

From Data Centers to Enterprises: How Interconnections bridge the gap between data and compute



Gerald Buchholz
Senior Cloud Value Engineer
gerald.buchholz@de-cix.net





DE-CIX at a glance
**Born with the Internet, and powering the Internet, everywhere,
for everything and everyone**

Neutral
Community
owned



Born in
1995



270
Employees
globally



1,000+
enabled
Data centers



58 IXs
around
the globe



35
Nationalities



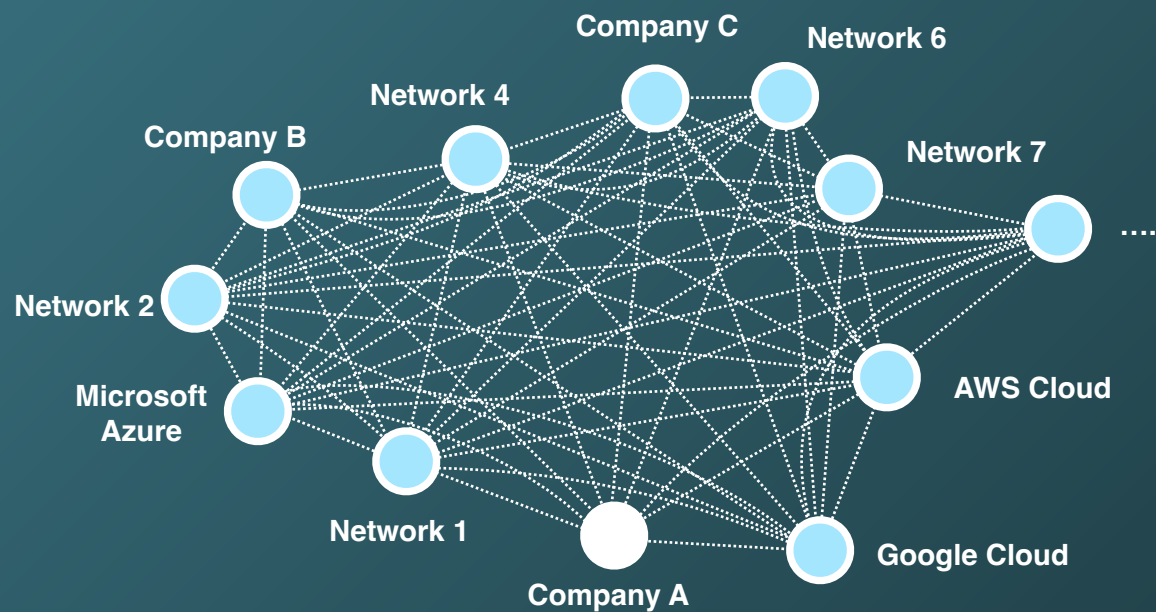
600+
Metros
accessible



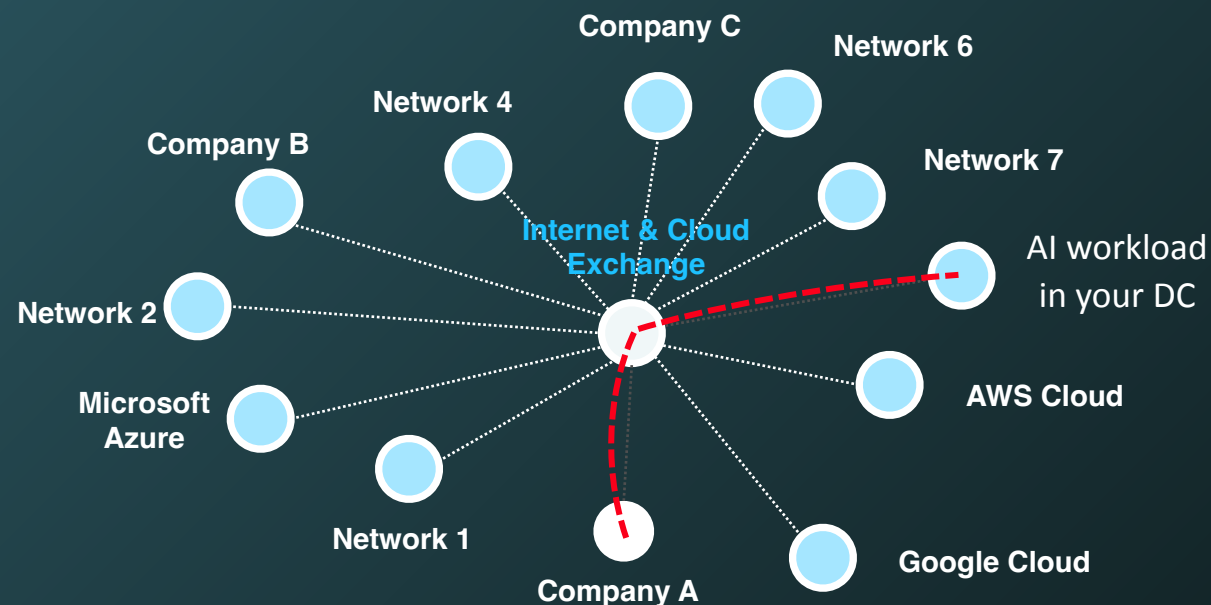
50+
Cloud
partners

We build, develop & operate neutral Cloud & Internet exchanges

Conventional connectivity model for data exchange
& cloud applications: N-N connections



Principle of an Internet & Cloud Exchange:
direct connections



Reduced complexity, increased controllability, performance & security

DE-CIX: The largest carrier & data center neutral interconnection ecosystem in the world

58

Internet & Cloud
Exchanges

600+

Metros

50+

Cloud Service
Providers

1,000+

Data Centers

3,600+

Connected Networks

166+

Tbit Capacity

**Bringing content & applications closer to local end-users -
Shorten the path of data flows and avoid unnecessary
detours for local data**

North America

Chicago, Dallas, Houston,
Mexico City, New York,
Phoenix,
Queretaro, Richmond, Seattle

South America

Sao Paulo, Rio de Janeiro

EMEA

Amsterdam, Aqaba, Athens, Baghdad, Barcelona, Berlin, Bucharest,
Copenhagen, Dubai, Dusseldorf, Esbjerg, Frankfurt, Hamburg,
Helsinki, Istanbul, Kinshasa, Kristiansand, Lagos, Leipzig, Lisbon,
Madrid, Marseille, Munich, Oslo, Palermo, Prague, Riyadh*, Ruhr
region, Sofia, Stockholm*, Warsaw

