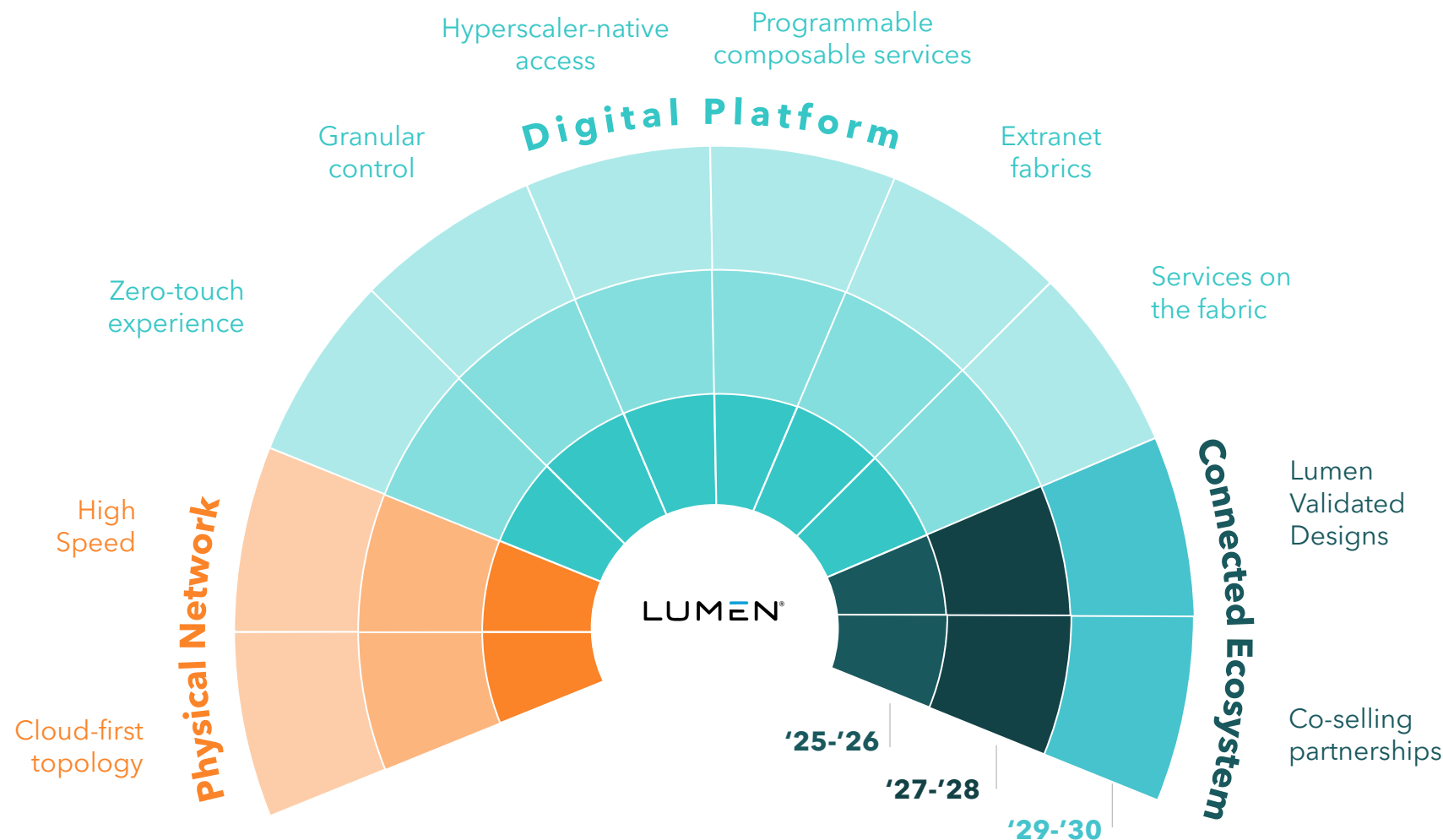
Technology partners
see their customers co-buying
3rd party solutions from
hyperscalers' marketplaces³

Sources: 1. Equinix Global Interconnection Index (2024) Report; 2. Answered to importance of digital UX during customer interview programs with Former CTOs, CIOs of enterprise customers (Aug 2024, n=9); 3. Canalys (Omdia) Global Technology Channel Survey (July 2024, n=265 channel partner respondents)

