



TRANSFORMING THE METRO

INSIGHT
INFINERA **2015**

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8:50 am	Welcome	Michael Capuano , VP Marketing
9:00 am	The Opportunity Ahead	Tom Fallon , CEO
9:10 am	Unleashing Intelligent Transport End-to-End	Dave Welch , President and Co-Founder
9:30 am	Accelerating the Metro	Karl Thedéen , SVP, Head of Metro Business Group
9:50 am	What the Network Will Be	Dave Welch , President and Co-Founder
10:00 am	The Evolution of Service Provider Networks	Randy Nicklas , EVP – Engineering & CTO, Windstream Nico Fischbach , Director – Strategy, Arch. & Innovation, Colt Technology Services
10:35 am	Executive Q & A	
11:15 am	First Breakout Slot	
Noon	Lunch	
1:00 pm	Second and Third Breakout Slots	
4:00 pm	Reception	

Housekeeping Check List

- Cellphones off (*silent mode*)
- 1 hour 30 mins live recording (*doors remain closed*)
- No photos or video allowed
- Please remain seated
- For any emergency please see our staff at the exit
- Bathrooms
- Wi-Fi access (*lobby area*)
- Breakout sessions (*down the hall*)



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Welcome

Michael Capuano, VP Marketing

The Opportunity Ahead

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Unleashing Intelligent Transport End-to-End

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Accelerating the Metro

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What the Network Will Be

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The Evolution of Service Provider Networks

Randy Nicklas,
EVP – Engineering & CTO, Windstream

Nico Fischbach, Director – Strategy, Arch.
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what **THE NETWORK** will be

Disclaimers

This presentation contains "forward-looking" statements that involve risks, uncertainties and assumptions. If the risks or uncertainties ever materialize or the assumptions prove incorrect, our results may differ materially from those expressed or implied by such forward-looking statements. All statements other than statements of historical fact could be deemed forward-looking, including, but not limited to, any projections of financial information, including statements about revenue and profitability; any statements regarding industry trends; any statements of the plans, strategies, and objectives of management for future operations; any statements about historical results that may suggest trends for our business; any statements of expectation or belief regarding future events, potential markets or market size, or technology developments.

These statements are based on estimates and information available to us at the time of this presentation and are not guarantees of future performance. These risks and uncertainties include, but are not limited to, the risk that Transmode's and Infinera's businesses will not be integrated successfully; the risk that synergies will not be realized or realized to the extent anticipated; the risk that the combined company will not realize on its financing or operating strategies; the risk that litigation could arise; the risk that disruption caused by the combined company would make it difficult to maintain certain strategic relationships; the risks of competitive responses and shifts in the market; delays in the release of new products; continued market acceptance of our products; fluctuations in customer demand; changes in industry trends; and changes in the macroeconomic market. These risks and uncertainties also include those risks and uncertainties discussed in Infinera's most recently filed Quarterly Report on Form 10-Q for the quarter ended June 27, 2015 filed with the SEC, and those risks and uncertainties identified in any subsequent reports filed with the SEC by Infinera. Our SEC filings are available on our website at www.infinera.com and the SEC's website at www.sec.gov. We assume no obligation to, and do not currently intend to, update any such forward-looking statements.

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The Opportunity Ahead

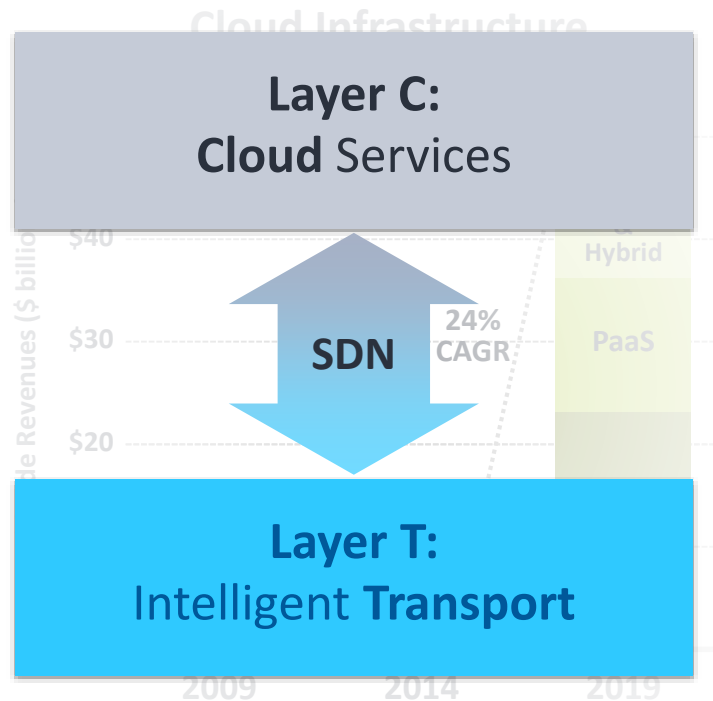
Tom Fallon, CEO

October 6, 2015



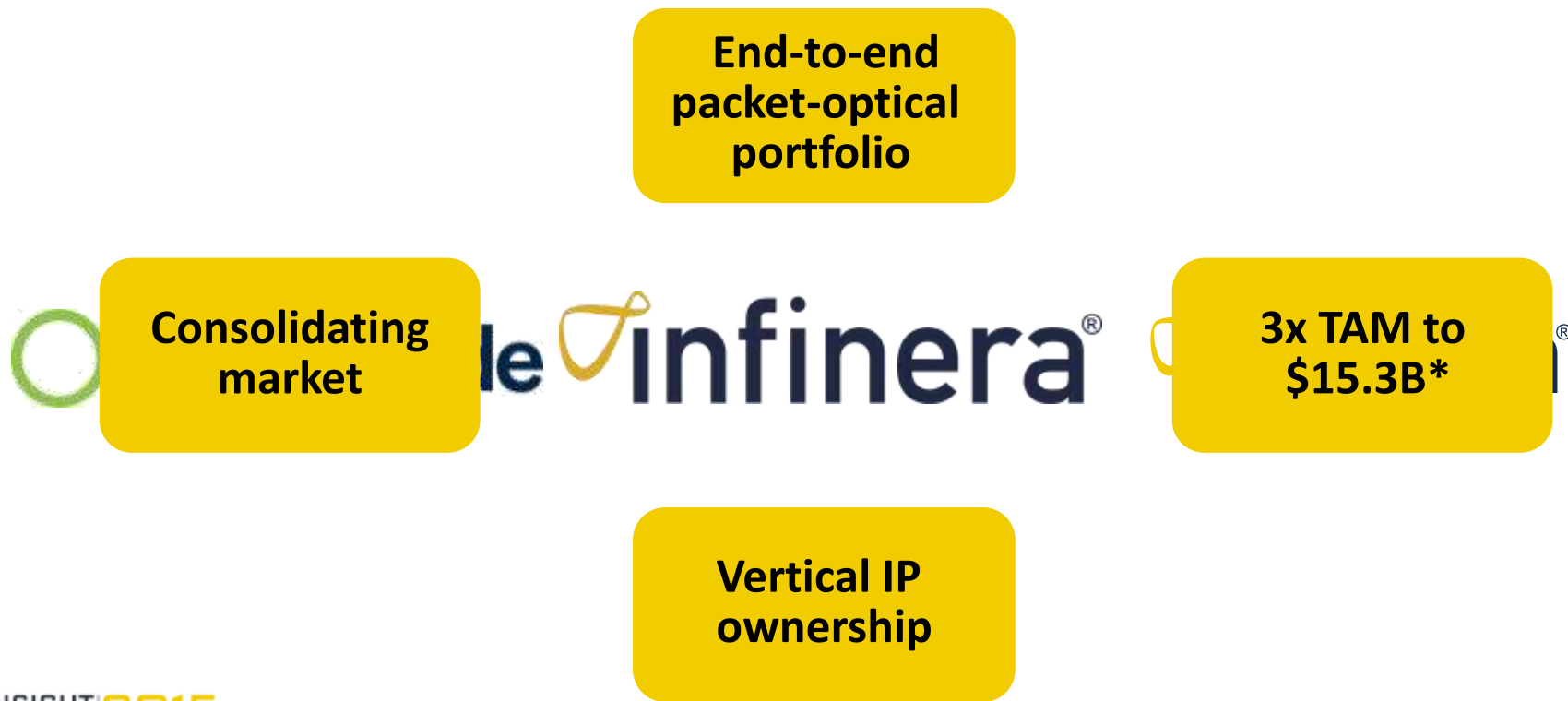
Good Time To Be In Optical Networking

- ▶ Cloud services begin to dominate
- ▶ Once in a decade transition 10G to 100G
- ▶ Networks transforming to Layer C & Layer T architecture

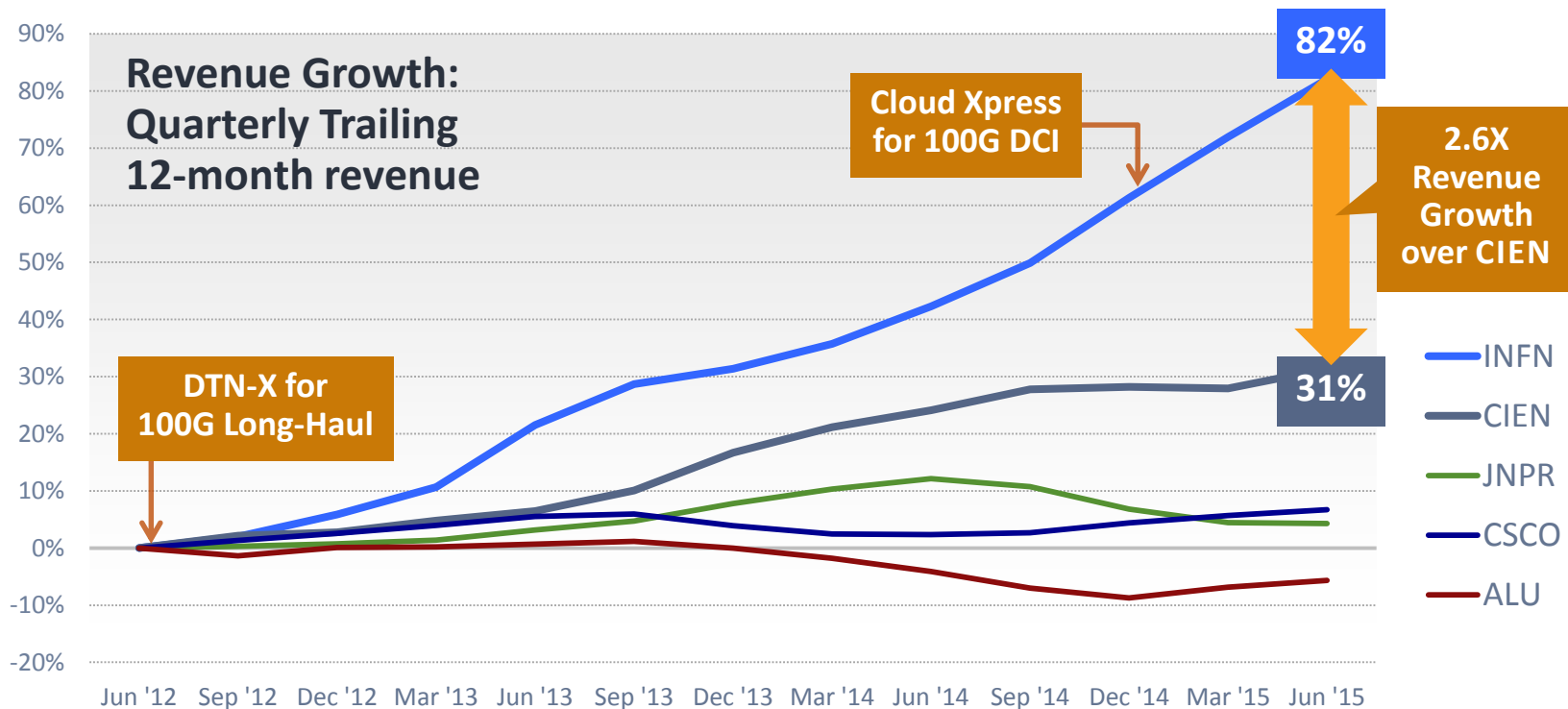


Source: Synergy Research Group

Great Time To Be In Optical For Infinera



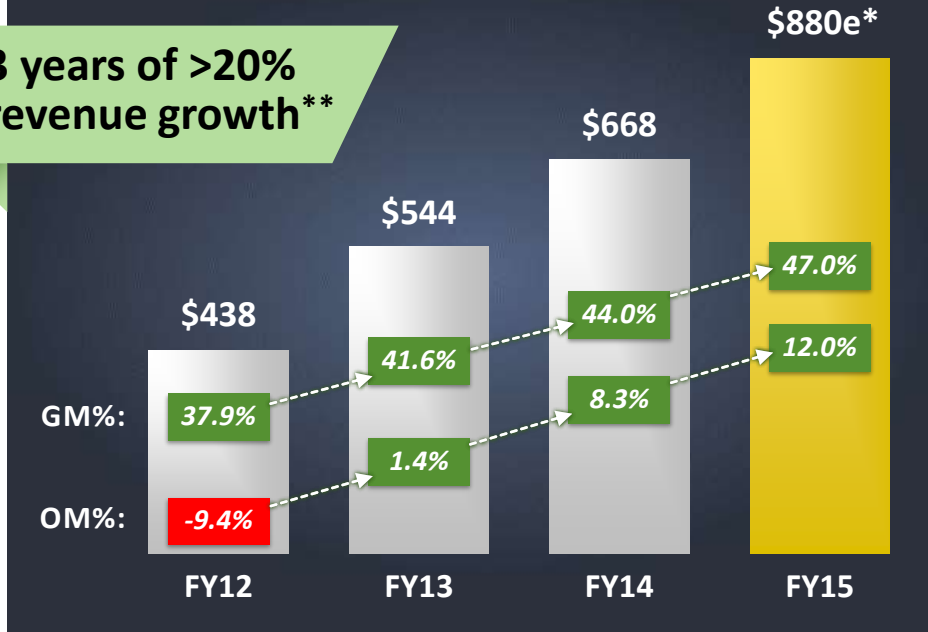
Outpacing Other SP Networking Players



Infinera – Financial Performance

Revenue (in \$m)

