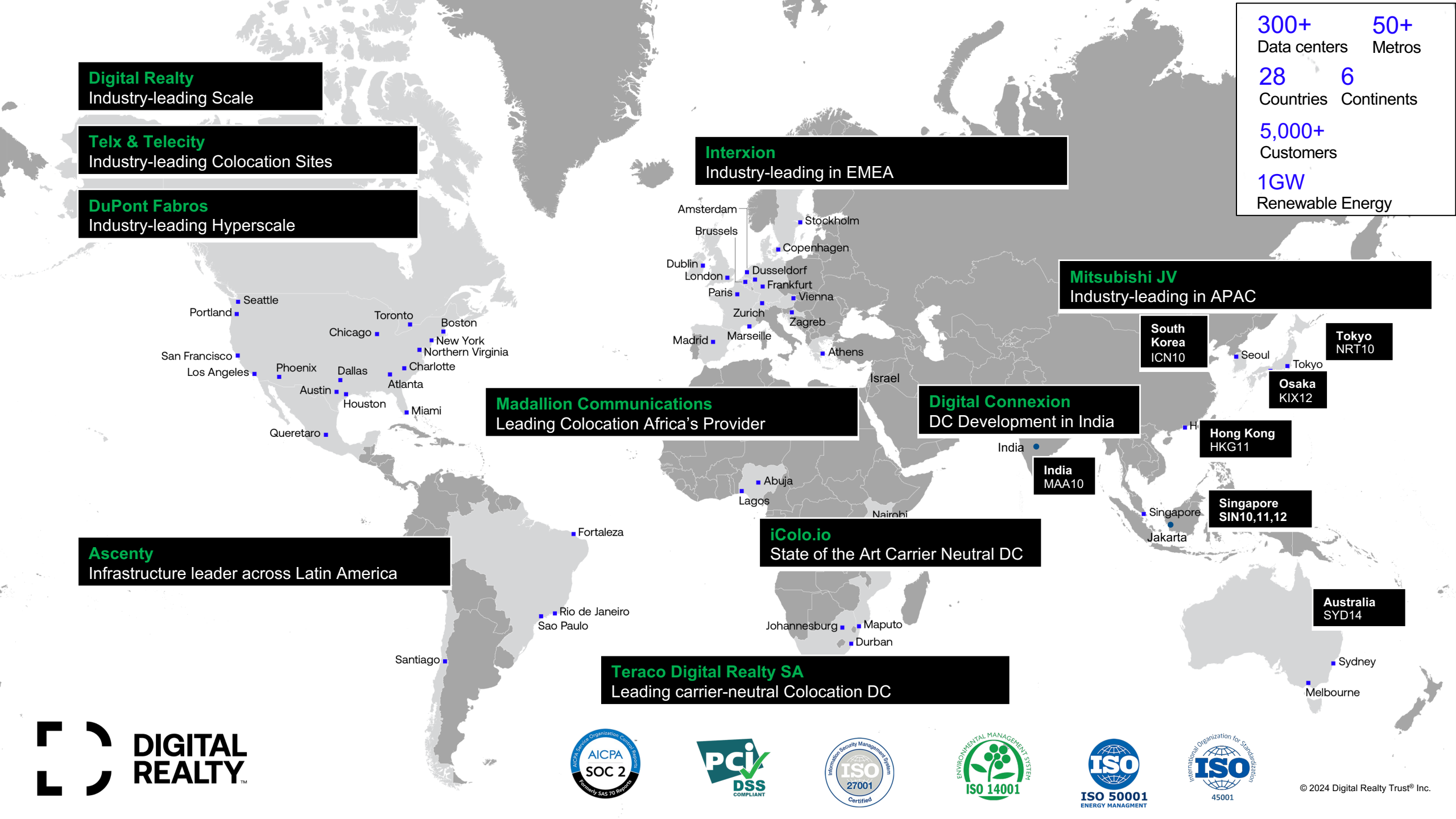
Revolutionizing Tomorrow:
Unleashing the Power of Modern Connectivity into Private Cloud and AI Innovations

