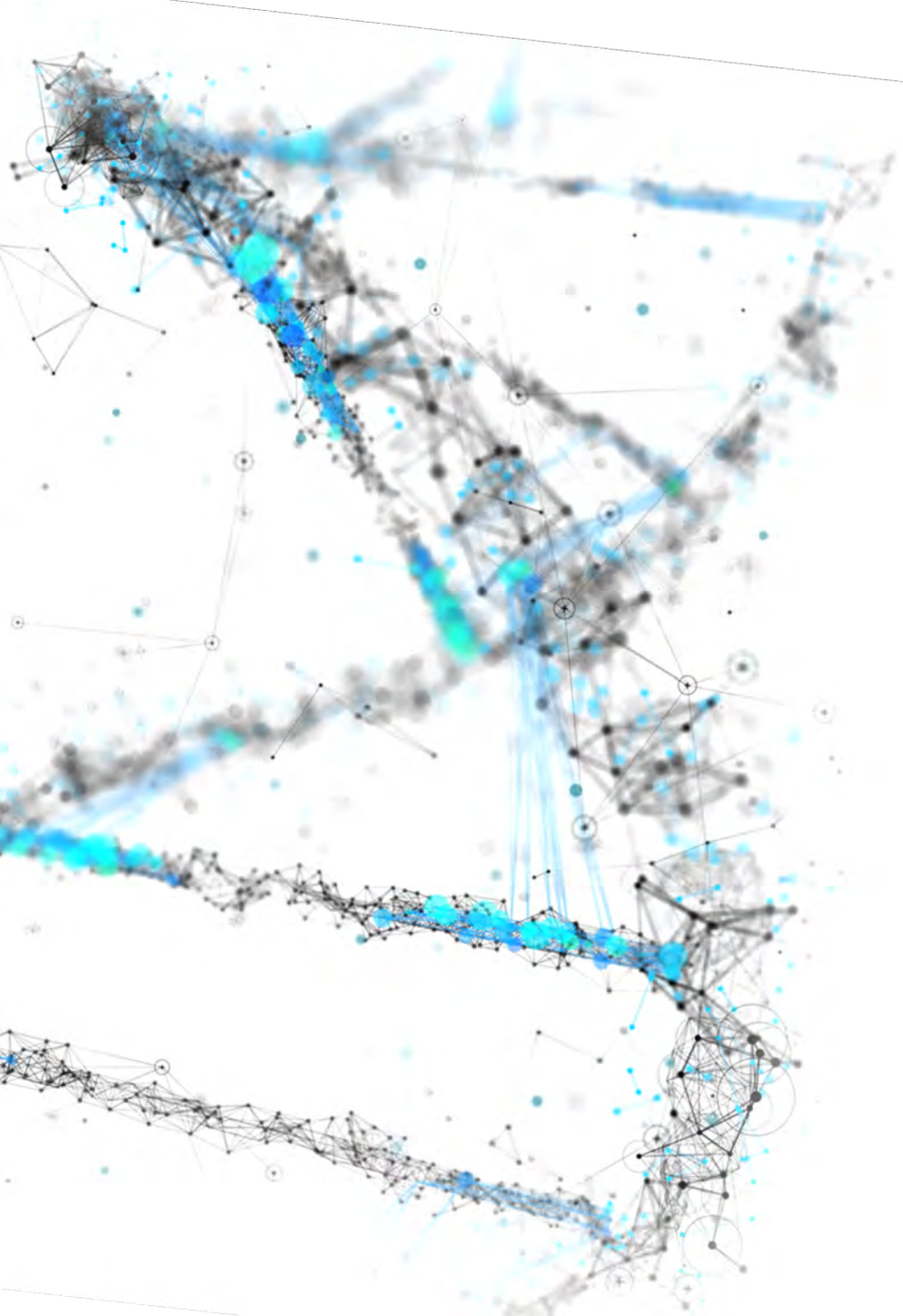


From the Edge to the Core

Delivering services from the edge to the core activates untapped business intelligence