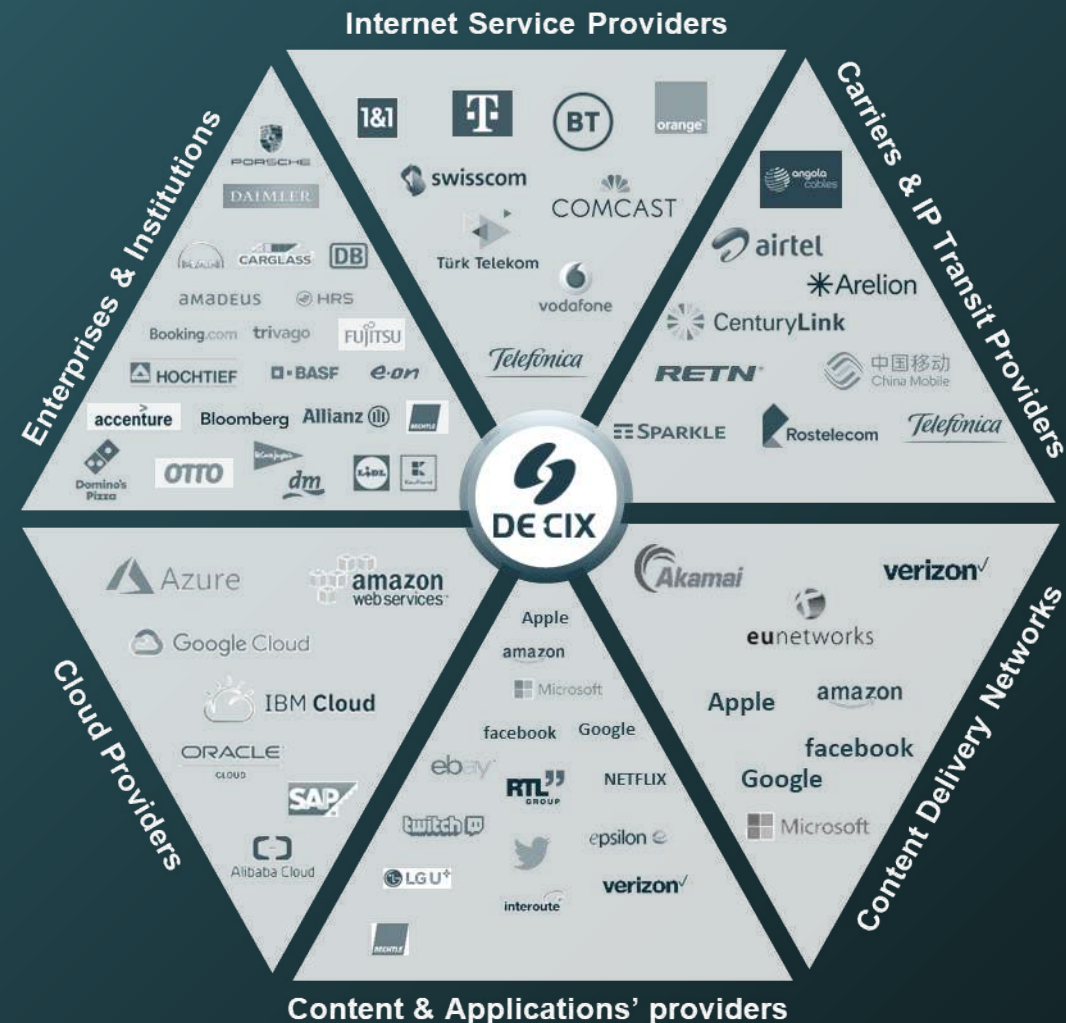
Asia Pacific

Brunei, Chennai, Delhi, Hyderabad,
Jakarta, Johor Bahru, Karachi,
Kuala Lumpur, Kolkata, Manila,
Mumbai, Osaka,
Penang, Singapore, Tokyo

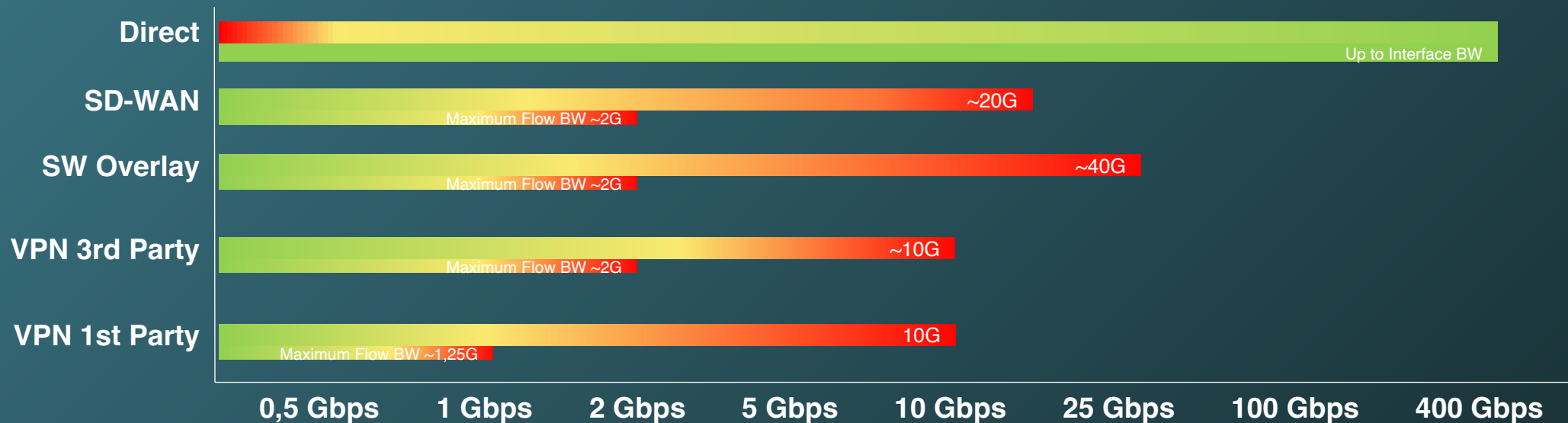
Our Cloud & Internet exchanges - a digital interconnection ecosystem

Enterprises and providers expect
a digital ecosystem that enables
seamless communication, reach,
and access between partners,
customers and services.

... and AI training resources !