INEX event 7th March 2024

Darren Chan, Sr Solution Architect, London

DIGITAL REALTY™

1) Who we are
2) History of Cloud
3) AI Architecture
4) Digital Realty Solution
5) Service Directory
6) Key take away


300+
Data centers
50+
Metros
28
Countries
6
Continents
5,000+
Customers
1GW
Renewable Energy
Digital Realty
Industry-leading Scale
Telx & Telecity
Industry-leading Colocation Sites
DuPont Fabros
Industry-leading Hyperscale
Interxion
Industry-leading in EMEA
Mitsubishi JV
Industry-leading in APAC
Madallion Communications
Leading Colocation Africa's Provider
Digital Connexion
DC Development in India
iColo.io
State of the Art Carrier Neutral DC
Ascenty
Infrastructure leader across Latin America
Teraco Digital Realty SA
Leading carrier-neutral Colocation DC
Amsterdam
Brussels
Dublin
London
Paris
Madrid
Stockholm
Copenhagen
Dusseldorf
Frankfurt
Vienna
Zurich
Zagreb
Marseille
Athens
Israel
Seattle
Portland
San Francisco
Los Angeles
Phoenix
Dallas
Austin
Houston
Chicago
Toronto
Boston
New York
Northern Virginia
Charlotte
Atlanta
Miami
Queretaro
South Korea
ICN10
Seoul
Tokyo
Tokyo
NRT10
Osaka
KIX12
Hong Kong
HKG11
India
India
MAA10
Singapore
Singapore
SIN10,11,12
Jakarta
Australia
SYD14
Sydney
Melbourne
Abuja
Lagos
Nairobi
Fortaleza
Rio de Janeiro
Sao Paulo
Santiago
Johannesburg
Maputo
Durban
DIGITAL REALTY
AICPA SOC 2
PCI DSS COMPLIANT
ISO 27001
ISO 14001
ISO 50001
ENERGY MANAGMENT
ISO 45001
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A Brief History of Cloud

2010

Cloud Computing

2015

Cloud Computing

Digital Transformation

2020

Cloud Computing

Digital Transformation

Artificial Intelligence

Q1 2023

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A Brief History

2010

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Cloud Computing

Digital Transformation

Artificial Intelligence

Q1 2023

Feb '23

Amazon launches multimodal CoT-model

Incorporates "chain-of-thought prompting and outperforms GPT-3.5 on several benchmarks

Feb '23

Microsoft launches Kosmos-1

Can respond to both image and audio prompts in addition to natural language

Mar '23

OpenAI launches GPT-4

Significantly improves accuracy - 40% improvements over GPT-3.5

Mar '23

Microsoft integrates O365

Brings GPT-4 into its software suite, enabling massive productivity gains

Mar '23

Bloomberg launches BloomberGPT

A trained model using financial data to suppor tasks in the financial sector

Feb '23

Meta launches LLaMA

Recognized as a smaller, more efficient model that still performas well in benchmarks

Mar '23

Salesforce launches Einstein GPT

The first GenAI technology for Customer Relationship Management (CRM)