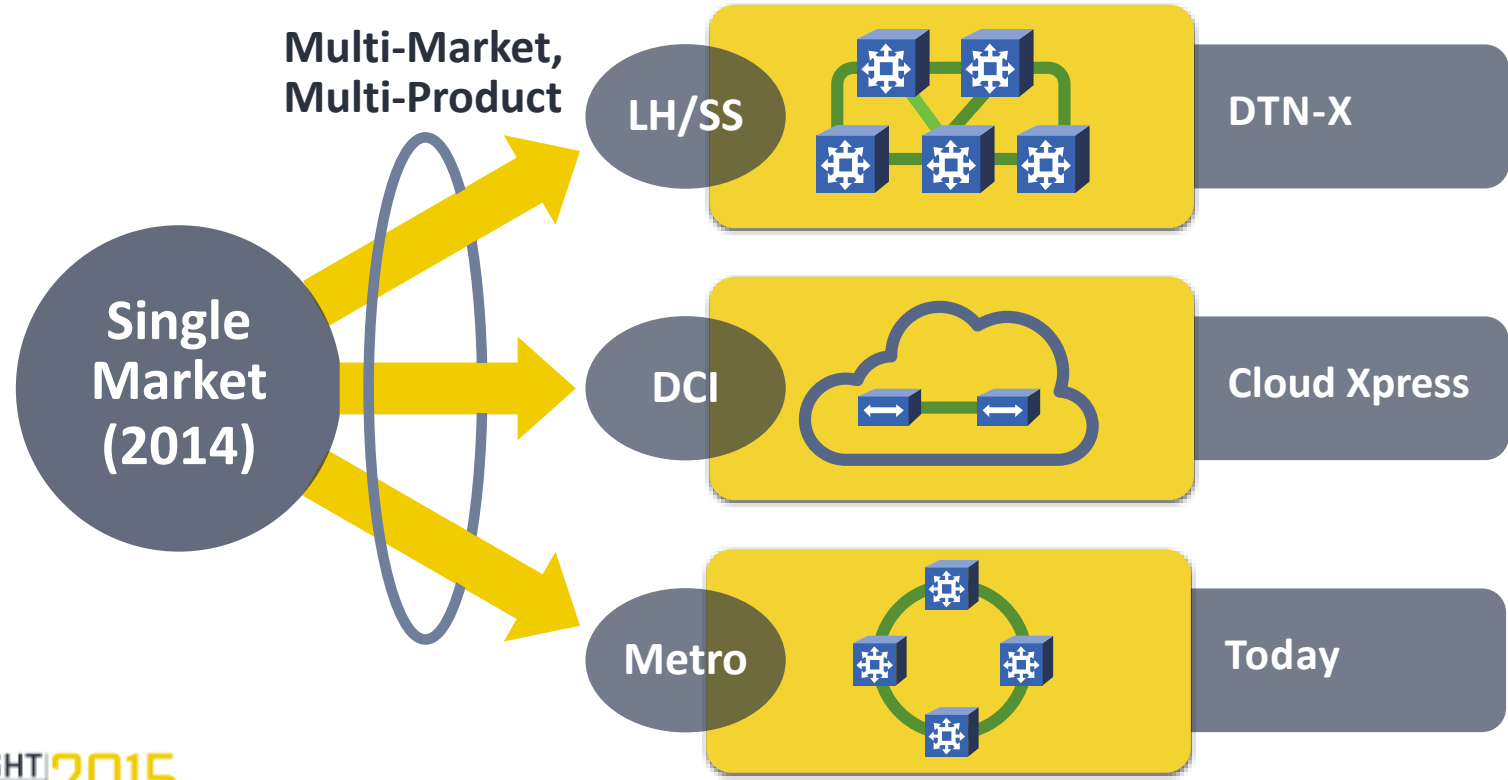
3 years of >20% revenue growth **



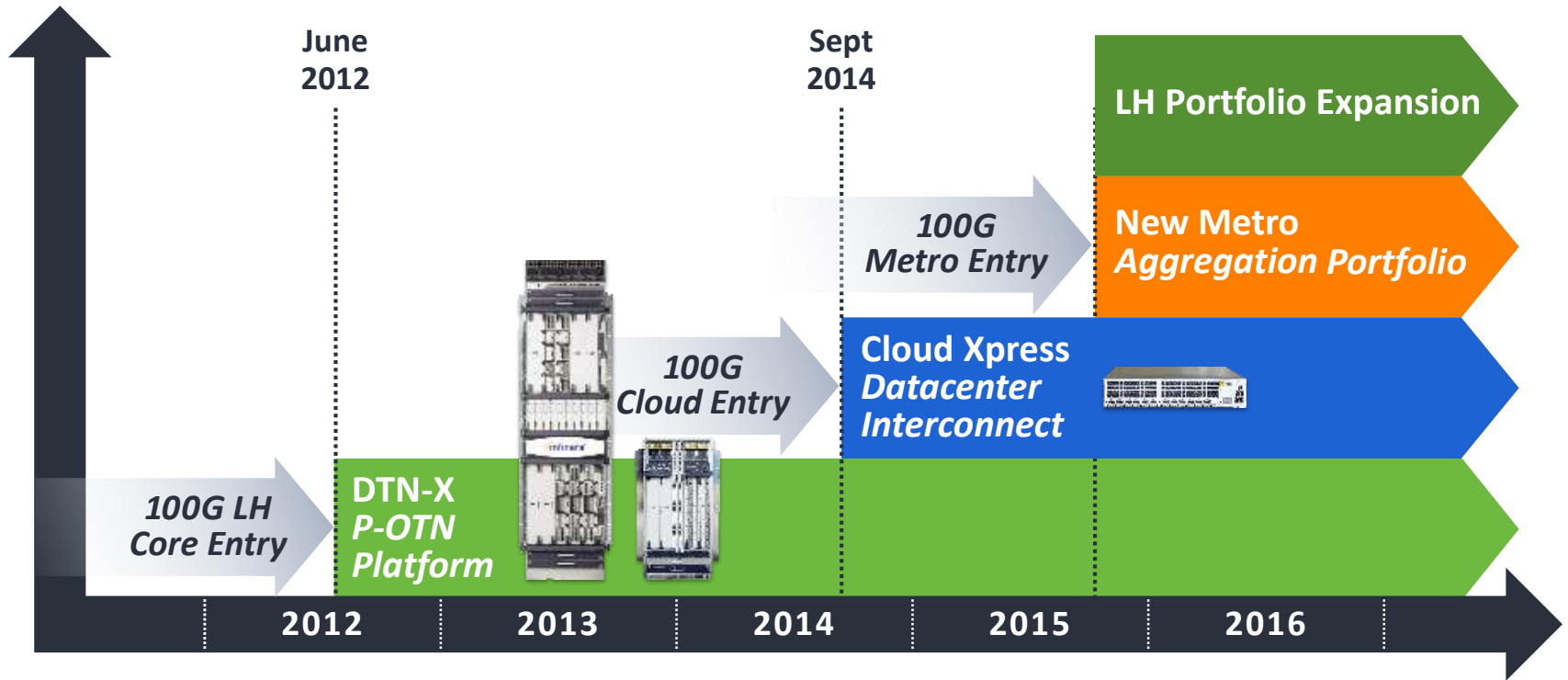
- ▶ Industry leading revenue growth and profitability
- ▶ Solid Balance Sheet
 - Strong cash position
 - Last 4 quarters Cash Flow**:
Cash Flow from Ops = **\$116 million**
Free Cash Flow/Revenue = **11%**

All figures are Non-GAAP. *Incorporates Wall Street consensus as of 9/23/15, consisting of the eight analysts who include Transmode in their estimates (pre-Transmode consensus was \$832 million)
**As of the end of Q2-FY15; does not include Transmode