10 Building Blocks of Lumen's 2030 Strategy to Capture this Market Opportunity



Three Core Pillars of our Roadmap



Physical Network

- Our physical network **topology** and **speed** allow Lumen to offer cloud-enabled, marketplace-driven solutions

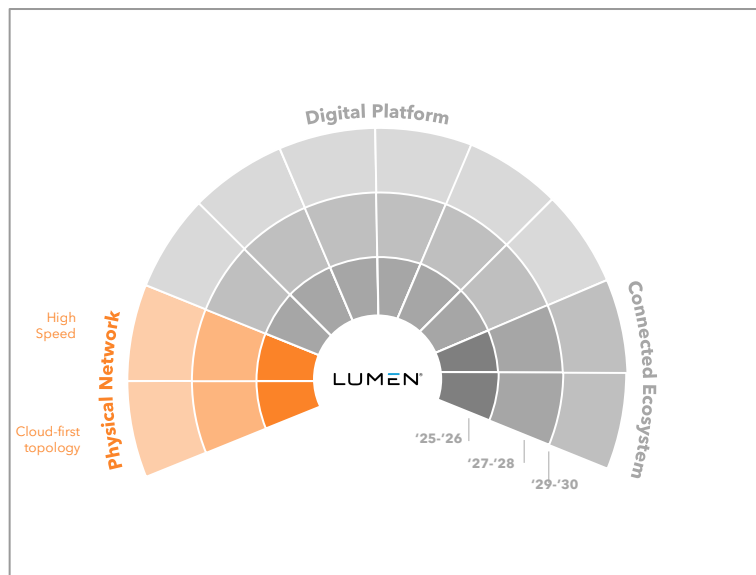
Digital Platform

- Our roadmap addresses structural barriers to network growth – **disaggregating** customer experience, **aligning** sales models, and enabling bandwidth **flexibility**

Connected Ecosystem

- Lumen is building a connected ecosystem of customers, partners, and platforms to **unlock commercial scale** and accelerate go-to-market impact

Physical Network | Backbone of Lumen Growth



Cloud-first topology

High Speed

Customer outcomes

Cloud-first access fabric

Direct-to-cloud and on-ramps

Fast + steady connectivity performance

*High bandwidth
Low-latency, high QoS*

Safe, reliable adoption

*Enables secure
management for resilient
and redundant paths*

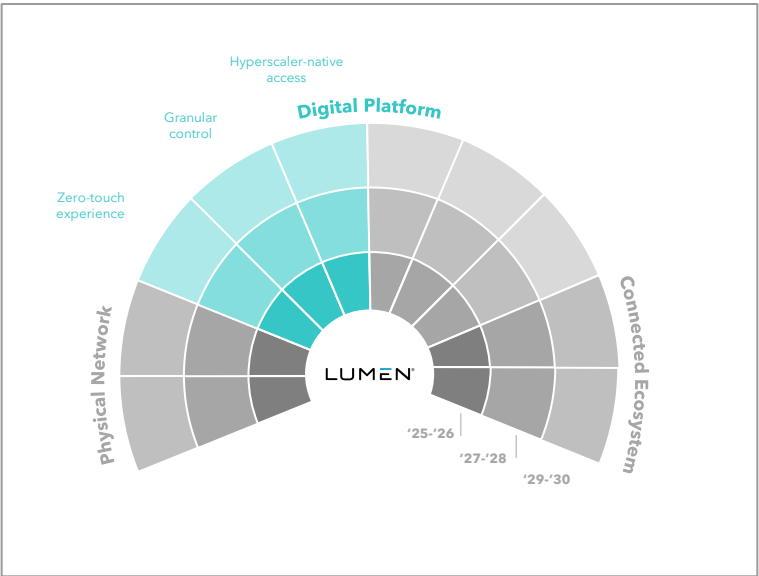
Key business features

- ☆ **Fabric port:** The cornerstone enabling **full digital control** through multi-service delivery
- ☆ Projected to 90%+ hosted coverage of **Hyperscaler access points**
- ✓ AI On-Ramps to **Neo-AI providers**

- ☆ Multi-phased **Metro** and **Data Center** connectivity **speed upgrades** (up to 400G on Ethernet)
- ☆ **Automated Lumen Wavelength Solutions** design & quoting
- ☆ **Low-latency paths** for specialized customer applications
- ☆ **Up to 800G** speeds launched on wavelengths
- ✓ **Up to 1.6T** speeds available on wavelengths