Tim Parker, VP Network Strategy

Flexential

PACIFIC TELECOMMUNICATIONS COUNCIL

PTC'19 | FROM PIPES TO PLATFORMS

20–23 January 2019 | Honolulu, Hawaii

Flexential

Network Enabled Colocation

21
Domestic and international markets

41
Data centers

4,200
Customers

169
MW critical load UPS capacity

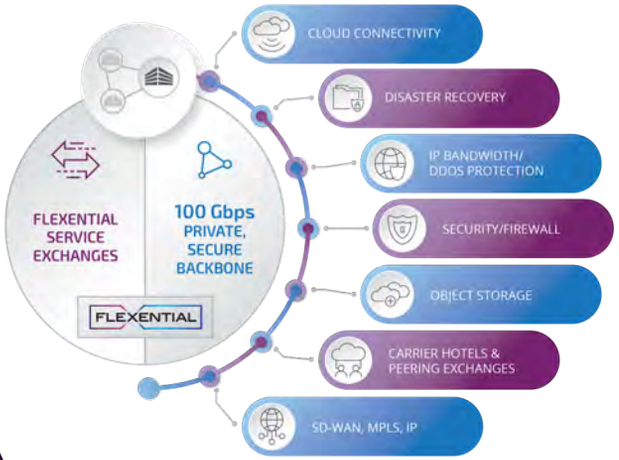
1,000
Employees

100Gb
Network backbone

3.1M Sq Ft
Data center footprint

31+
Industries

FLEX ANYWHERE



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INTERNET TRAFFIC

HAS INCREASED **5X** in the past 5 years

EXPECTED TO GROW **2.3ZB** by 2020 [1]

21B BILLION!

ACTIVE DEVICES POWERING PEOPLE, MACHINES AND THE INTERNET OF THINGS WILL GENERATE APPROXIMATELY

600ZB OF DATA BY 2020

MOBILE DEMAND WILL INCREASE

51% OF MILLENNIALS CAN'T GO MORE THAN 3 HOURS WITHOUT CHECKING THEIR PHONES

55% OF MILLENNIALS WATCH STREAMING VIDEO SEVERAL TIMES A DAY, ON VARIOUS DEVICES [3]

MOBILE VIDEO STREAMING ACCOUNTED FOR **60%** OF ALL MOBILE DEVICE TRAFFIC IN 2016

EXPECTED TO RISE **78%** [4] IN 2020

Edge enables the digital transformation

Consider the impacts of the next 1 Billion users

Smart Cities:
Government awards funding for SC projects

Increased use of autonomous vehicles in mining and agriculture

More IoT and AI deployments and success stories:
IoT and AI begin to deliver value in agriculture & aquaculture