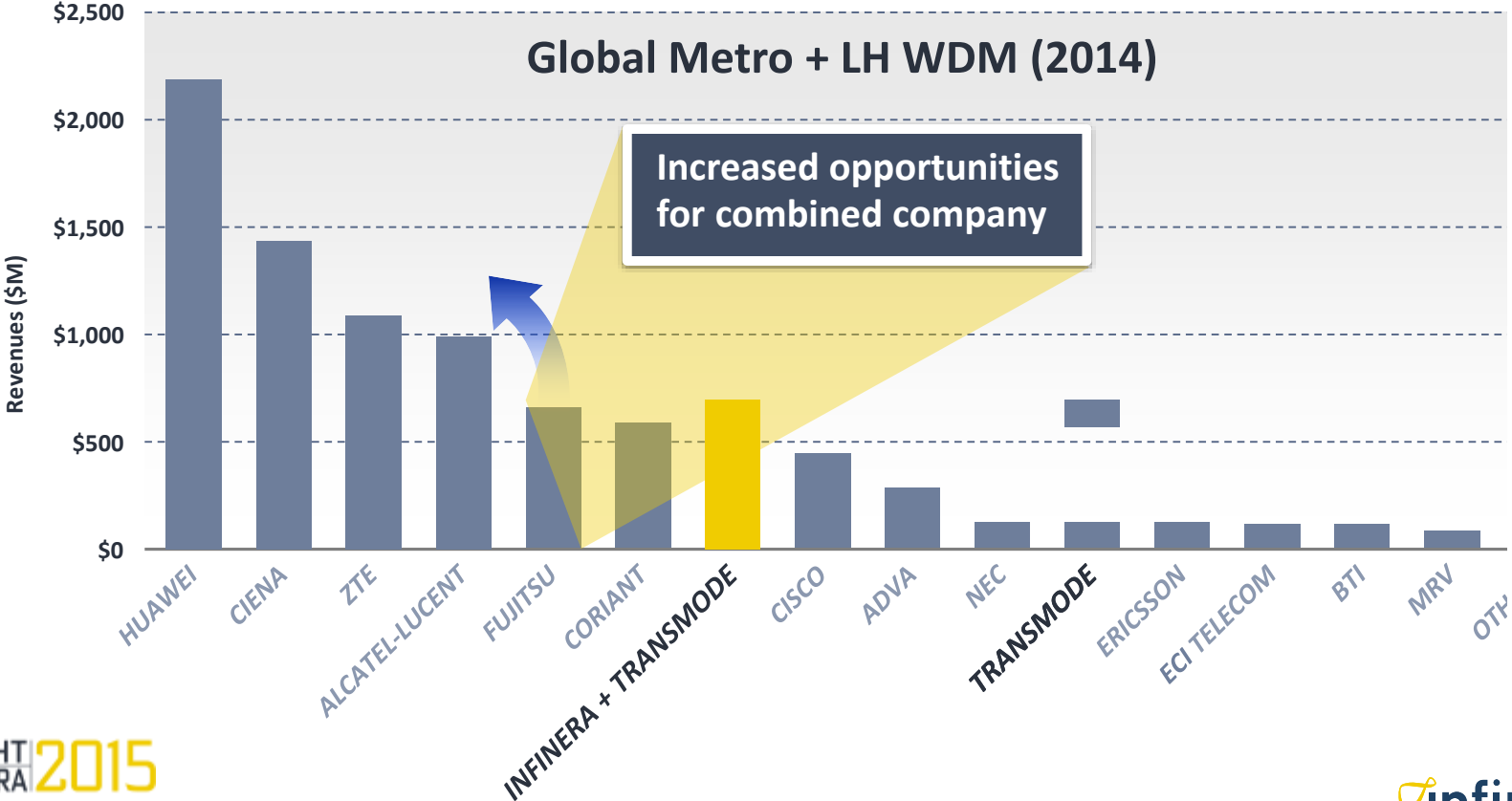
Market Expansion Strategy



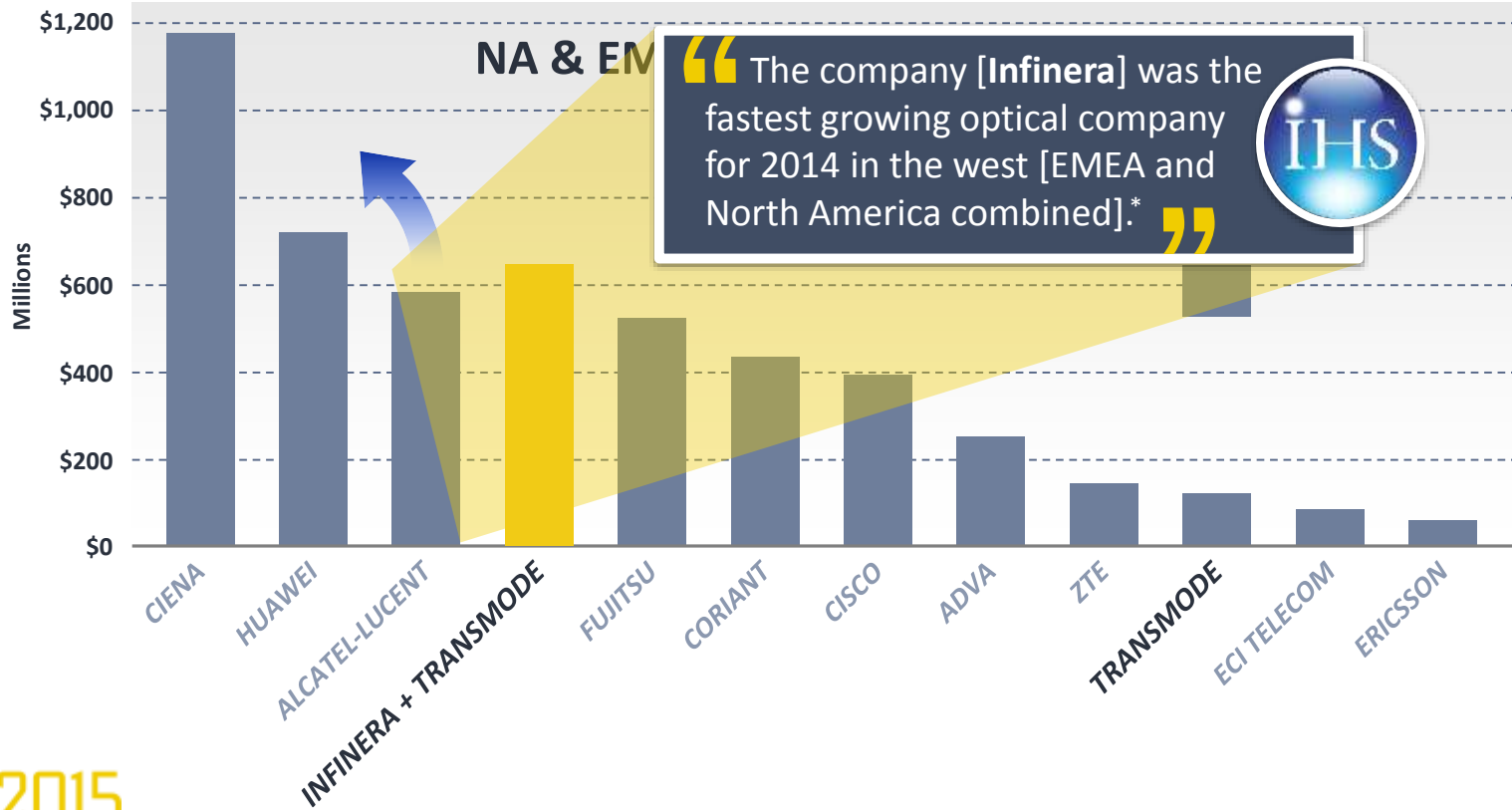
Right Products, Right Time



Infinera's Ascending Global Market Position



Infinera's Ascending N. Am. and EMEA Market Position



Great Time To Be In Optical For Infinera

**100G Metro
Transition**

**Layer T/
Layer C**

Cloud

3x TAM

**Supplier
Consolidation**



Enabling an infinite pool of intelligent bandwidth

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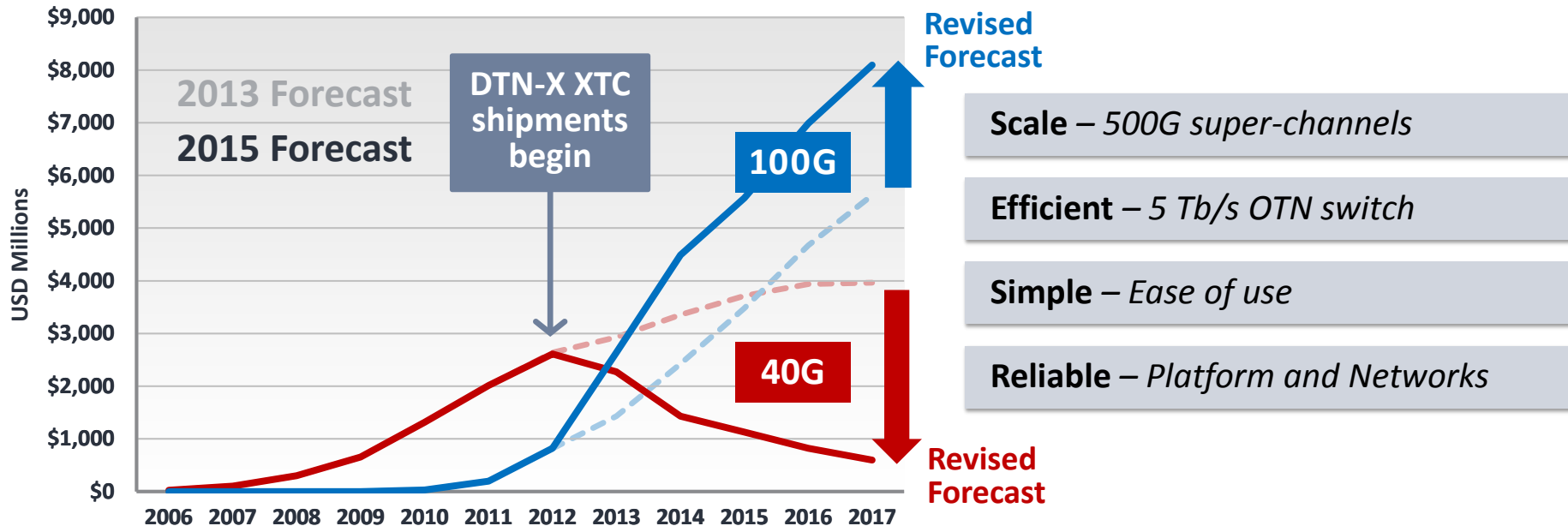
Unleashing Intelligent Transport End-to-End