- ☆ **On-ramp failovers** in key metro areas
- ✓ **Next-gen optical encryption** for more secure wavelengths
- ✓ Ability to carve out **segmented physical environments** for regulated industries

Lumen Connect | Key Driver of Customer Experience



Zero-touch experience

Granular control

Hyperscaler-native access

Customer outcomes

Open platform with add-on services

API integration with partners & marketplaces

Activation and delivery within minutes

Fast and predictable provisioning

Single pane of glass control

Observability & SLA status + automation

Safe, reliable adoption

Enables secure management for redundant paths

Key business features

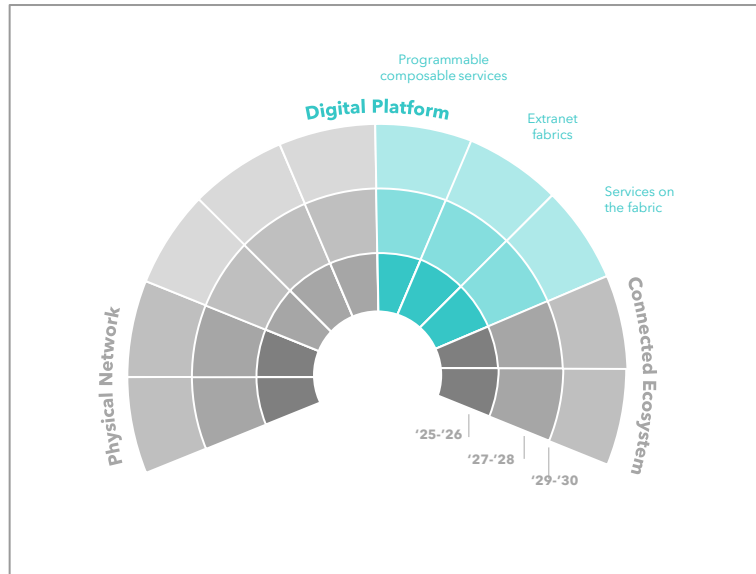
- ☆ Redesigned **developer-friendly API ecosystem**: Robust standards, public libraries and dev ecosystems
- ☆ Integration **partnerships** with **hyperscalers**
- ☆ Deliver a unified digital experience across Network, Voice, Edge & Security - **Lumen Connect Platform**

- ☆ **Design, Price, Order** capability
- ☆ **Volumetric billing** enabling aggregate bandwidth sale
- ✓ **Agentic AI solution builder** and onboarding flow
- ✓ **AI-powered service** chains

- ☆ **FinOps: Telemetry** visibility for **performance** and **spend optimization**
- ✓ **Digital Twin**: Network simulation to test environments

- ☆ Ability to manage **multi-level user hierarchies** with roles & permissions in Lumen Connect

Product Experience | Next-Generation, Composable Products



Programmable, composable services

Extranet fabrics

Services on the fabric

Customer outcomes

Cloud-first access fabric

Direct-to-cloud and on-ramps

Activation and delivery within minutes

Fast and predictable provisioning

Open platform with add-on services

Safe, reliable adoption

Secure management for resilient & redundant paths

Key business features

- ☆ **Multi-cloud gateways:** cloud-to-cloud & hybrid cloud
- ☆ **Fabric connections:** Peer-to-peer clouds
- ☆ **Enterprise on-ramps:** conn. to SaaS private clouds

- ☆ **Programmable (on-demand)** Ethernet, IP, VPN
- ☆ **Faster 'turn-ups'** enabled by **Fabric port**