Tier 1 banks embrace AI & blockchain for various applications

5G Network Mobile & IoT:
Journey towards excellent customer experience

Oceania & Asia:
Highest growth in 2017 in colocation data center

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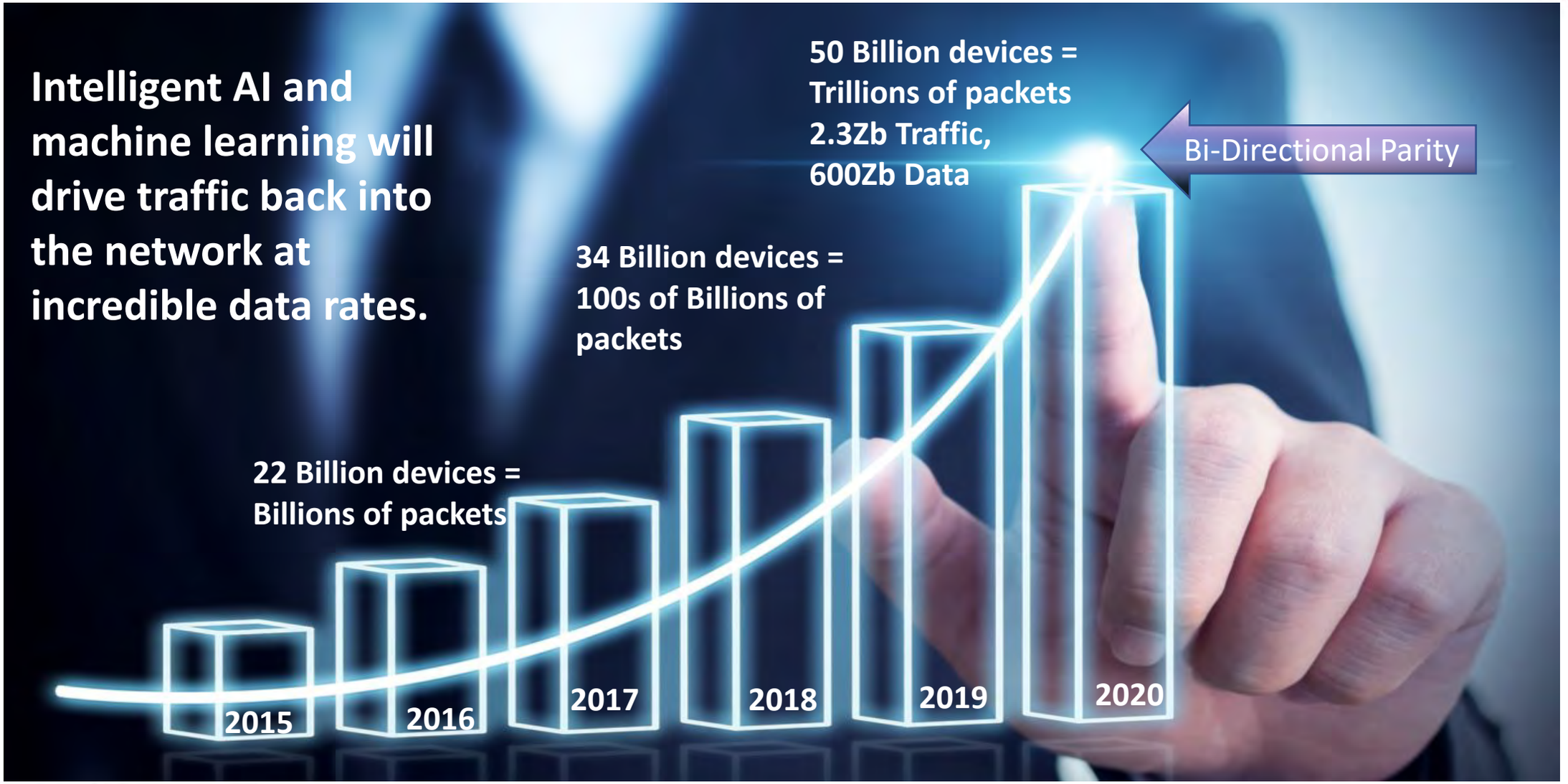
* Courtesy of Vertiv


Intelligent AI and machine learning will drive traffic back into the network at incredible data rates.
50 Billion devices = Trillions of packets 2.3Zb Traffic, 600Zb Data
Bi-Directional Parity
34 Billion devices = 100s of Billions of packets
22 Billion devices = Billions of packets
2015
2016
2017
2018
2019
2020