Dave Welch, President and Co-Founder

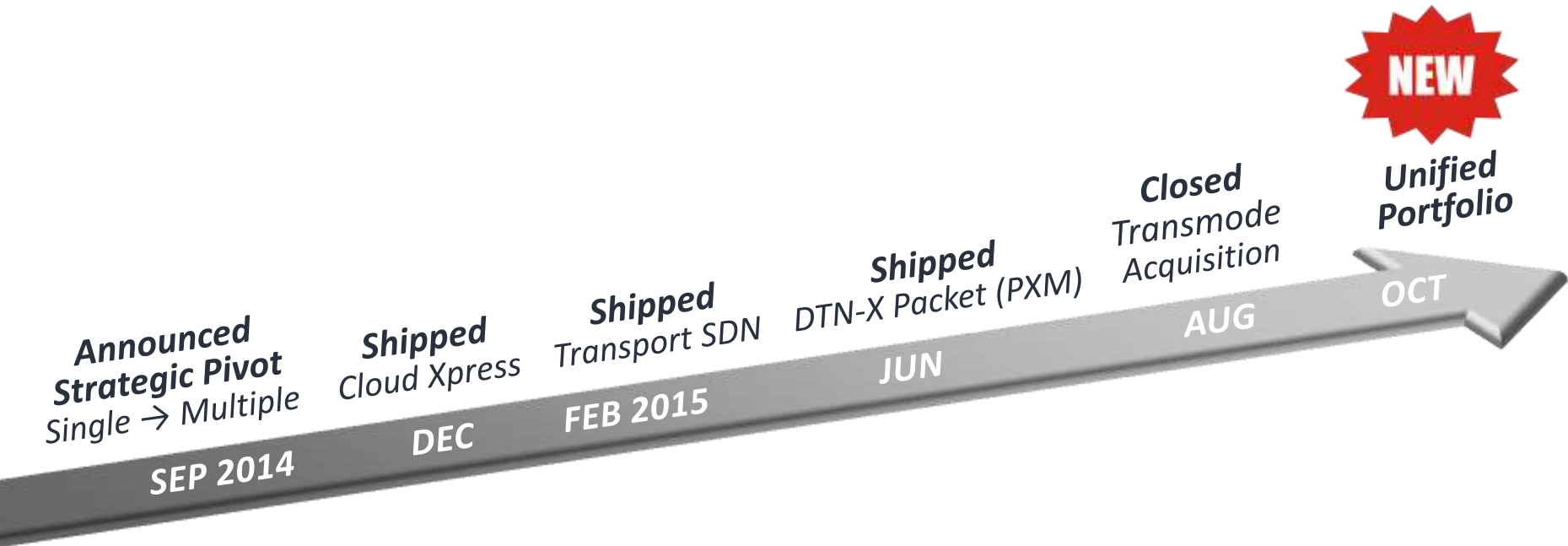
October 6, 2015



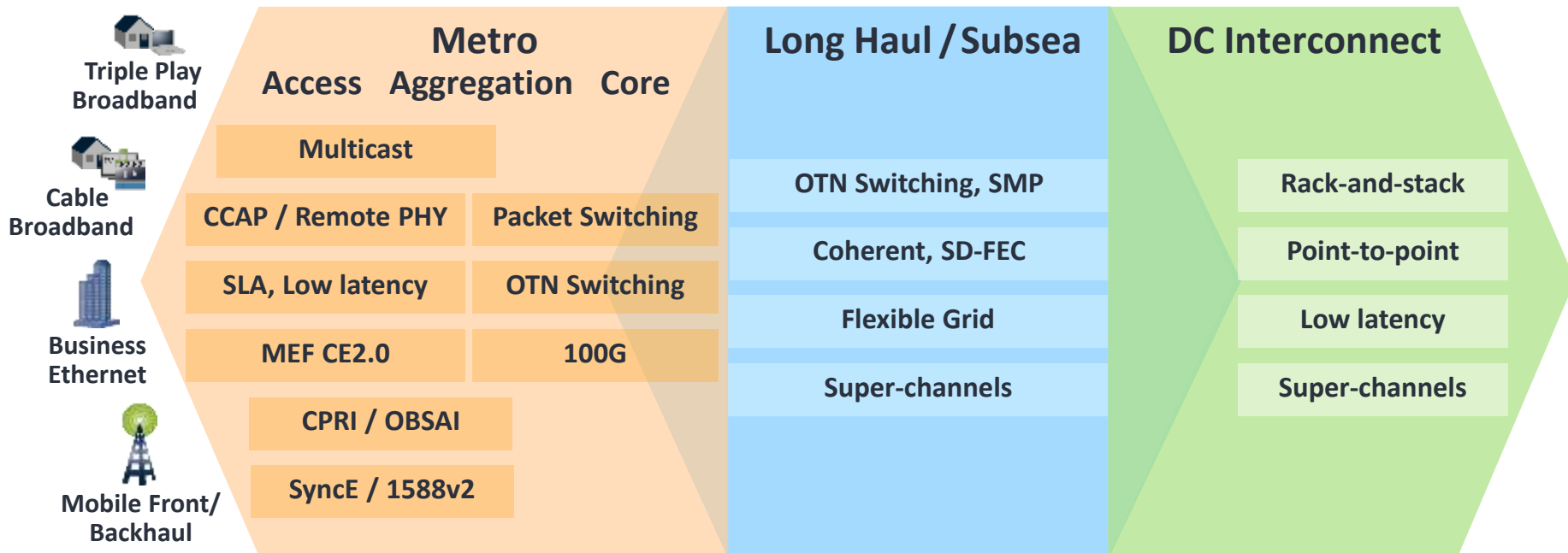
Right Product, Right Time



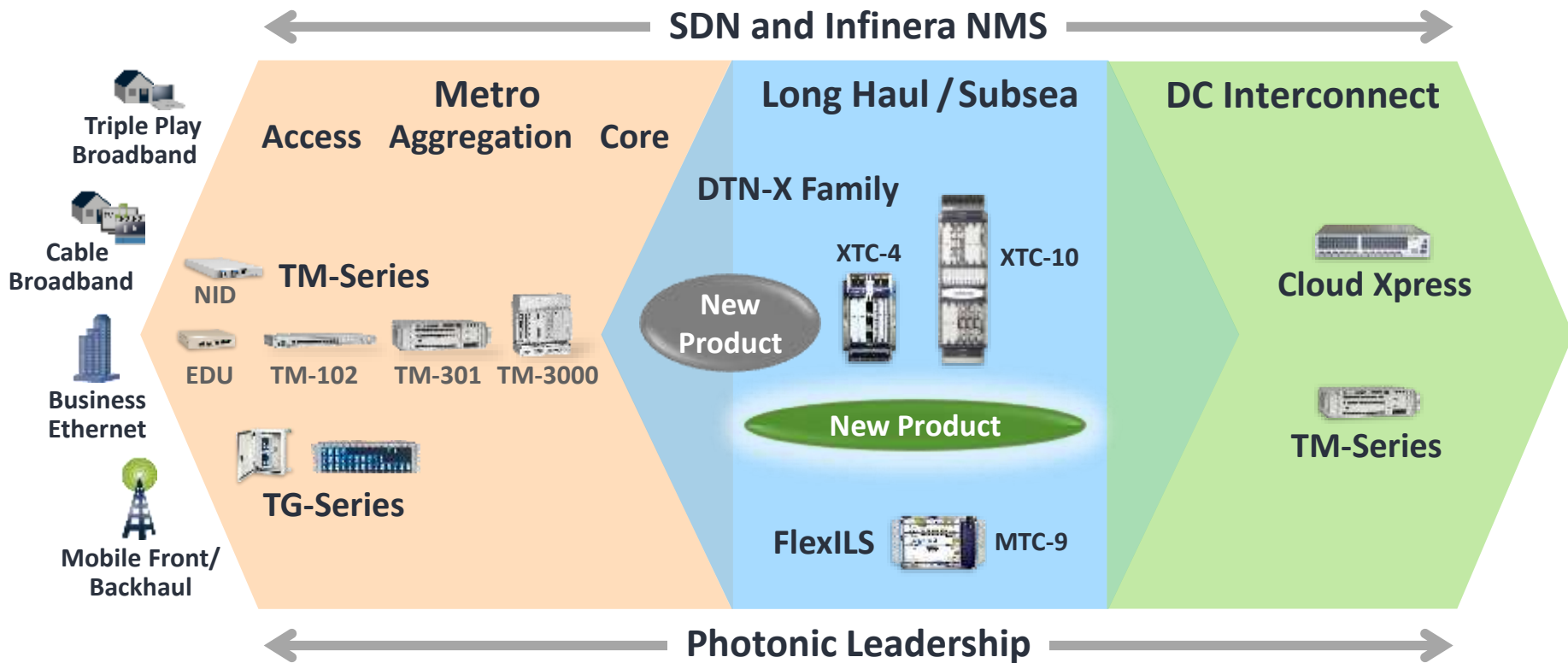
Continued Innovation and Execution



Network Requirements Are Diverse



Application Specific Solutions

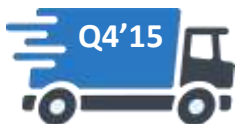


Introducing the DTN-X XT Series



DTN-X XT-500

Shipping this quarter



Scalable

Super-channel; ILS integration

Efficient

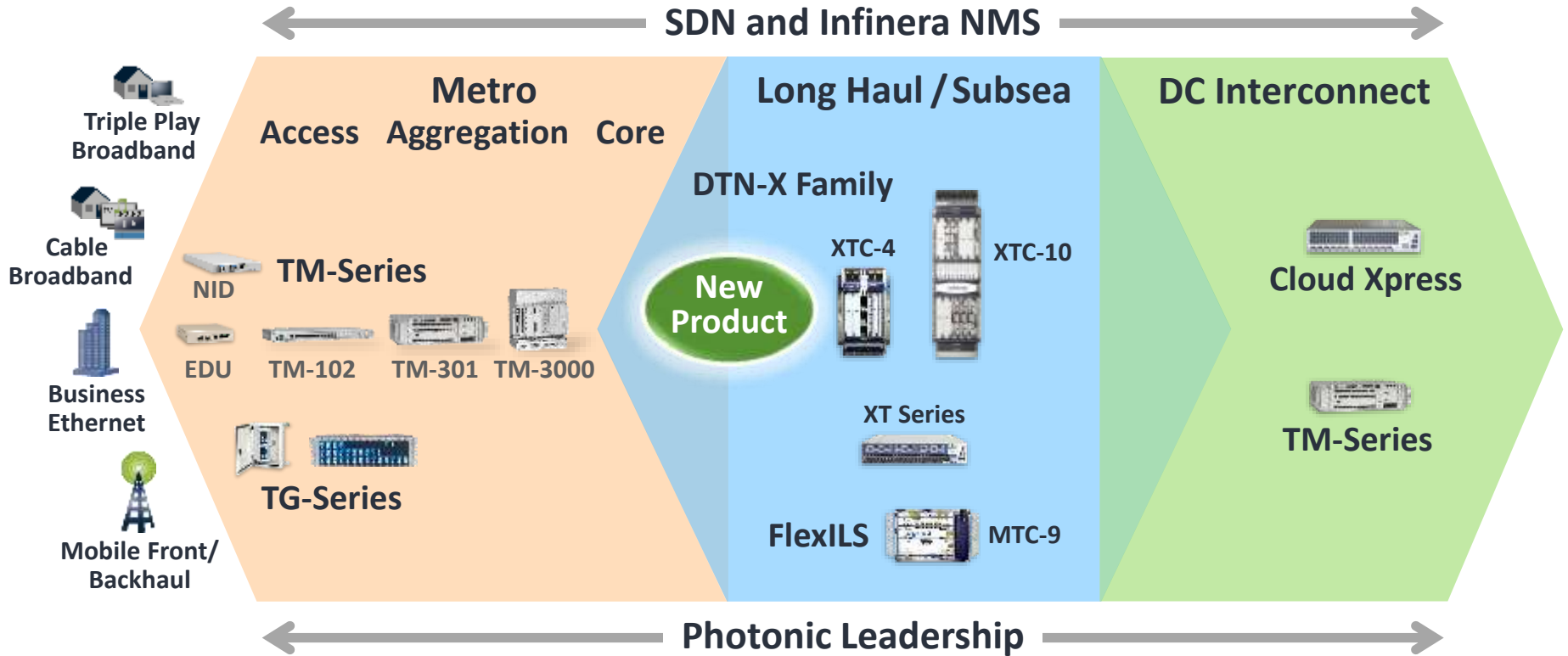
~1W/Gig, 1Tb/s IO 2RU

Programmable

Instant Bandwidth, SDN enabled

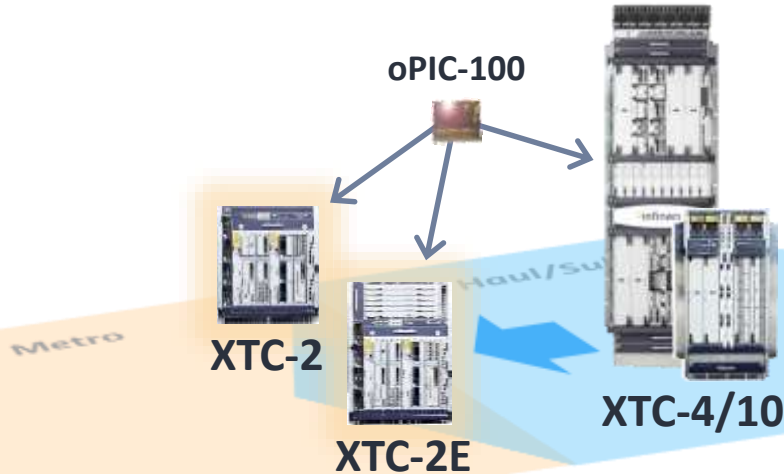
**Long-Haul Point-to-Point Interconnect
Optically Switched (ROADM)**

Application Specific Solutions



Introducing the DTN-X **XTC-2** and **XTC-2E**

Extending the value of DTN-X



Right-sized

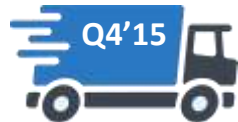
100G, Low space and power

Simple

Converged WDM/OTN/Packet
FastSMP™ resiliency

Programmable

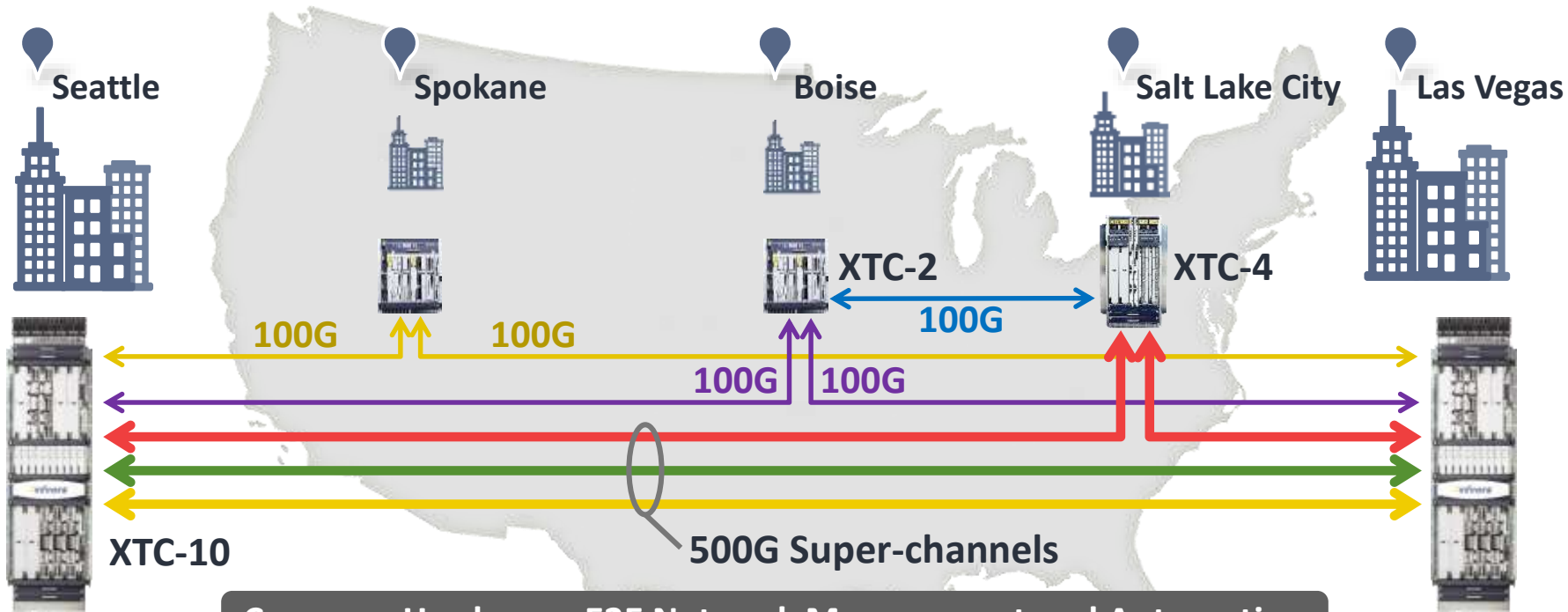
Ease of use, SDN enabled



Investment Protection: Common Modules, Software

Extending the DTN-X Experience to Lower Capacity Sites

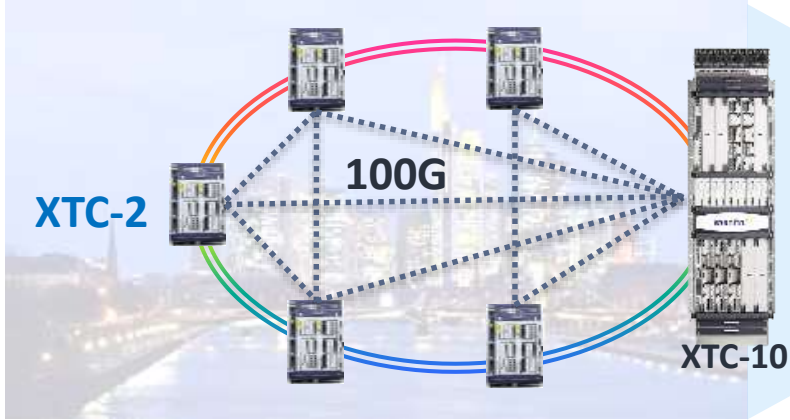
E.g. Right-sized DTN-X XTC for smaller cities