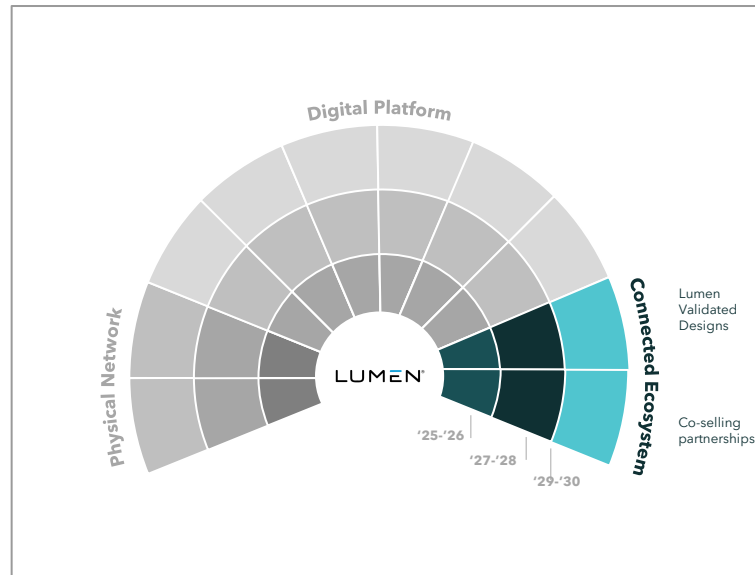
- ☆ **Bare metal, compute** and **GPU** on Lumen edge
- ☆ **LCC** Cloud Voice Control, calling plans & billing autom.
- ✓ **UCaaS, CCaaS** with **Partner** (e.g., Twilio) and **agentic AI**

- ☆ Multiple Lumen (**Defender, Black Lotus Labs**) and partner-powered security solutions
- ☆ Extensive **managed & prof. services** portfolio
- ✓ **MacSec** encryption for end-to-end security

Ecosystem | Validated Designs Co-Marketed with Leading Tech Partners

Customer outcomes

Key business features



Lumen Validated Designs

Co-selling partnerships

Open platform with add-on services

API integration with partners & marketplaces

Safe, reliable adoption

Enables secure management for resilient and redundant paths

- ☆ Suite of **validated solutions** built with technology partners to solve **specific customer business outcomes**
- ☆ Focus on partners driving **high bandwidth consumption**, enabling **pull-through connectivity demand** for analytics, data platforms, collaboration, security, and identity
- ☆ **Industry specific validated designs**: e.g., healthcare, finance, media, and retail

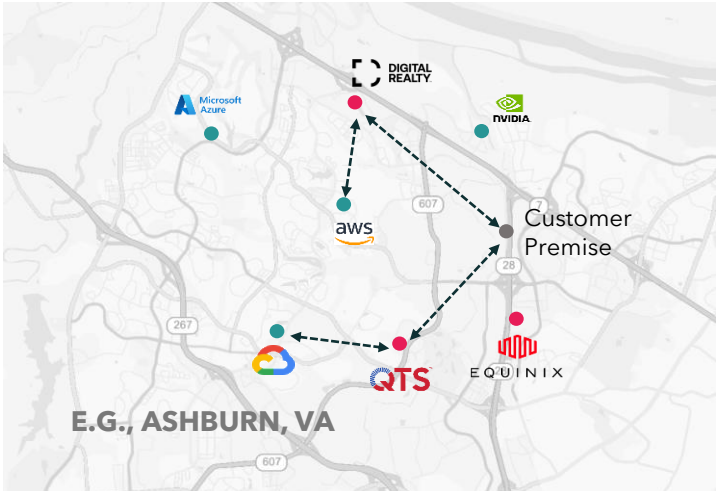
- Staged approach based on customer demand scaling:
 - ☆ **Crawl** (co-selling integrated solutions)
 - ☆ **Walk** (offer M&P services for integrations)
 - ✓ **Run** (potential white-labeled offerings)
- ☆ Solutions **ready to deploy in production** environments, minimizing risk and accelerating time to value

Lumen has Begun the Journey to Become the Backbone for AI

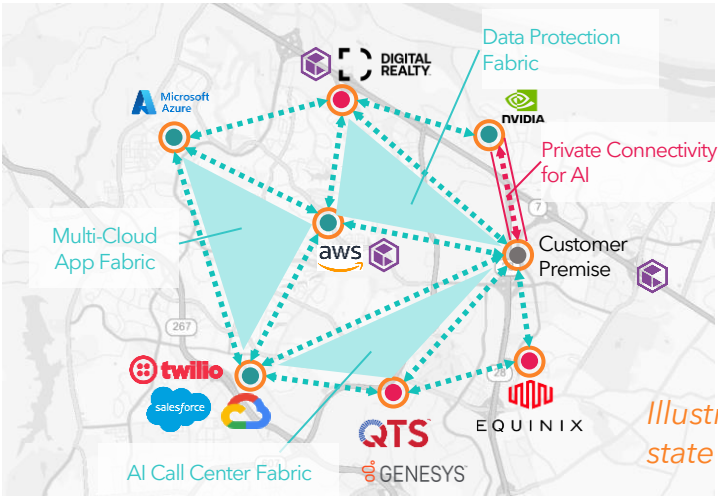
Legend

- Data Center
- Hyperscaler
- Enterprise Premise
- Fabric Port enabled
- ⋯ Point-to-point connectivity (<100G)
- Point-to-point connectivity (100G+)
- ⋯ Lumen Connectivity Fabric (400G+ enabled)