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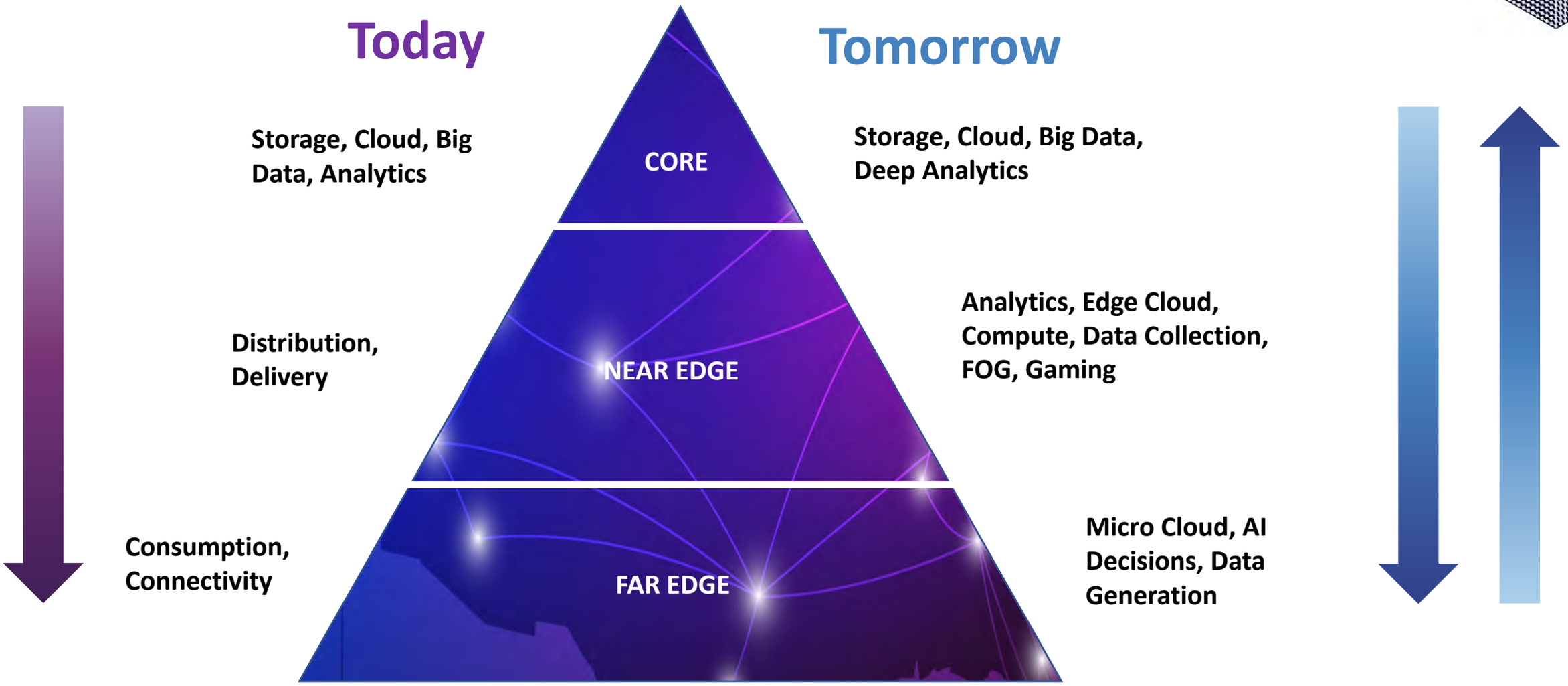
Data services are exploding, and traffic patterns are changing.



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Latency Kills!