Cloud connectivity bandwidth comparison

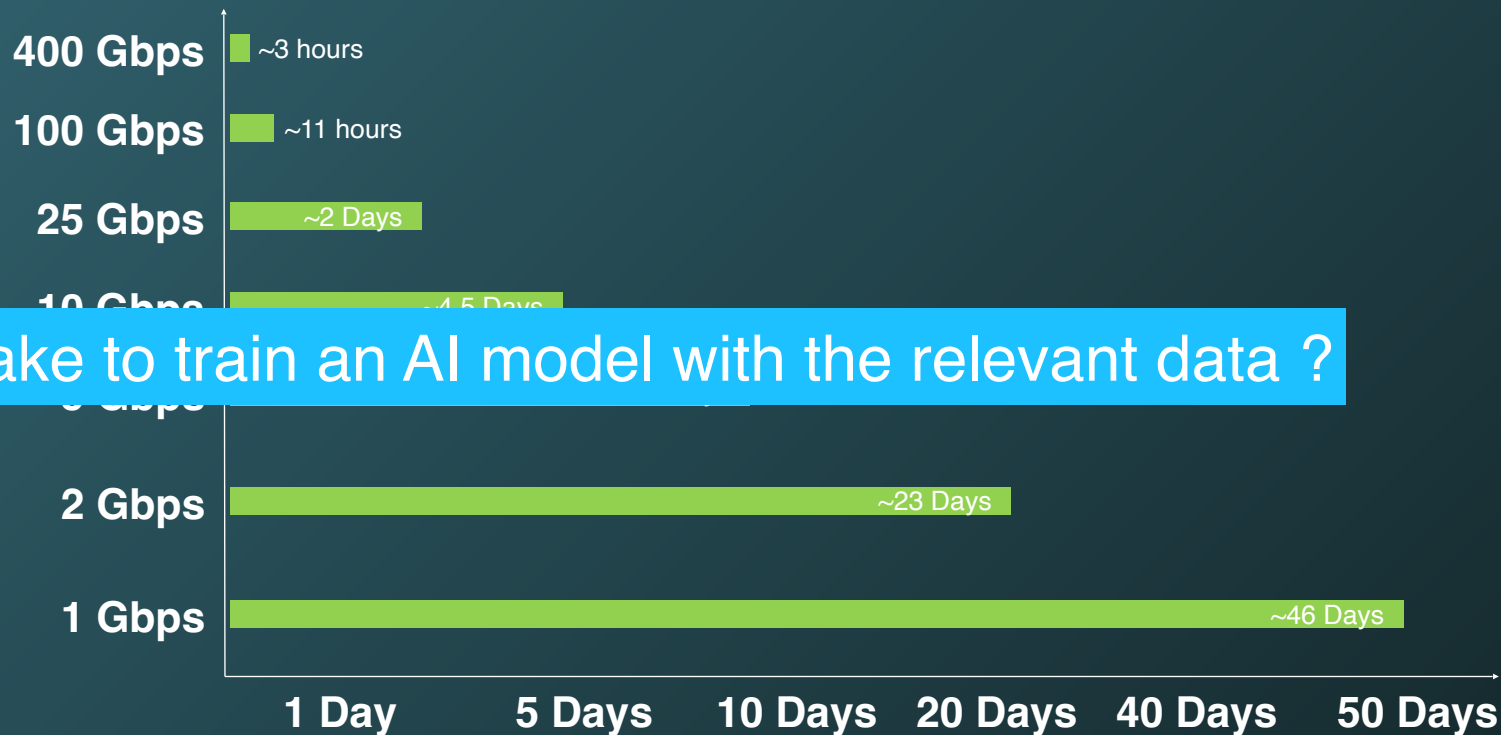


Notes:

- Just for illustration, not in scale
- Packetsize impacts flow bandwidth
- Major Bandwidth options with Hyperscalers, options may vary
- 400 Gbps today only with Oracle

Average time to transfer 500 Terabyte

- 500 Terabyte is the rough amount of data of 2000 Users
- Certain datasets require large (eg. ADAS data, medical data, simulation data)
- Only one-time transfer
- Changes in source data are not taken into account