Common Hardware, E2E Network Management and Automation

The DTN-X Family in Action

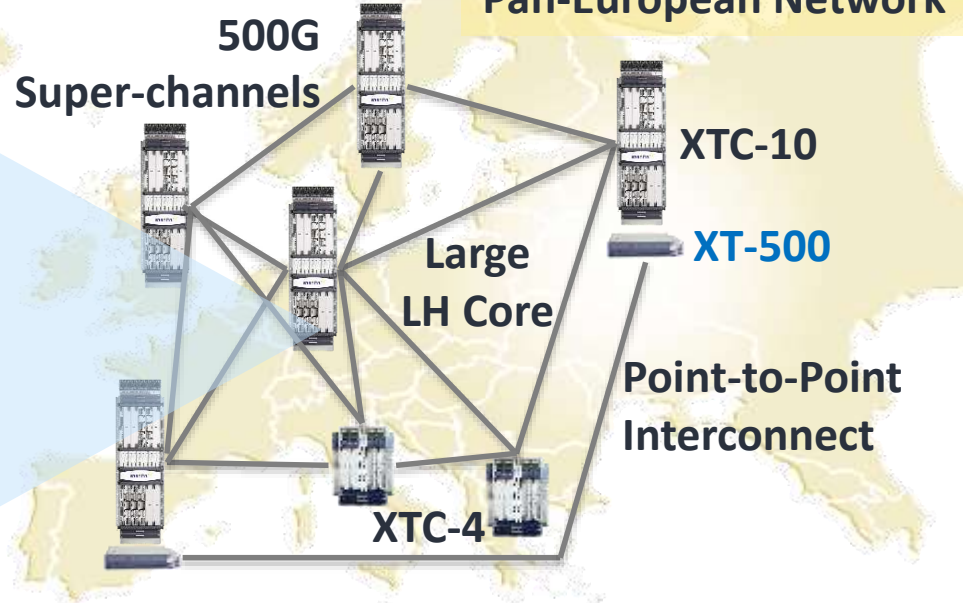
Converged Packet Aggregation
& OTN Switched Metro Core



Frankfurt Metro Area, Germany

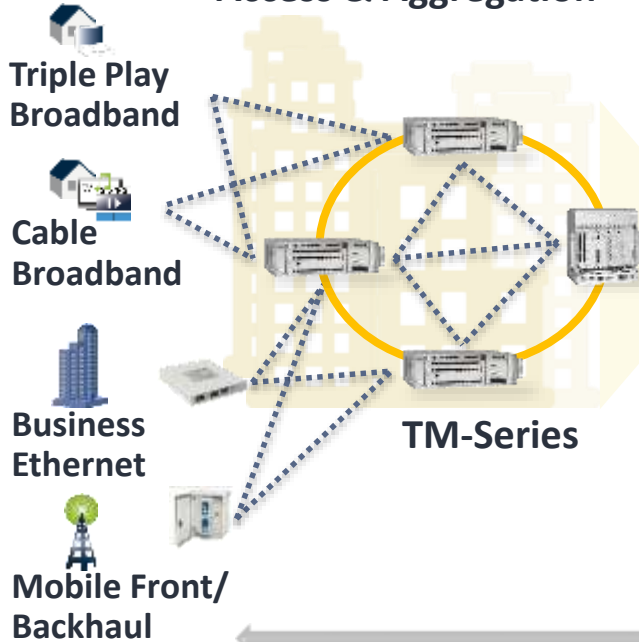
500G
Super-channels

Pan-European Network

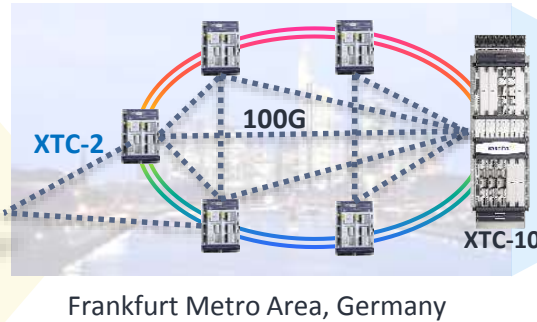


Value of End-to-End

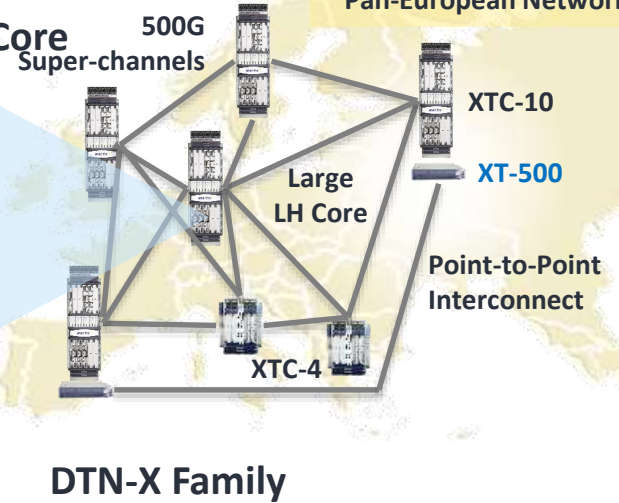
Packet-Optical Switching Access & Aggregation



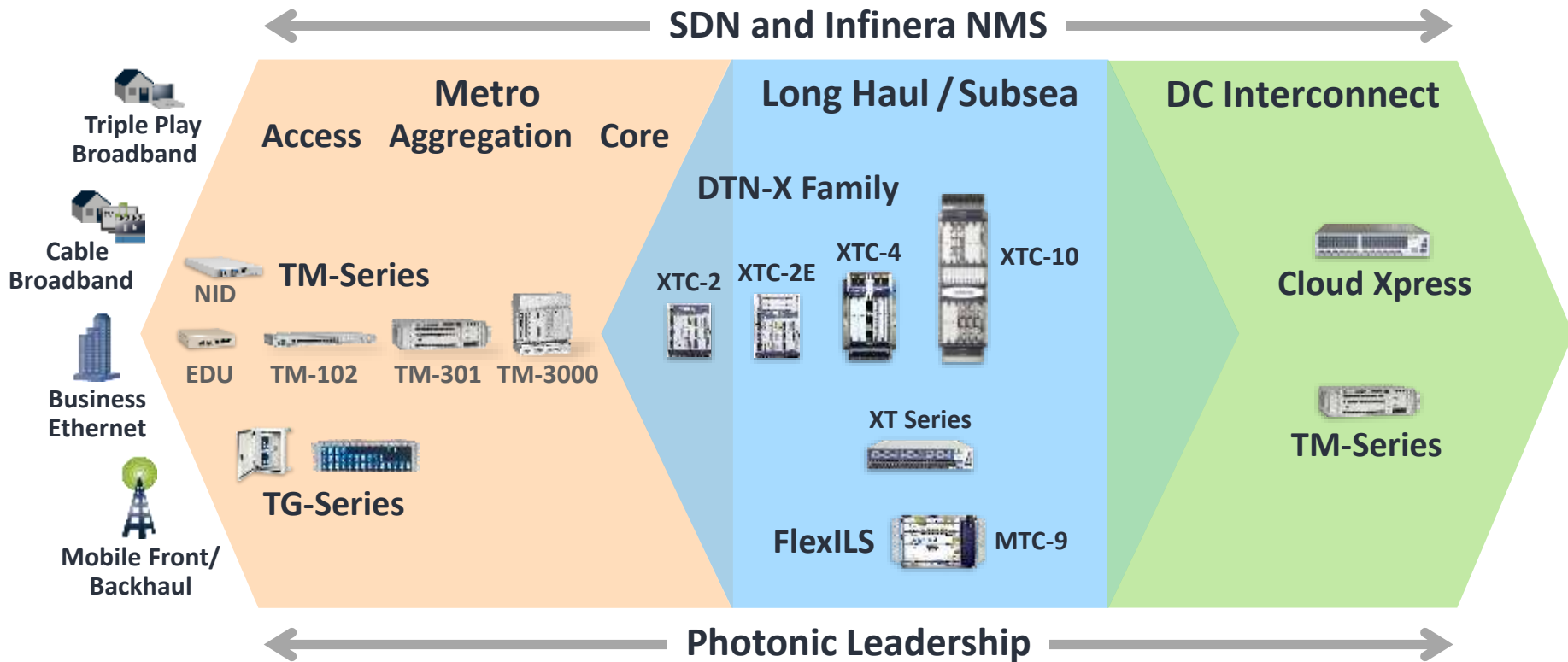
Converged Packet Aggregation & OTN Switched Metro Core



Pan-European Network



The Infinera Unified End-to-End Portfolio



Right Tool for the Right Application

Innovating to address
entire \$15B opportunity

New XT-Series:
High Capacity LH Data
Center Interconnect



New XTC-2/2E:
Packet-OTN Switching
for Regional / Metro Core

TM-Series:
Packet-Optical for Metro
Core, Aggregation, Access

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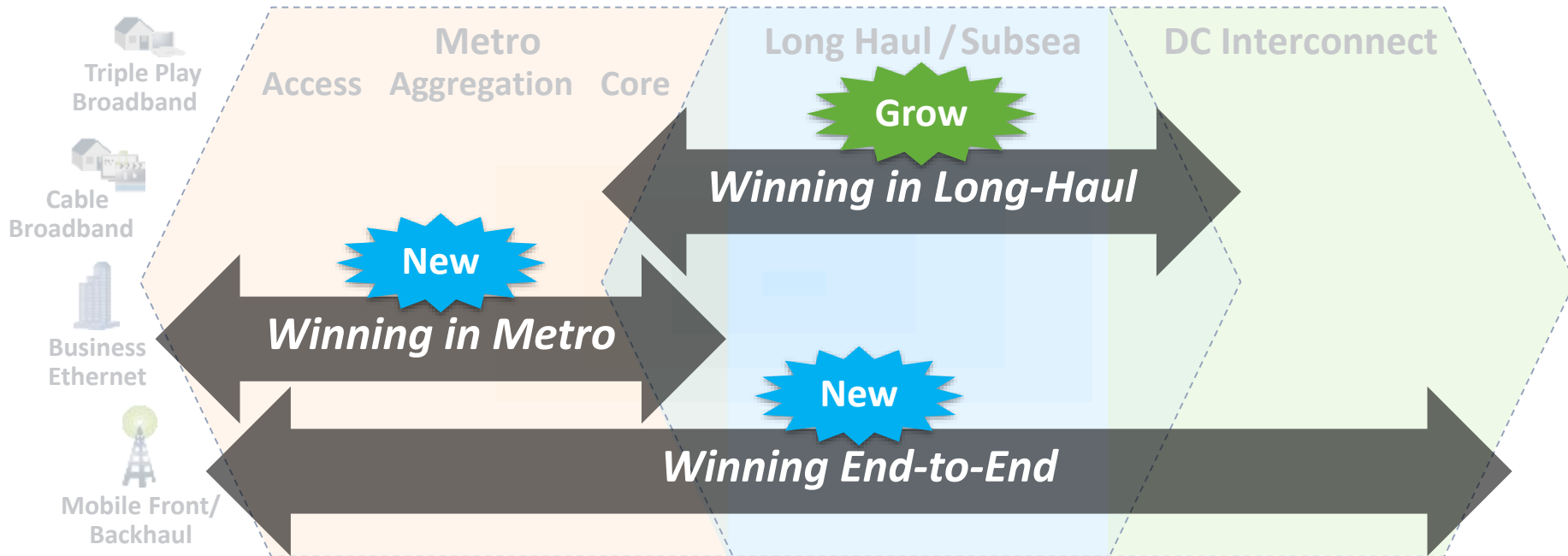
Accelerating the Metro