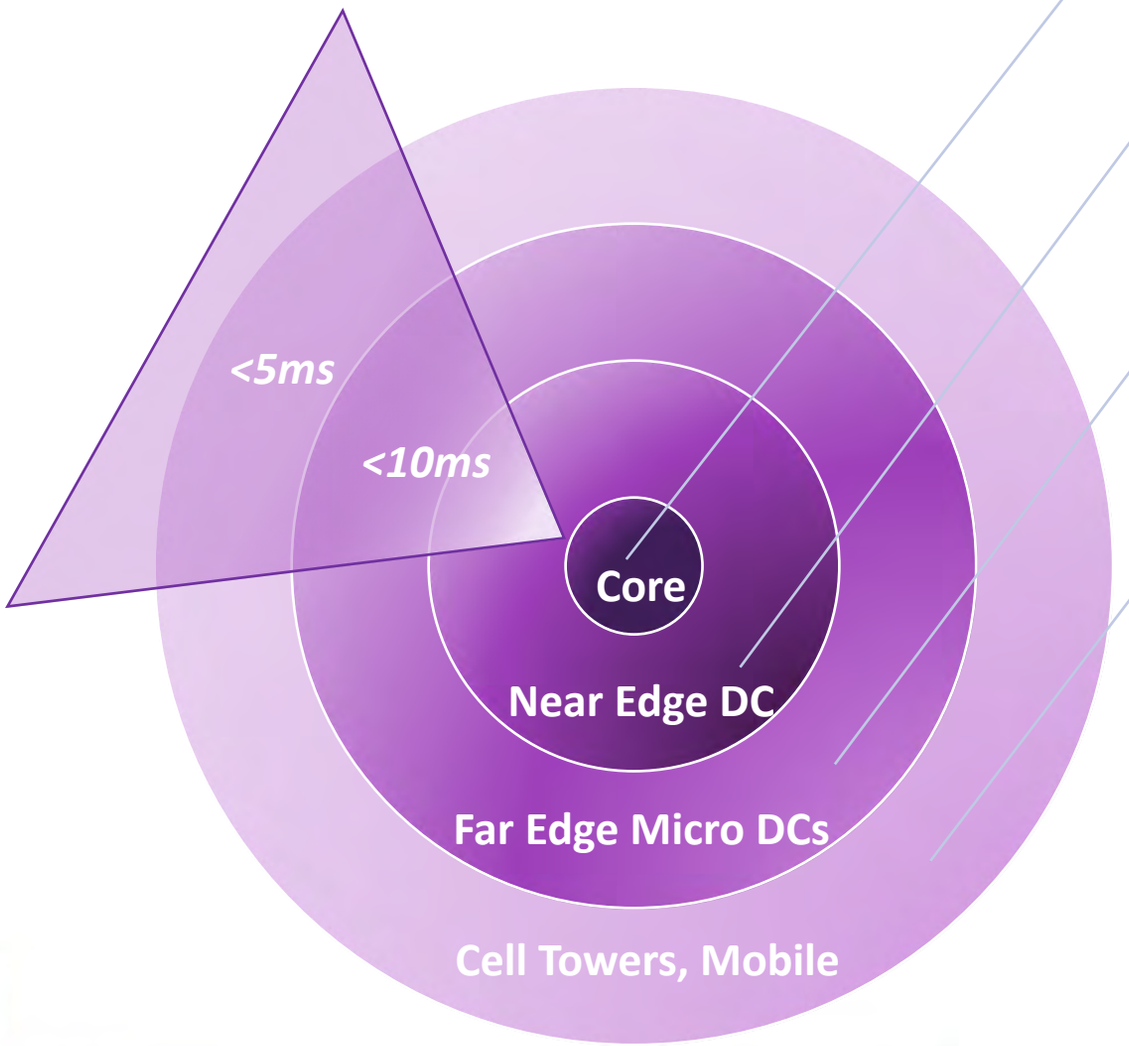
Health Care

A.I.

Safety

Gaming

Retail



Analytics, Archive, Big Data, Development

Regional Compute, Gaming services, Actionable AI Analytics, on demand storage

Latency intense: AI response, IOT and user content inputs, Mobile data aggregation

Mobile, User Apps, bi-directional data

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THE SOLUTION

DATA NEEDS TO BE PROCESSED CLOSER

TO USERS

Unlike centralized data centers, edge data centers push processing physically closer to data sources.

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Near Edge Data Centers are the hub for far edge deployments

Smart Cities, Manufacturing

Health Monitors, remote surgery

Autonomous vehicles, Drones

Gaming, retail Virtual Reality

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Call To Action

Develop your edge and distributed strategies now.

Develop service offerings to support edge deployments

Utilize more near edge data center deployments to manage data, traffic, etc.

Improve the connectivity and capacity from Edge to Core. Plan to tether the far edge.

Deploy more services to the Edge, within 10ms. Define what data needs to be managed at the edge.

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Interconnection is the Key:

Define how to move data efficiently between Edge and Core

Make decisions on what is managed at the edge and what is delivered to the core.