Mar '23

Anthropic launches Claude

Uses "Constitutional AI" to reduce the likelihood of harmful outputs

Mar '23

Google launches Bard

Based on the LaMDA family of LLMs

Apr '23

Amazon launches Bedrock

The first managed service to make models available via API

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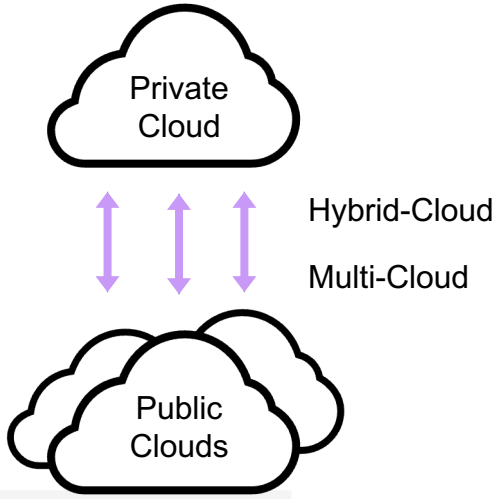
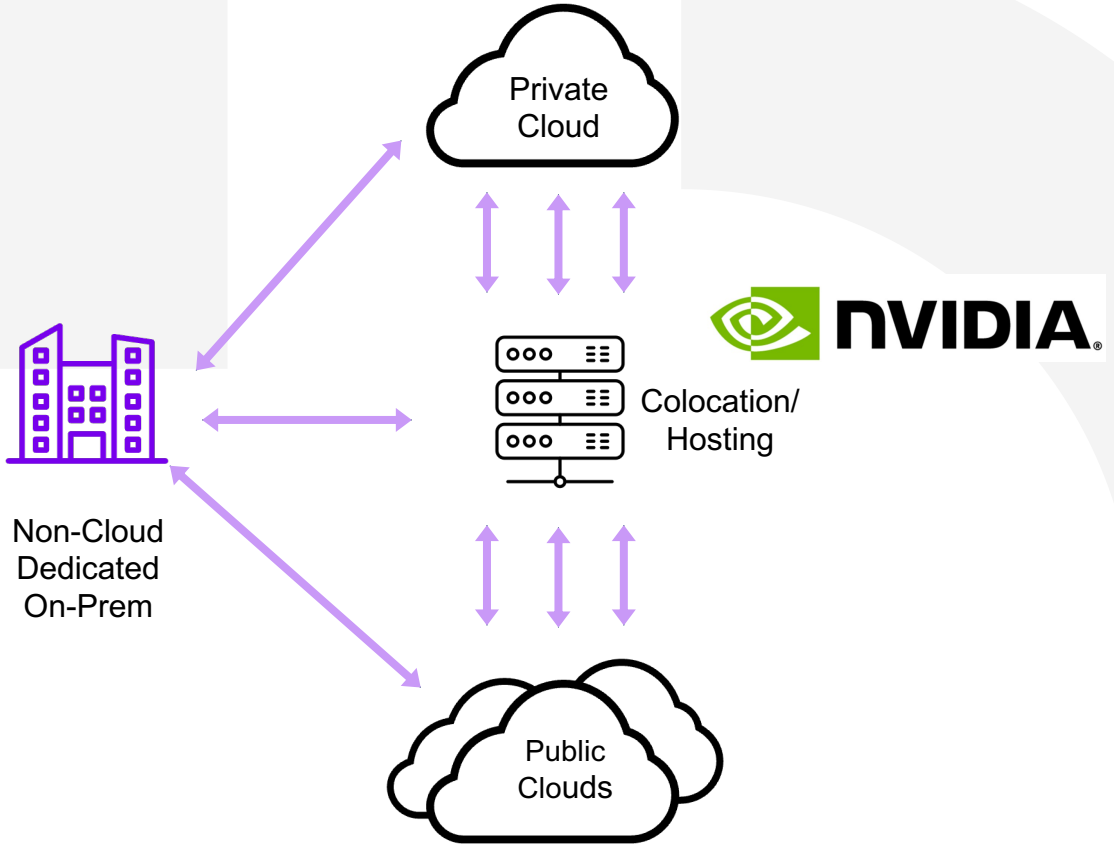
Hybrid IT is a Result of evolving Digital Transformation

From This…



To This…

Hybrid IT is the evolution of Enterprise IT



MULTI HYBRID CLOUD

HYBRID IT

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Types of AI Architectures

Data Lake

Capacity Block Size: 5-15 MW

Rack Density: Low to medium (5 – 15 kW)

Air Cooled

Training

Capacity Block Size: 5-100 MW

Rack Density: Very high (35 – 100 kW)

Liquid Cooling

Inference

Capacity Block Size: 1-5 MW

Rack Density: Medium to high (15 – 25 kW)