Exemplar Cloud 1.0



Vision for 2030



Illustrative future state vision

Connected Ecosystem	
Digital Platform	Digital Experience
	Product Experience
Physical Network	

Exploring partnerships with top technology companies

Customers can view online inventory of connectivity with catalog pricing

Highly configurable on-demand connectivity services on Lumen network

Ongoing high-speed upgrades between metro areas and data centers

Multiple partners through Lumen Validated Designs

Enable customers to provision services digitally, on Lumen platform & through API-integrated hyperscaler marketplaces

Innovative products with multi-cloud gateway solutions, AI and service fabrics and advanced network programmability

High-speed connectivity in key metro areas and data centers up to 400G

Lumen Enterprise Customers Need us to Enable Them for Cloud 2.0

69%

of US Leaders don't think their legacy network infrastructure can handle the demands of AI

IT leaders require networks that support AI-era data and speed needs, using multi-cloud solutions for greater flexibility, redundancy, and ease.

“ I need full terabyte connectivity across every end point I have in the Continental US ... and I need terabyte switches going to petabyte switches within the next 12 months...But right now, [we] cannot keep up with the massive demand of data needed...” - *Clinical diagnostic customer*

95%

of companies consider AI-ready networks a must for their AI strategy

Moving to AI requires connecting to a fast and reliable 400G network, working with industry partners to develop targeted solutions

“ Suddenly, enterprises end up with a multi-cloud environment... It helps to have an open platform that can accommodate any underlying environment, no matter what cloud provider.” - *Technology customer*

92%

of companies use multiple-cloud solutions to utilize AI in their business

Multi-cloud demand is rapidly growing across all industries; Lumen needs to build cross connectivity to benefit from this trend

“ ...this involves upgrading our network to support AI toolsets and maintaining high availability and performance for critical applications” - *Healthcare customer*

96%

of enterprises strive for Cloud-based, simplified and flexible network

Lumen unlocks Everything as-a-Service demand through Fabric Port, NaaS and consumption-based pricing and experiences.

“ ...wow I can see use cases for this platform [NaaS] throughout the organization...”
- *Media customer*

Lumen Is Playing To Win With Our Product Roadmap



Validated customer demand backed by Voice of the Customer insights and **extensive research** through the analyst community



Lumen is executing one of the most **extensive network builds** in history, enabling us with the **right topology and speed** to support the network needs of AI innovation



Delivering a superior, API-first customer experience around the Fabric Ports & Fabric Services on our platform: **Lumen Connect**



Building the Connected Ecosystem

Unlocking Value for Customers, Growth for Lumen

Ashley Haynes-Gaspar, EVP & Chief Revenue Officer



Our Market Opportunity

Cloud spending
projected to increase
~2x by 2030 to

\$1.12T

By 2030, US data center site
expansions are expected to
grow nearly 70%, which is

~1,600

\$15B

Cloudify Telecom TAM (~5% CAGR),
part of larger \$80B enterprise
connectivity opportunity

~85%

of customers are expecting
AI to drive bandwidth and
cloud demand

Sources: Cloud spending and data center expansion projections based on multi-source data prepared by 4MC Partners for Lumen analysis. TAM data based on IDC TAM Reports 2024 and 2025. 85% customer data based on Gartner, What's New in Artificial Intelligence, 2023 Gartner Hype Cycle, August 2023.