- ✓Drop and Dump non critical data at the edge
- ✓Take action for critical data, utilize FOG
- ✓Deliver to the core **only** data that needs deep analytics, long term storage, and high security (PCI, etc.)
  - *These are very costly to distribute, thus Core will still have relevance*

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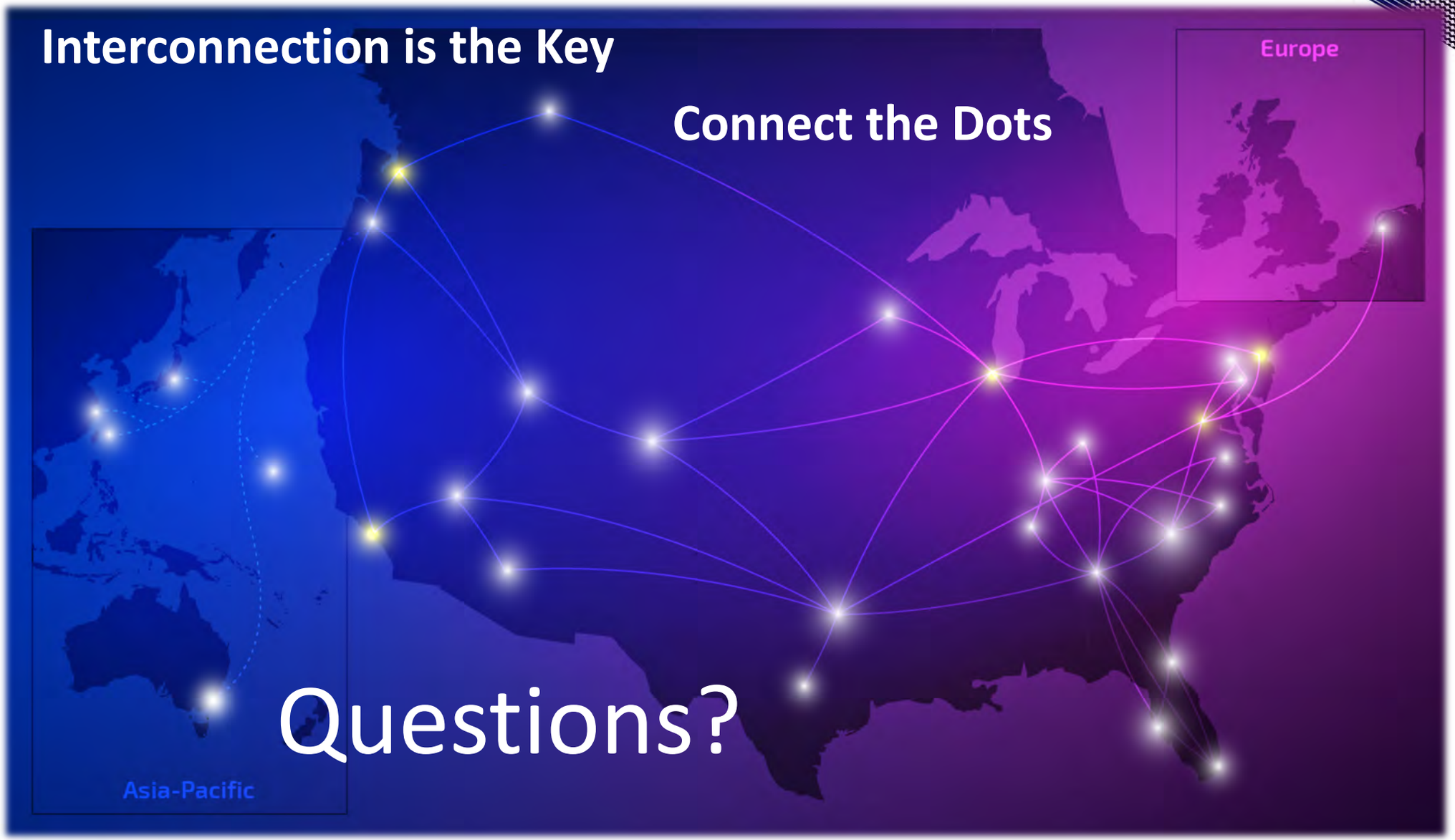
Interconnection is the Key
Connect the Dots
Europe
Asia-Pacific
Questions?

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