Karl Thedéen, SVP Head of Metro Business Group

October 6, 2015



Accelerating the Business



Introducing the TM-Series and TG-Series Portfolio

5W/10G
70W/100G

80 x 10G
in 13RU

Innovative Packet-Optical Integration

Simple scalable architecture

Leading transport performance

< 5 ns

Sync E
1588v2



NID

TM-Series



EDU



TM-102



TM-301



TM-3000



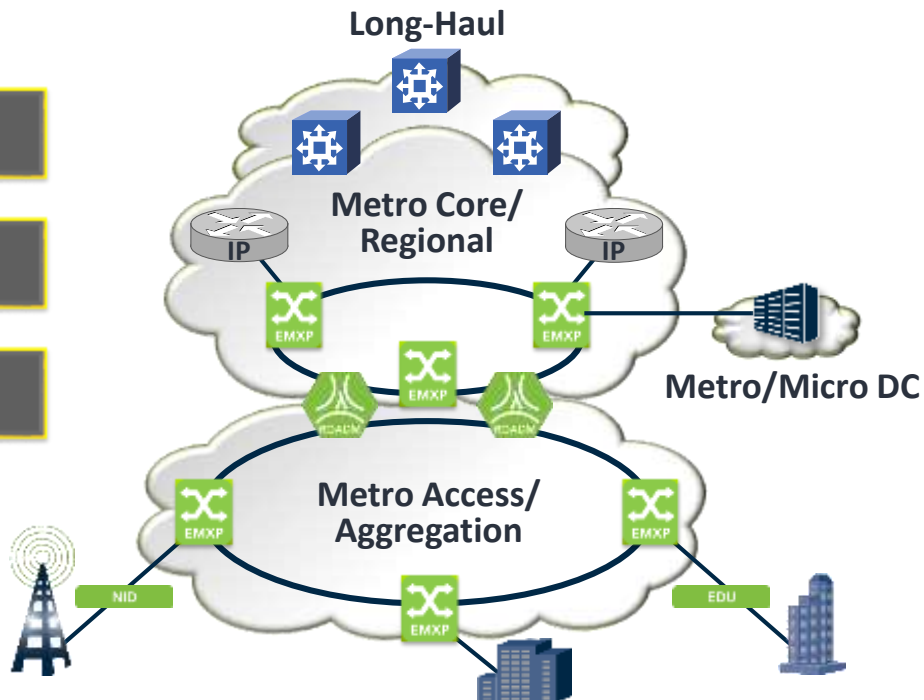
TG-Series

Metro Networks Are Application-Oriented

Cable MSO Evolution

Business Ethernet

Mobile Evolution



DTN-X Family



TM-Series

100G and Packet-Optical in Metro

Portfolio Ready for 100G Coherent Metro Ramp

DEPLOYED 100G TODAY

*Layer 1 – 100G
Transponder
and Muxponder*



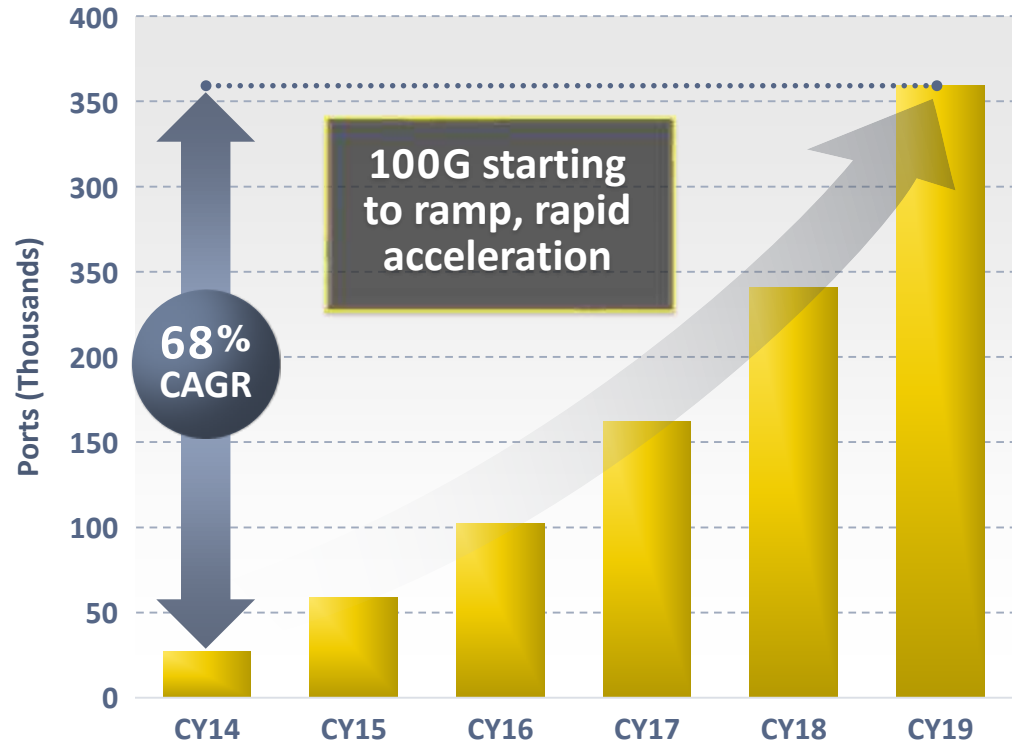
*Layer 2 – 220G
Packet Optical
Transport Switch*



NEW TECHNOLOGIES



*PIC and
FlexCoherent*



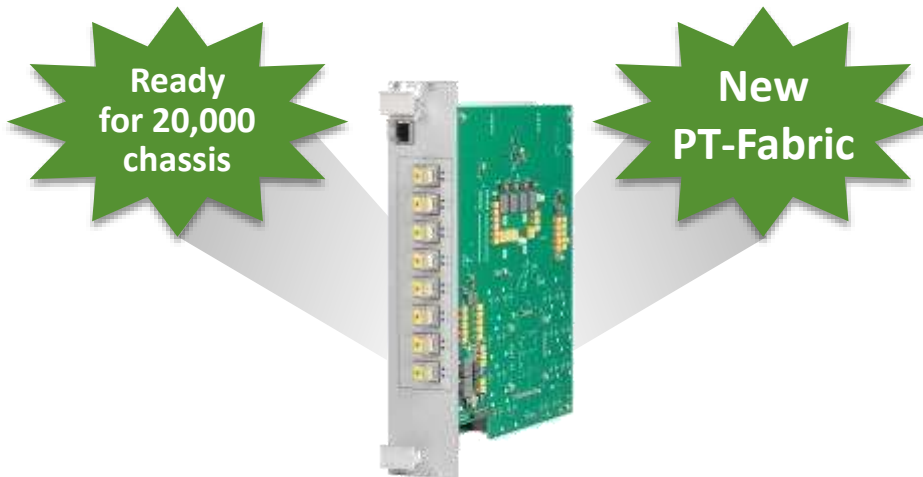
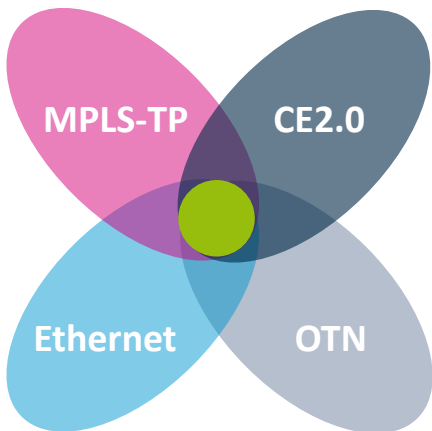
Packet Optical Goes Terabit