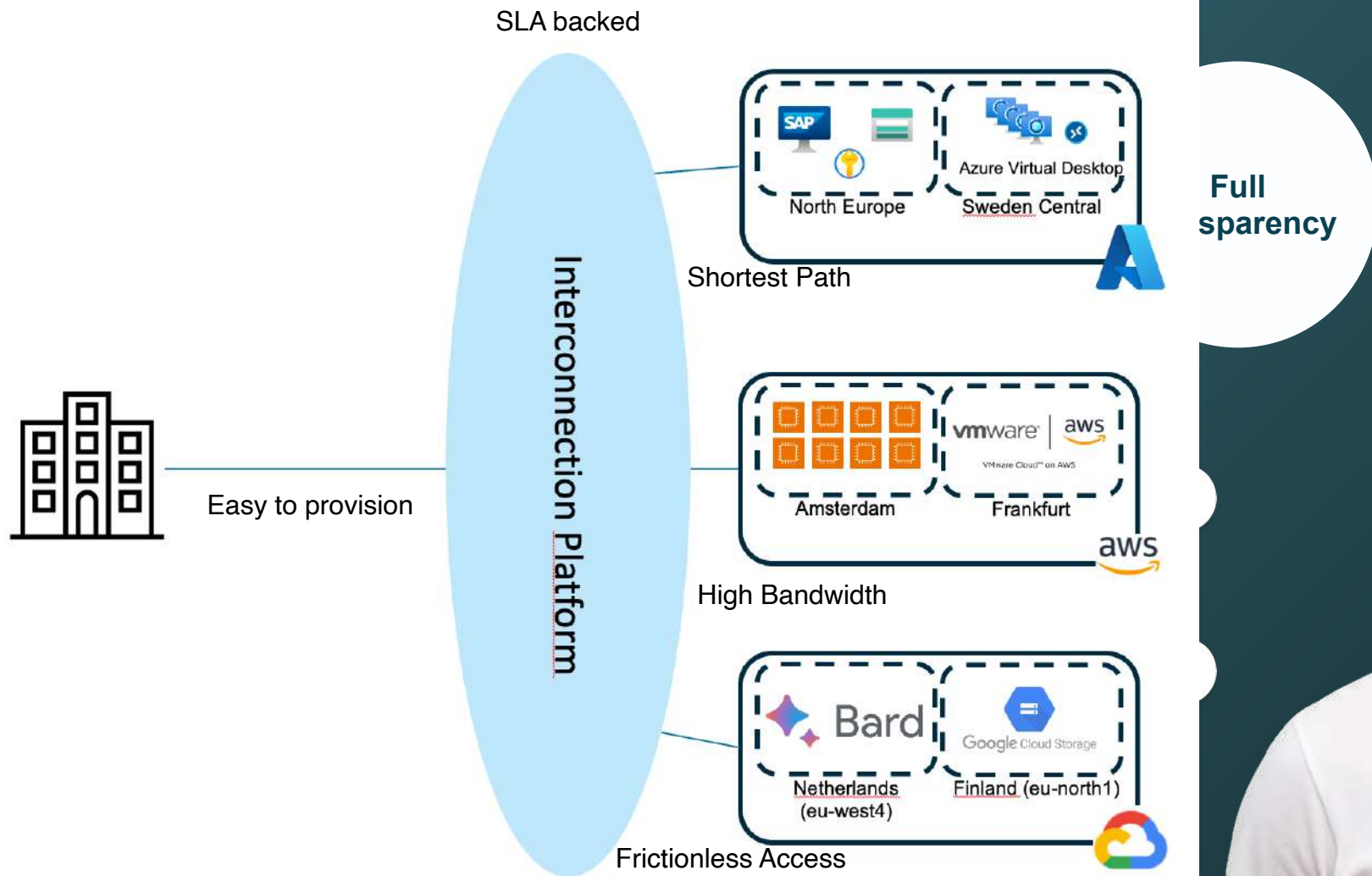


What time does it take to train an AI model with the relevant data ?

Notes:

- Not in scale
- Protocol overhead not calculated
- Latency not considered





Nordics set-up

- One platform distributed
- Fully redundant, total capacity of 80 Tbit/s
- 5 data centers live (+ Sweden 2025):