Location / Latency Sensitivity

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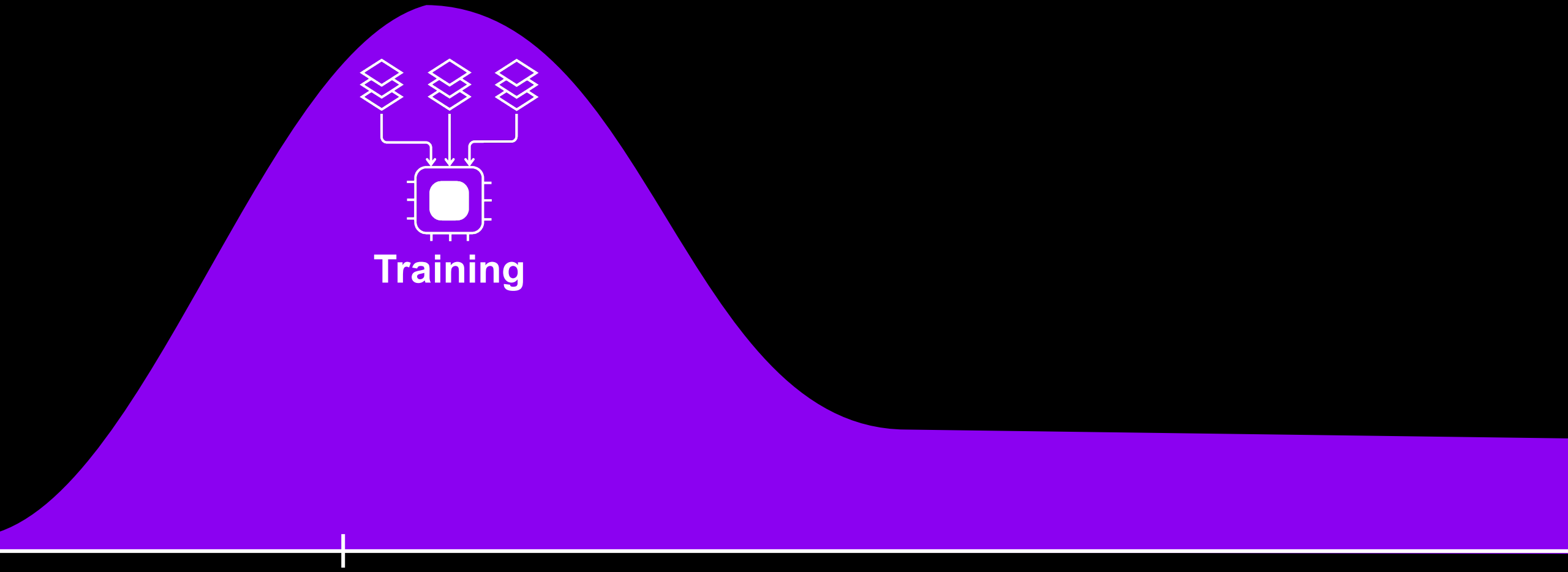
Generative AI Demand: Today

Primarily Demand for Training Deployments



Accelerating incremental demand as AI providers race to build Generative AI models

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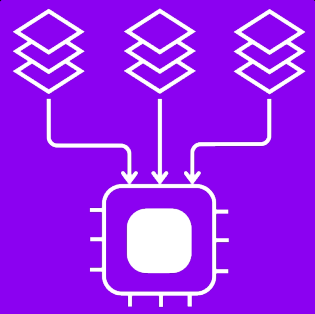
Generative AI Demand: 1-2 Years

Transition from Training to Inference as Products Mature



Training

Inference

Models become good enough, limiting incremental training demand. AI products still maturing with limited revenue, limiting inferencing demand

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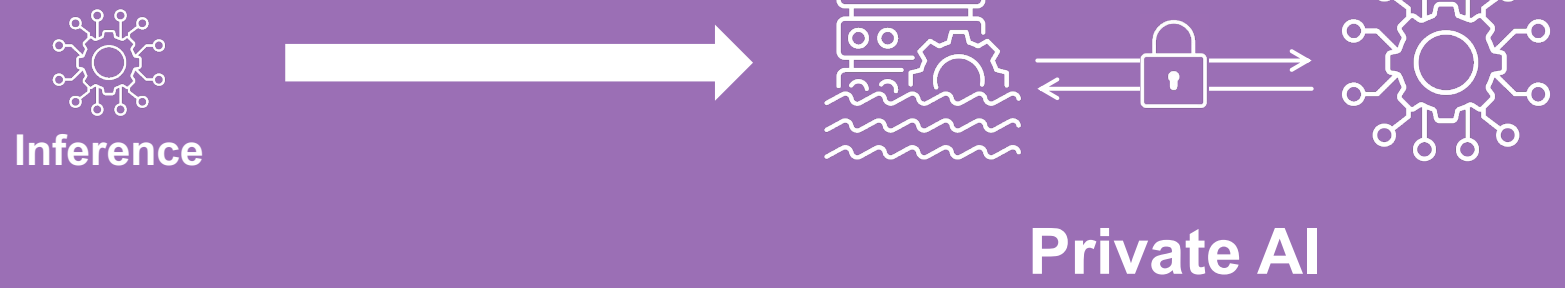
Generative AI Demand: 3-5 Years and Beyond