Transport performance Switch
on a blade architecture

Terabit switching with PT-Fabric

Unified edge to core

100G Packet-Optical Networking

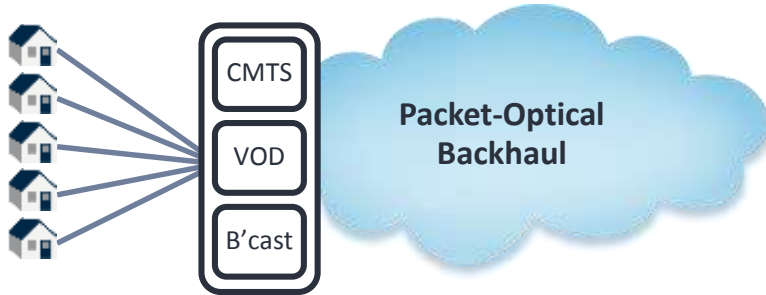


Cable MSO Evolution

TODAY

Broadcast TV, VOD and 100M Internet

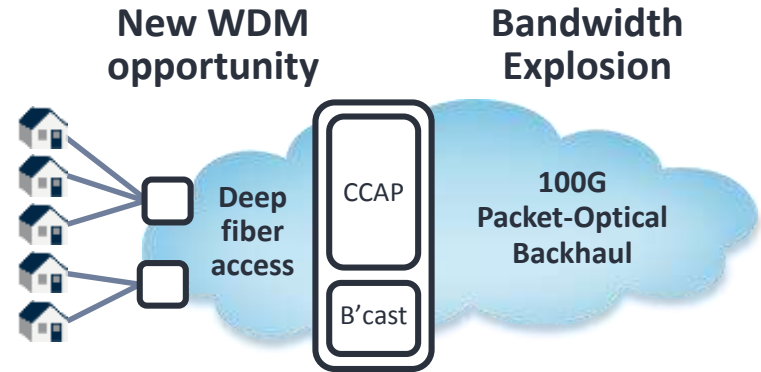
CMTS + VoD + Broadcast



2016+

4K and UHD TV and 500M+ Internet

Converged via CCAP, Remote PHY



Service Expansion: Business Ethernet

TODAY

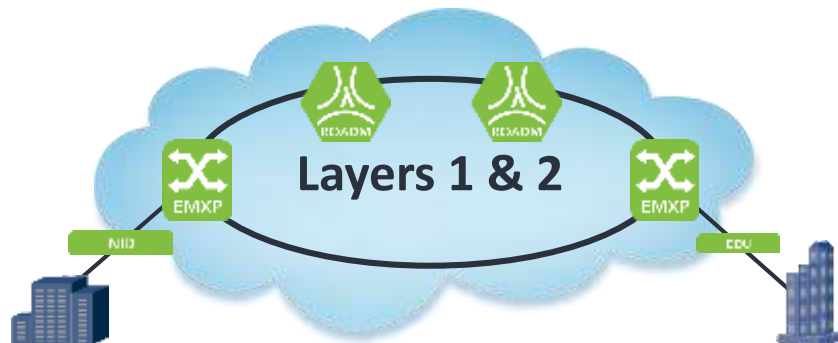
Transport services

Opportunistic

2016+

Full suite of enterprise services

Strategic



Mobile Evolution

TODAY

Traditional RAN

Widespread 3G/4G Backhaul



2016+

Cloud-RAN

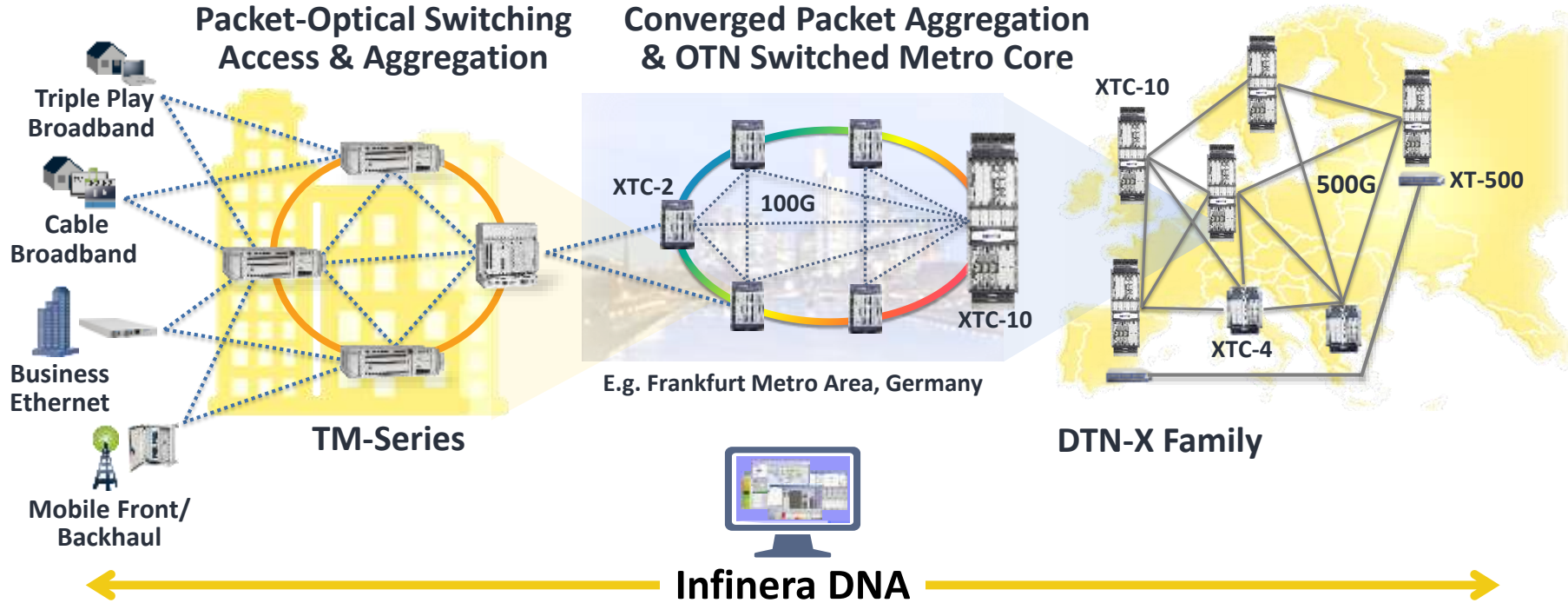
Emerging Fronthaul for LTE-A/5G

New WDM opportunity

Bandwidth Explosion



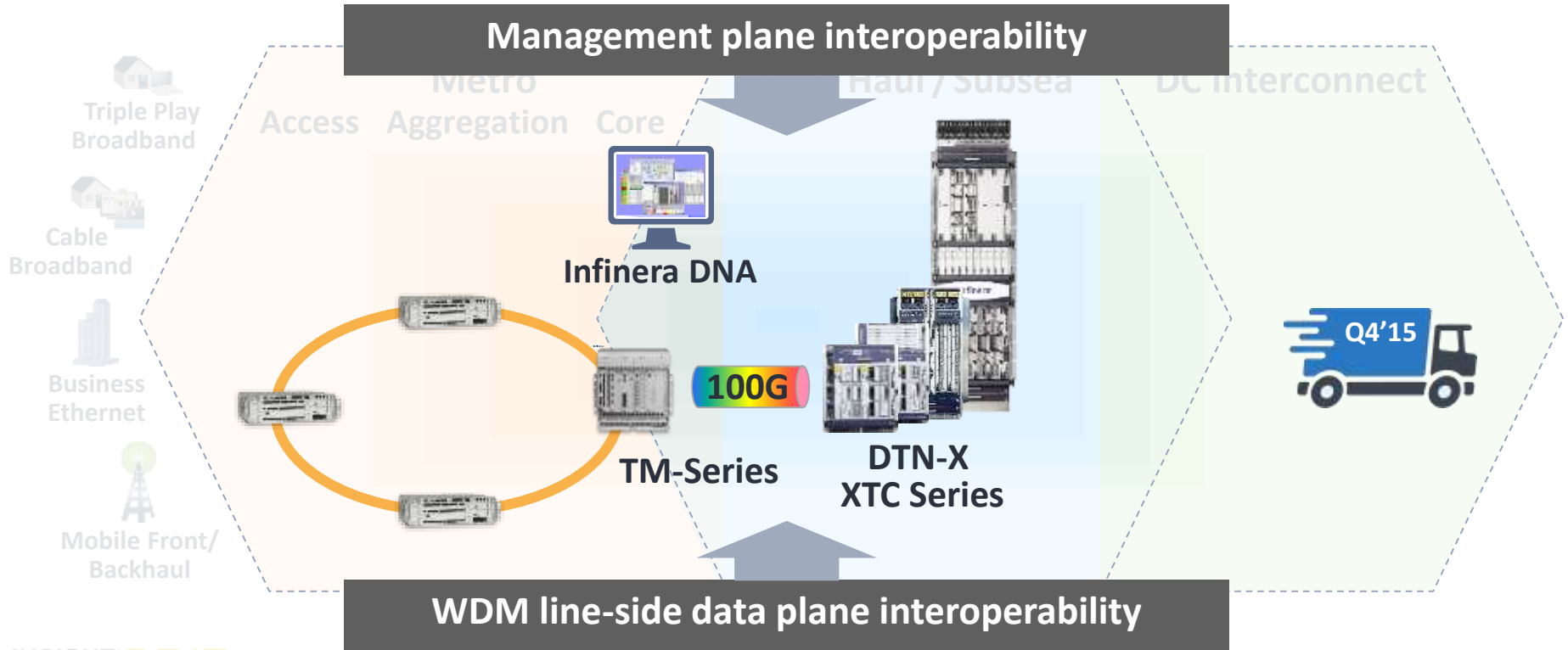
Value of End-to-End



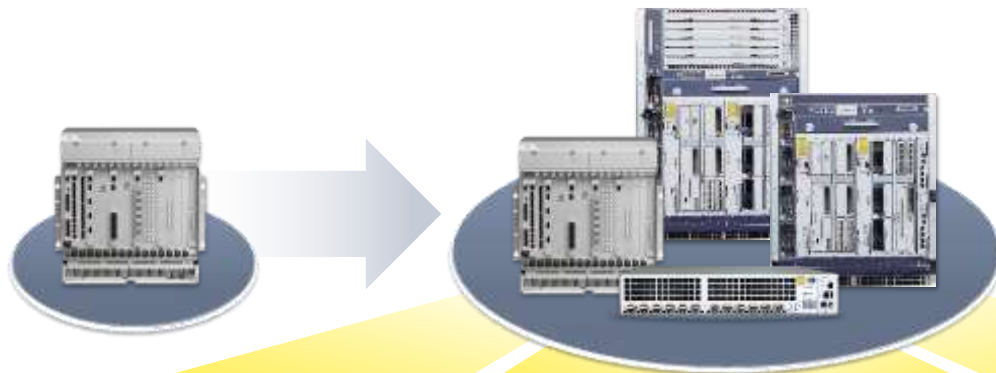
Demo Video



Infinera's First Unified Solution: TM-Series + DTN-X XTC



Winning in the Metro



**Expanded Portfolio
with “Best in Class”
Metro and Long
Haul solutions**

**Worldwide
Brand,
4x Salesforce**

**Significant
Increase in
Addressable
Market**

**Combined
engineering base
and technology
leadership**

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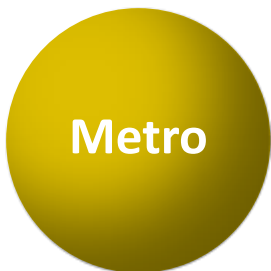
What the Network Will Be

Dave Welch, President and Co-Founder

October 6, 2015



Committed to Invest, Right Bets



Automated & Programmable

Application Rich

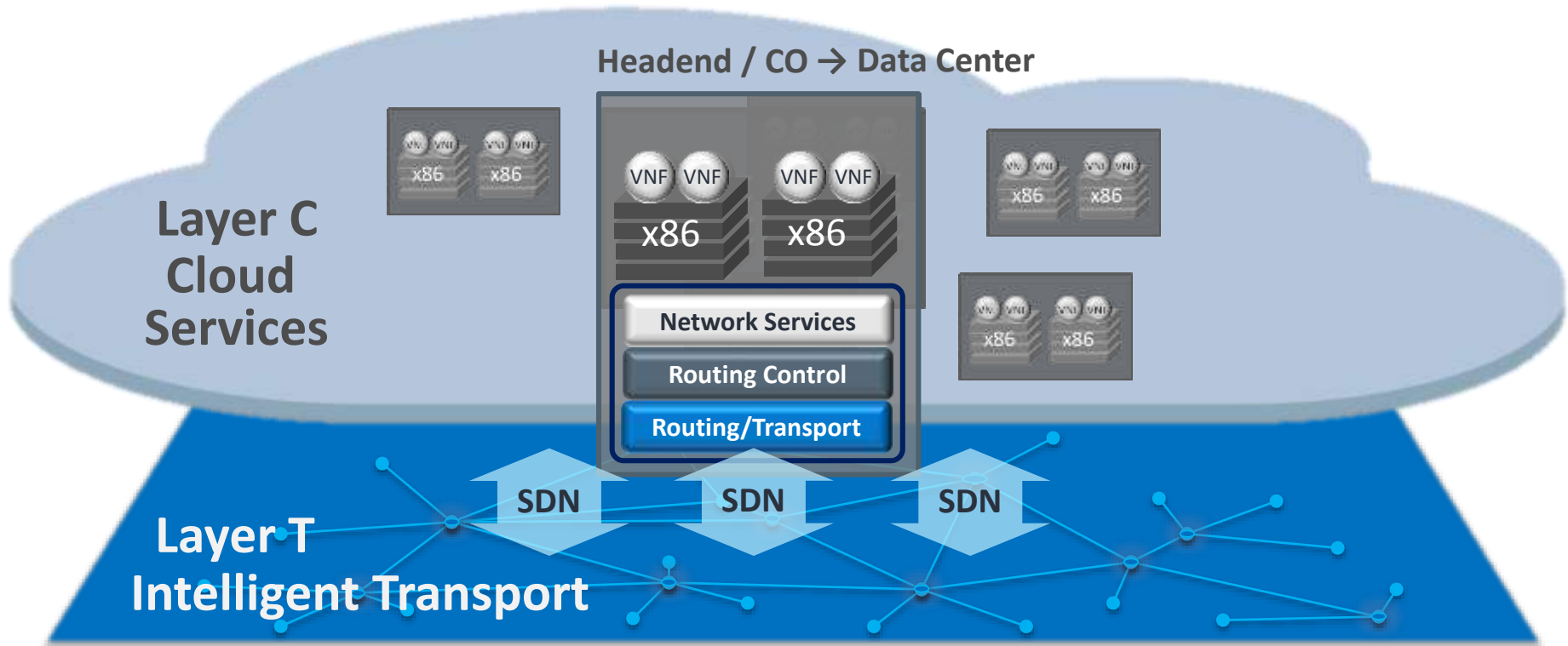
More Capacity/Reach

Hyper-scale, DevOps

Common Technologies

**Optimized Solutions
Increased Share of \$15B TAM**

Networks Are Transforming



Building the Best Layer T End to End

**Programmable
and Agile**



SDN Control and Open APIs
DevOps, Rapid service creation/delivery

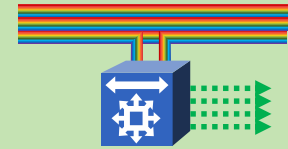


SDN-Virtualized
Optical

**Flexible
Granular Control**



Packet, Digital, Optical Switching
Rich applications, efficient networking



Packet, OTN,
ROADM Switching

**Scalable
Optics**



Best-in-class right-sized optics
Max capacity, minimum space/power/cost



Industry's only
Large Scale PICs

Long Term Strategy – Vertical Expansion

Router Market → 2% CAGR

Expanded Opportunity with SDN-enabled
Packet-Optical Solutions

Metro

LH,
Subsea

DCI

Automated & Programmable

Application Rich

Transport Market → 9% CAGR

Hyper-scale, DevOps

Common Technologies

Right Products at the Right Time



**DTN-X
XTC-2 & XTC-2E**



**Optimized 100G for
OTN switched metro**



TM-Series DTN-X XTC



100G



**Unified Packet-Optical
for the Metro**



**DTN-X
XT-Series**



**Long Haul Point-to-
Point Interconnect**

Unified End-to-End Portfolio – Foundation for Layer T

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windstream



colt

The Evolution of Service Provider Networks

 **infinera**[®]



Windstream's Transport Network

Randy Nicklas

CTO & EVP of Engineering
Windstream Communications

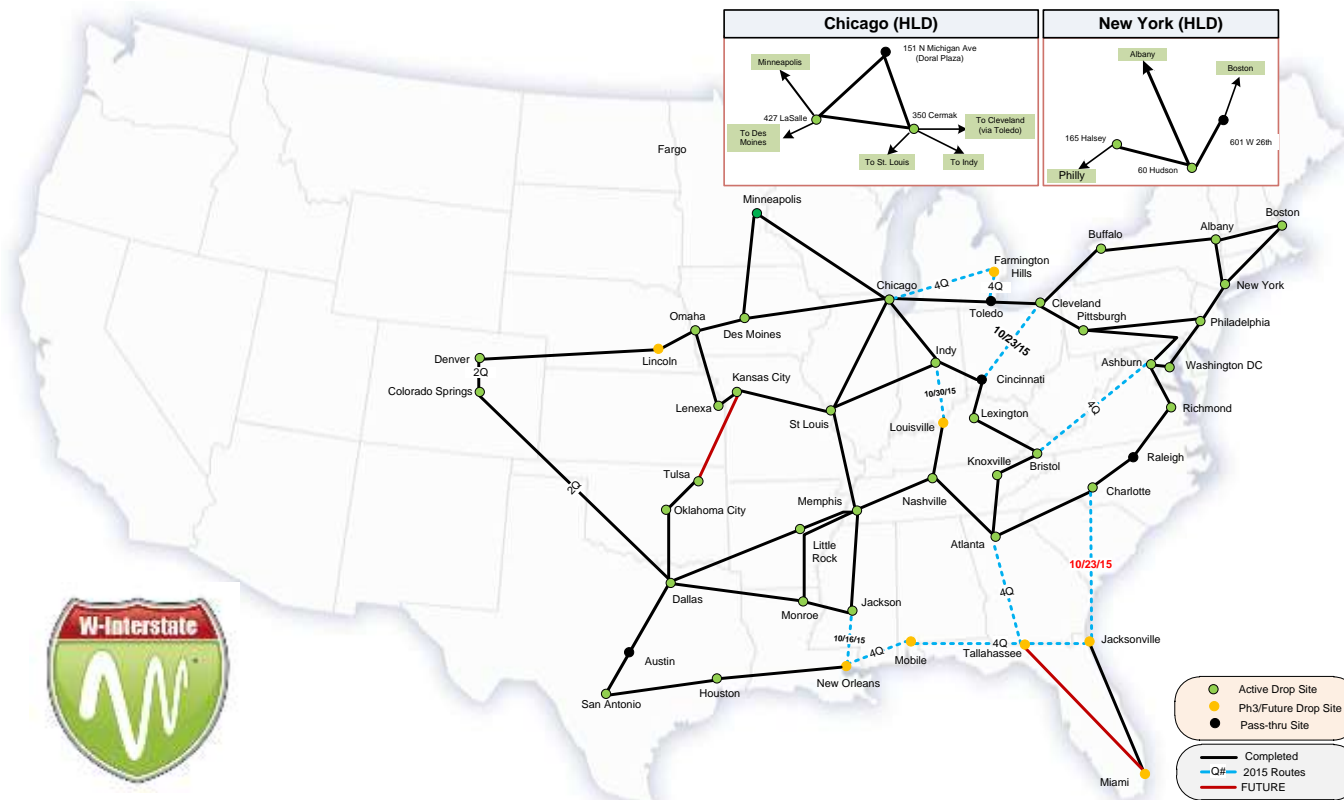




- A national wireline telecommunications service provider serving Enterprise, Consumer and Carrier customers in 48 states.
- A full suite of advanced network, cloud and managed services.
- A complete set of network assets
 - 118,000+ route mile fiber optic network
 - Single converged IP/MPLS network
 - Extensive Data Center and Cloud capabilities