Customer Demands are Evolving from Legacy Constraints to AI-Driven Opportunities—Driving the Need for a Seamlessly Connected Infrastructure

Legacy Infrastructure can't keep up with AI demands

69% of U.S. leaders don't think their **legacy network infrastructure can handle the demands of AI**

96% of enterprises **strive for cloud-based, simplified and flexible network**

92% use **multiple-cloud solutions** to utilize AI in their business

95% of companies consider **AI-ready networks** a must for their AI strategy

Customers are seeking connected solutions to be market ready:

- **Accelerates AI adoption:** cost savings & faster deployment
- **Simplifies operations:** fewer vendors, unified platforms
- **Scales with business:** Turnkey growth-ready solutions
- **Delivers ROI faster:** Optimized for budget & performance

Modernization Imperative

Surging data growth

Enterprise bandwidth demand and latency-sensitive apps are outpacing legacy networks.

Legacy bottlenecks

Traditional IT and telco can't scale for AI workloads where resiliency is mission-critical.

Multi-cloud complexity

Global companies juggle multiple clouds and on-prem for real-time, data flows.

Cloud economics pressures

Escalating cloud costs squeeze cost saves and strain profit margins.

The LUMEN[®] Connected Ecosystem

Data Centers

Embed Lumen
Connectivity Fabric in
every DC with a
digital marketplace

Technology
Partnerships

Focus on workload
categories to create
integrated solutions

Hyperscalers

High-speed onramps
available in
marketplaces

Enterprise / Public
Sector Customers

Drive adoption of our
multi-cloud NaaS
offering across
industry



Test, Learn, Scale: Test to refine GTM and commercial models, scaling based on early demand signals to **drive repeatable, scalable customer outcomes**

Breakthrough Value with Multi-Cloud and NaaS

“

"I think it's great. It simplifies the entire process... That's what we have now, but I'm able to **click and provision almost instantaneously and then build out whatever I want.**"

– Customer, Retail

“

"...sending a direct point to point between two cloud providers... **this was just amazing.** I can just go in there **two minutes, set it up, and wait ten minutes, and boom, it's there!**" – Customer, C-Suite, Pharmaceutical