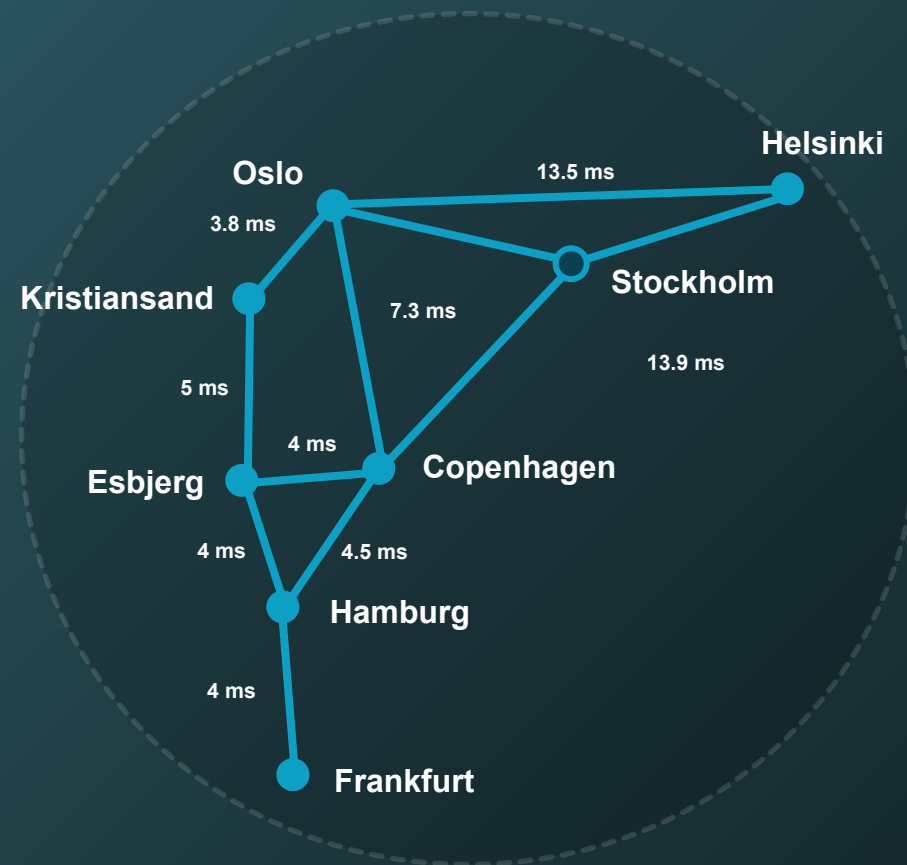


- Oslo, Kristiansand, Esbjerg,
- Copenhagen (CPH1)
- Helsinki (HEL1)

- Global leading Cloud providers already present at top 3 Nordics metro (Oslo, Copenhagen, Helsinki)