- Windstream History
 - 2006 Wireline spin-off of Alltel (ILEC + CLEC)
 - Further ILEC acquisitions
 - CLEC acquisitions in support of a National footprint
 - Total of 9 acquisitions 2006-2012
- Extreme Network Diversity in all layers (Physical, Transport, Data & Voice)
 - Significant network component overlap
- Extreme BSS/OSS Diversity
 - One of our largest challenges
- 2013 forward: Network Rationalization programs
 - IP/MPLS (on-going)
 - Transport (on-going)
 - Voice (on-going)
 - Pick or introduce go-forward platforms/vendors
 - Cap or decommission legacy platforms
 - Focus on operational considerations, service delivery intervals and capital

Winterstate LH DWDM Network



- **Single Transport Network to Provision and Operate**
 - Towards a programmable network with more API and less human interaction
 - Requires network simplification and realistic expectations/timelines for any chance of success

- **Across all domains: long-haul, regional and metro**
 - All-Ethernet metro rationalization and growth a key focus area
 - Metro fiber network expansion & associated access and transport network platform builds in strategic markets underway
 - Increase Winterstate (LH DWDM) capillarity overall and gateway density in strategic markets
 - Drives our interest in Infinera product line expansion/Metro Business Group

- **Across all (go-forward) vendors**
 - Stove pipe platforms no longer a viable modus operandi

- **Technology driven capital and operational expense efficiencies**
 - Infinera as a vendor/platform is our benchmark

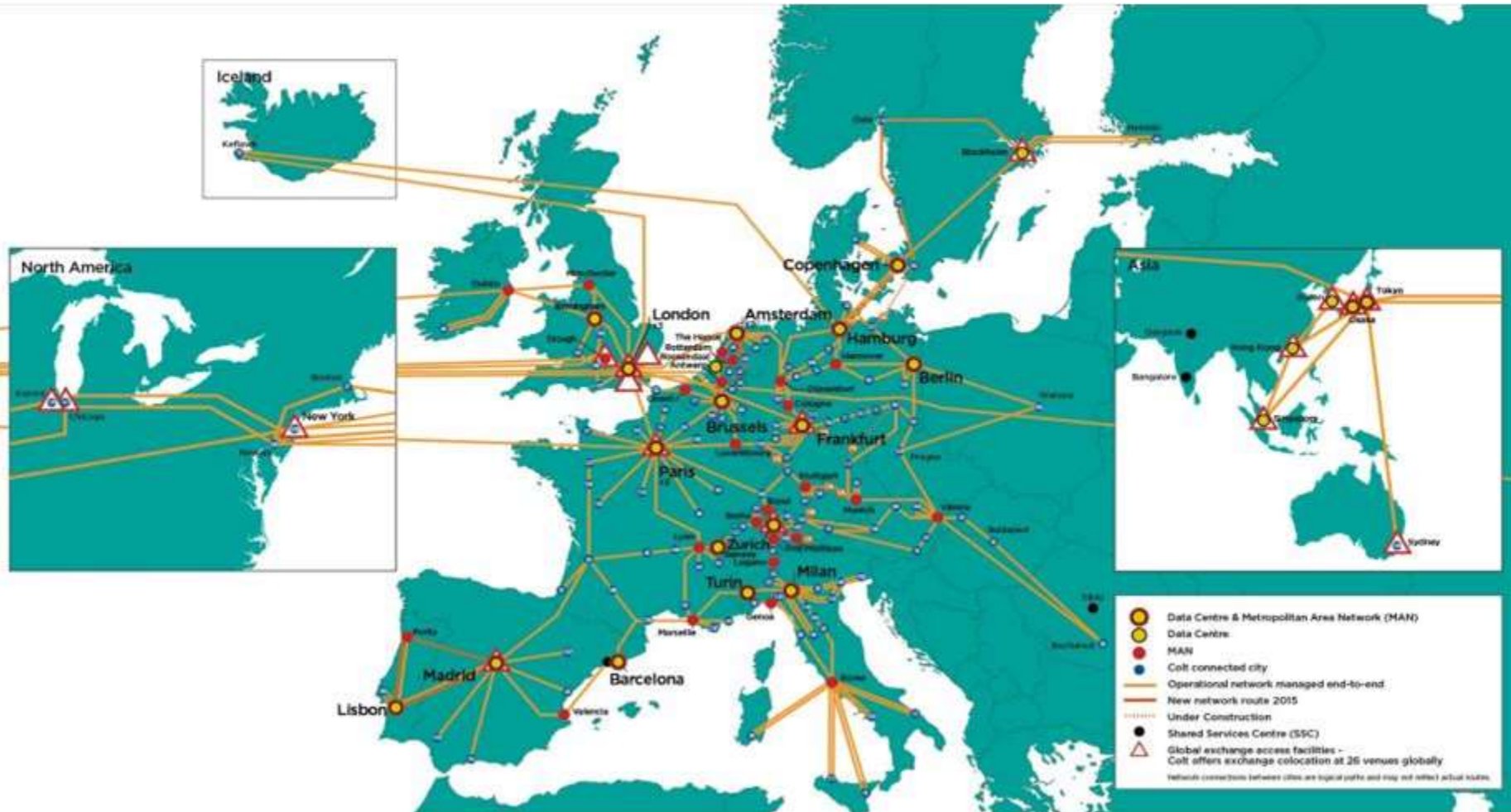
- **Easier network planning and operations**
 - Infinera as a vendor/platform is our benchmark

What's next in Metro

Nicolas Fischbach

Strategy, Architecture and Innovation Director





184k+

LDN, metro fibre
and subsea &
terrestrial leased
capacity

29

Carrier neutral Colt
owned and / or
managed data
centres

500+

Network to Network
interfaces

23k+

Buildings directly
connected

3

Continents

537

Colt-connected
data centres

50+

Industry awards

207

Cities connected

86

Countries in which
we deliver services
to end-user customer
sites (On-Net or via
partners)

25k+

Customers

5k+

Employees

16

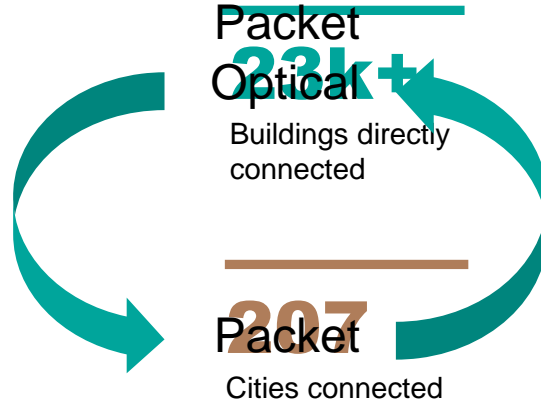
Languages
supported by 24/7
customer service

29

Carrier neutral Colt
owned and / or
managed data
centres

537

Colt-connected
data centres



This is why Metro is key

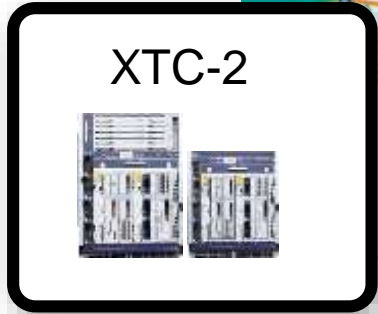


The Long Haul Footprint

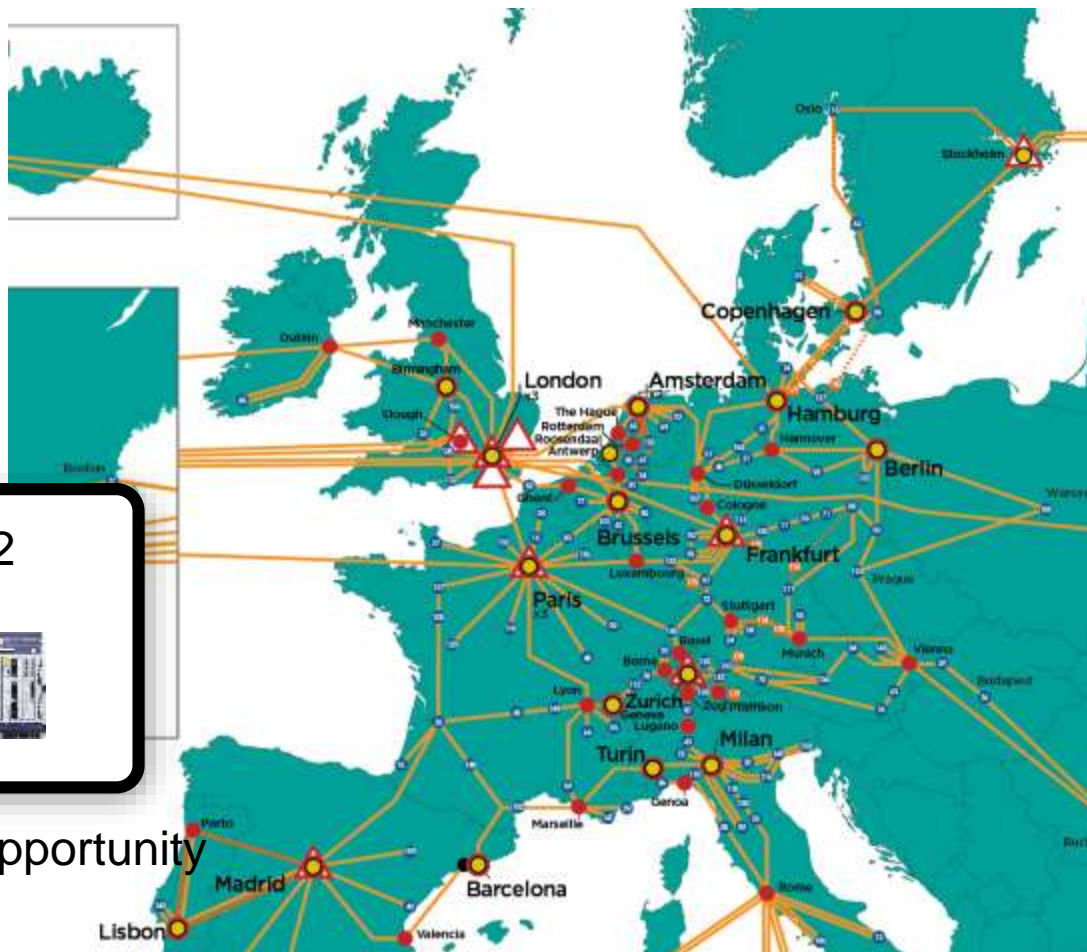
DTN



DTN-X



The Metro Opportunity



Colt DCNet



CHILL

COLT'S GOT IT COVERED

John is our kind of guy

He likes his working week to run without any downtime, which means he can spend his weekend hanging five on a fast-breaking shooter.

[Read John's story >](#)



Why our customers choose Colt

CHILL

COLT'S GOT IT COVERED

John is our kind of guy

He likes his working week to run without any downtime, which means he can spend his weekend hanging five on a fast-breaking shooter.

[Read John's story >](#)



And why we picked  **infinera**[®]

Our Experience of Infinera

In our long haul core network...



**These capabilities matter
to Colt's customers**

**So now we need these
advantages in the metro too!**

For your time
Thank you
nico@colt.net // @niCRO