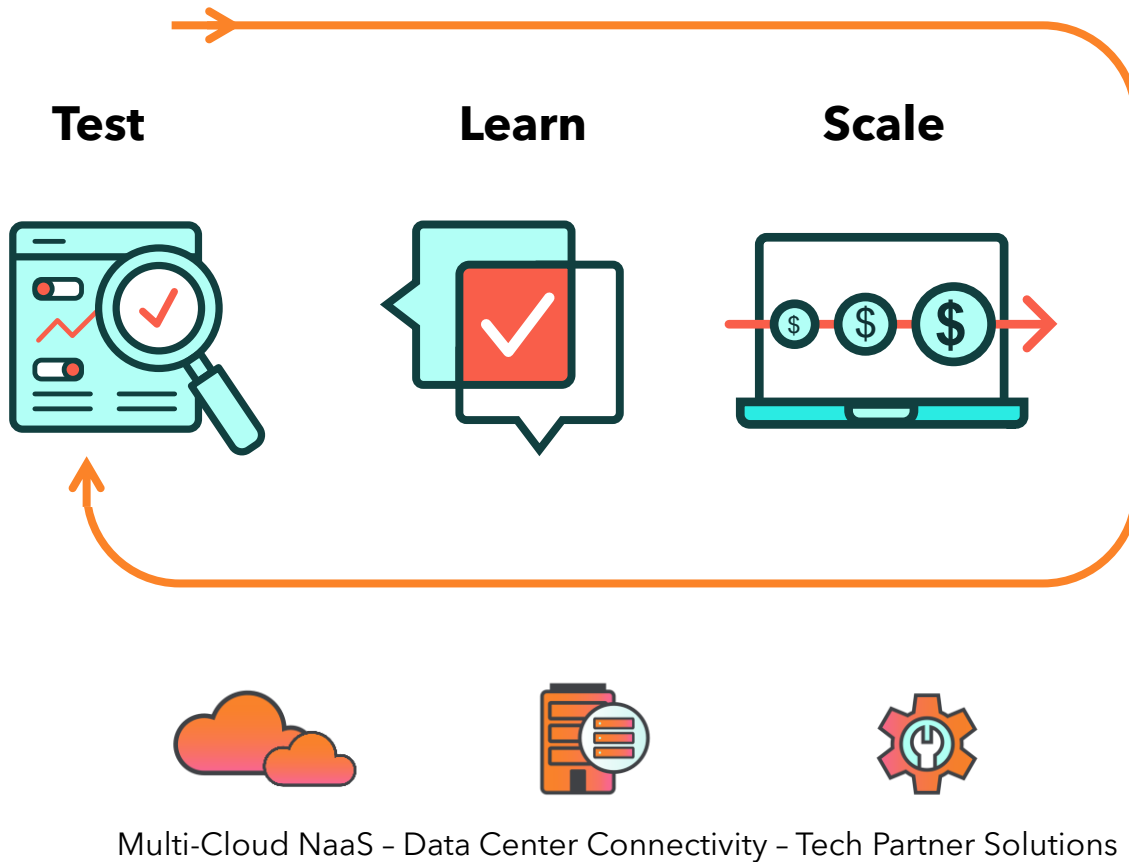
“

The biggest value prop is if you're using a **multi cloud environment this is gonna help you to figure out or connect those environments the fastest way possible**, potentially in one single pane of glass or a single dashboard as well. And then it's also gonna help in terms of your **speed and reliance or scalability** concerns that you might have had." – Customer, Sr. Director, Healthcare

“

"I can set up these cloud interconnections in **less than a minute and have them operational in ten minutes. To me, that's amazing.**" – Non-Customer, Sr. Director, Air & Defense

From Pilot to Repeatable Growth Engine



... drive long-term
commercial outcomes

Enabling customers to meet the **multi-cloud moment. Digitally.**

Delivering **high-capacity, one-click data center connectivity** through trusted DCOs, empowering tenants with faster provisioning, simplified access, and **scalable interconnect options.**

Codeveloping solutions with software partners to accelerate AI and edge deployments with integrated network solutions

LUMEN[®]









**Welcome Pranay Ahlawat,
Commvault's Chief Technology & AI Officer**

LUMEN[®]



Working Together to Build a Connected Ecosystem

Building the Future of Sales Enablement: Uniting Talent and AI to Drive Customer Outcomes and Growth

Build out resourcing model needed across commercial motions to scale growth					
Data Centers		Technology Partners		Hyperscalers	Commercial & Public Sector
 Account Execs	Mature capabilities to drive sell to motion: e.g., PCF deals with hyperscalers			Mature capabilities and stabilized commercial model driving results, e.g., successes w/ NaaS	
 Customer Success					
 Alliance Managers	Strengthening sell with/ through motion requires:				
 Specialist Teams					
		Test & build of new capabilities (test harness)	Test & build of tech partnerships via LVD process	Test & build of API to enable marketplaces	
 Biz Dev	New team hired to develop strategic 'muscle' for Lumen				
 AI /Agents	Accelerate quoting, renewal, & sales development through AI/Agents				

Key takeaways

- **Sell to capabilities have been rebuilt** and traditional **partner channel** capabilities are mature
- While other capabilities are entirely new and require building
- This will require us to be **agile and learn** rapidly - through test harnesses
- In parallel, BPO and agents will drive **efficiency and effectiveness** to free up **capacity for value accretive tasks**

AI Lab as the Catalyst for Unstoppable Growth

Modernizing selling with AI-powered precision

14+

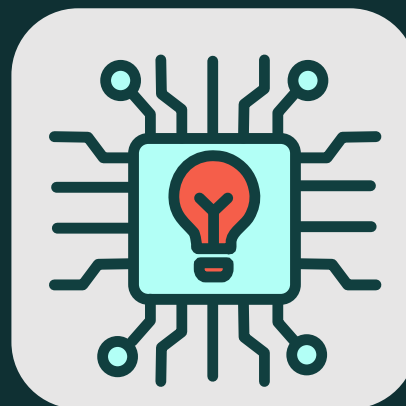
Legacy B2B apps unified into a single Salesforce engine to speed up lead-to-order velocity

3

AI agents deployed to automate targeting, sales execution, and support via chat, search, and routing

19

Use cases across commercial workflows—with repeatable playbooks



Faster, **frictionless commercial execution**

Smarter, **AI-driven targeting**

Guided, **intelligent workflows**

Automation of repetitive tasks

Predictable costs and scalable customer value



Exclusive validation:

Only telecom company invited to new research initiative, redefining the future of commercial selling.

The Power of a Connected Ecosystem

1

**Expands and
optimizes
network use**

+

2

**Transforms
the customer
experience**

+

3

**Unlocks smarter,
more efficient
cloud economics**

=

Accelerates sales efficiency & growth

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