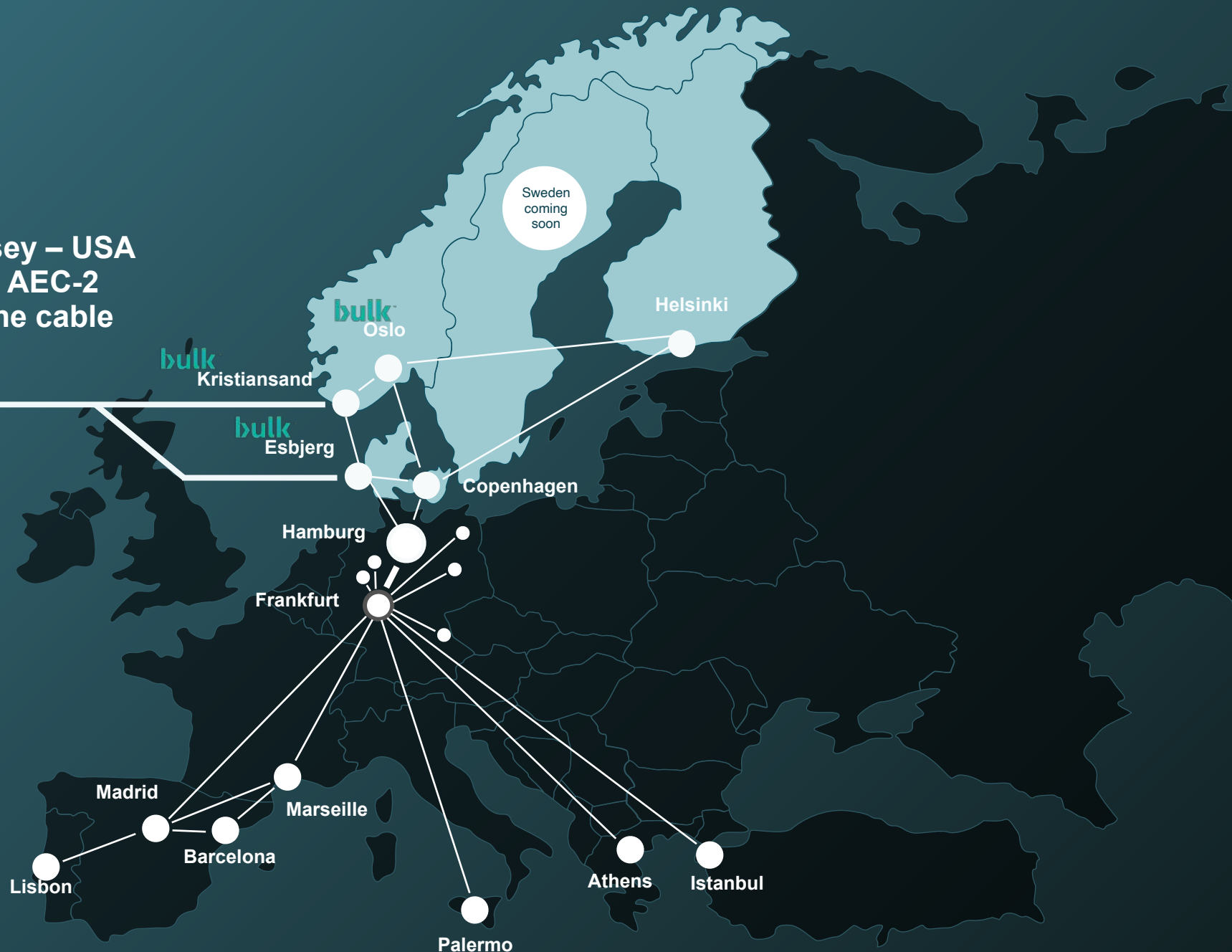
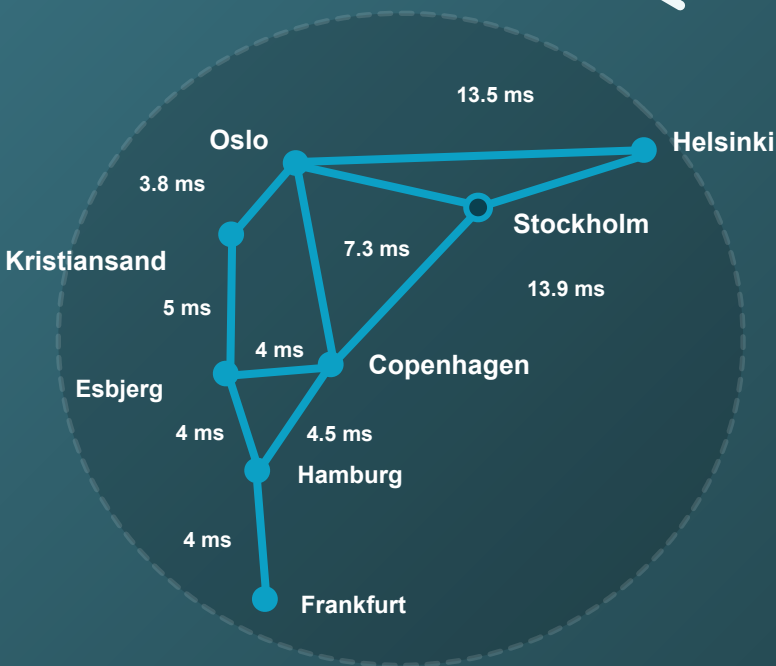


- Portal and API-enabled for self-service ordering and provisioning



*3 Nordics capitals within less than 14ms RTT**

**New Jersey – USA
Havfrue / AEC-2
Submarine cable**



*Avg. RTT (DE-CIX SLA between access site across the Nordics <-> service site)

What do
Enterprises
want



- Exchange **Data** with **international** AI datacenters
- Support of their **business models** and their **digital value chain**
- Access to **local and remote resources** to optimize latency and bandwidth
- React to dynamic requirements with **software defined** interconnection through APIs and portal
- Train **AI models** with their data

Enterprises apply new decision-making criteria & competitive differentiator when searching for an attractive multi-tenant data center



Interconnection services for the digital transformation of enterprises

Service rich – scalable & customizable services for the digitalization of the enterprises' business models & processes (e.g Cloud exchange)



Network density & diversity

Network rich – stimulate interconnection & data traffic, gain efficiency & control

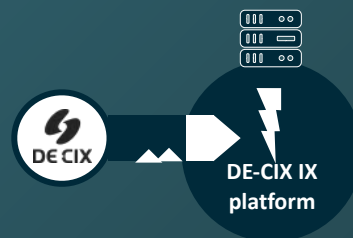


Neutrality is paramount

Diverse & neutral – avoid vendor lock-in, increase control and resiliency

Join the DE-CIX multi-awarded multi-interconnection services platform

1 access to DE-CIX platform



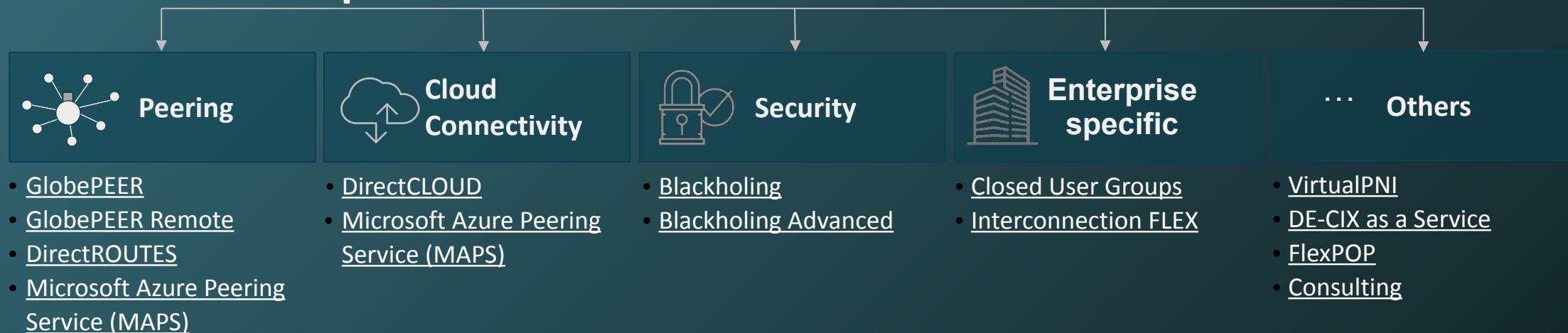
Access:

- Physical connection to DE-CIX
- either a 10GE or a 100GE access

Services:

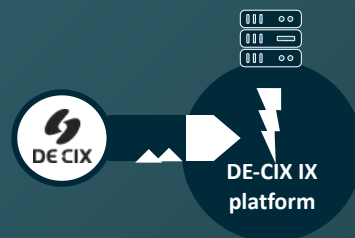
- Delivered on top of 'Access' (cross connect, transport connection)
- GlobePEER, DirectCLOUD, VirtualPNI (VLAN Provisioning / 1 IP Address each)

Multiple interconnection services across the same access



**And let your customers benefit from DE-CIX
interconnection platform**

1 access to DE-CIX platform








Multiple interconnection services across the same access

Benefits for your customers of the data center

- **Multiple services on one access**
- **Overbook access with services**
- **Maximize ROI of your DE-CIX connection**
- **Use DE-CIX platform even without an ASN**

Decision-criterias and competitive differentiator for an attractive Multi Tenant Datacenter

	Set-up & Design	✓
	Power	✓
	Security	✓
	Uptime	✓
	Pricing & commercials	✓



Network density

(Interconnection or IX platform)



1

Network Rich – leverage established interconnection ecosystem

Every company requires multiple/flexible connectivity options.

e.g. Bloomberg wants to connect to cloud providers, multiple ISPs & access networks.

Increase revenue – accelerate acquisition of new customers

Increase competitiveness vs other DCs.

e.g. in last 12 months, every month at least one customer asks for DE-CIX presence to install their POP.

Ensure continuous growth – stimulate interconnection & traffic

More networks reachable in the interconnection ecosystem creates more opportunities for your customers to connect with other networks and increase their data traffic.

**Enabling data centers to integrate
an established interconnection ecosystem**

**– a compelling solution to compete on dynamic digital
markets –**

DE-CIX Premium Enabled site – Strategic & business benefits for data centers and its customers

On day 1, the data center is part of the DE-CIX global ecosystem and can fulfil the new interconnection requirements of the market:



Network density & diversity



1 access at your DC will enable your customers to reach

- **28 IXs** and **+3,000 ASNs** in Europe
- **11 IXS** and **400+ ASNS** in North & South America
- **50+ cloud** providers
- Global leading **content, application and OTT networks**



Interconnection services for the digital transformation of Enterprises



1 access at your DC will enable your customers to use

- **Peering** services (private & public)
- **Cloud** connectivity (local & global leading Cloud applications)
- **Blackholing** services (anti-DDoS)
- **Other services** (virtual PNI, Closed User Groups, etc)



- **Easiness: entire marketing, sales & provisioning effort and process managed directly by DE-CIX** (single point of contact) incl. contracts & billing, delivering seamless access from your data center(s) to DE-CIX, promotions etc.
- **Neutrality guaranteed**

Thank you for your attention!



Gerald Buchholz
Senior Cloud Value Engineer
gerald.buchholz@de-cix.net