Inference is Long Tail of Enterprise AI Demand



Training

2nd and 3rd generation AI products reduce need for large-scale training. G2KEs deploy distributed inferencing to serve global users

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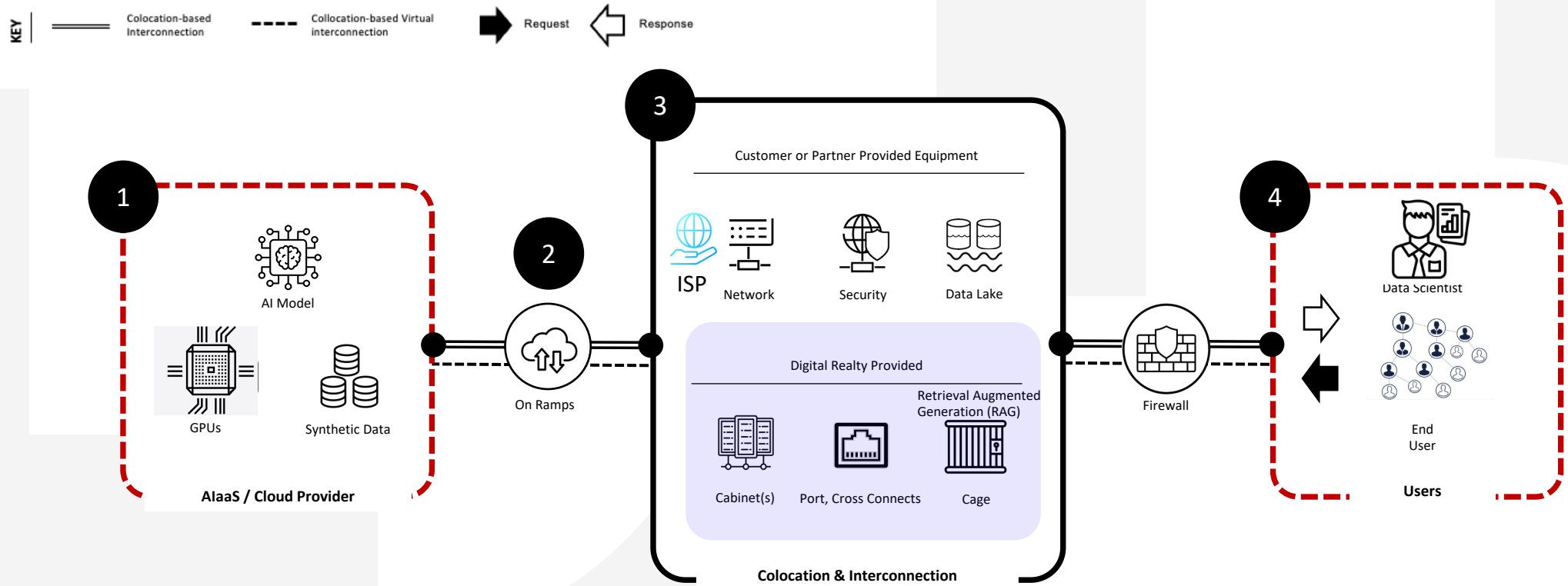
AI Training / Inference – Hybrid Cloud

AI Training / Inference Cloud Hosted, Data-On-Prem



1. Cloud-Hosted AI Inference Model
2. Private Connections in Colocation
3. CPE in Colocation
4. Request from Authenticated end-user

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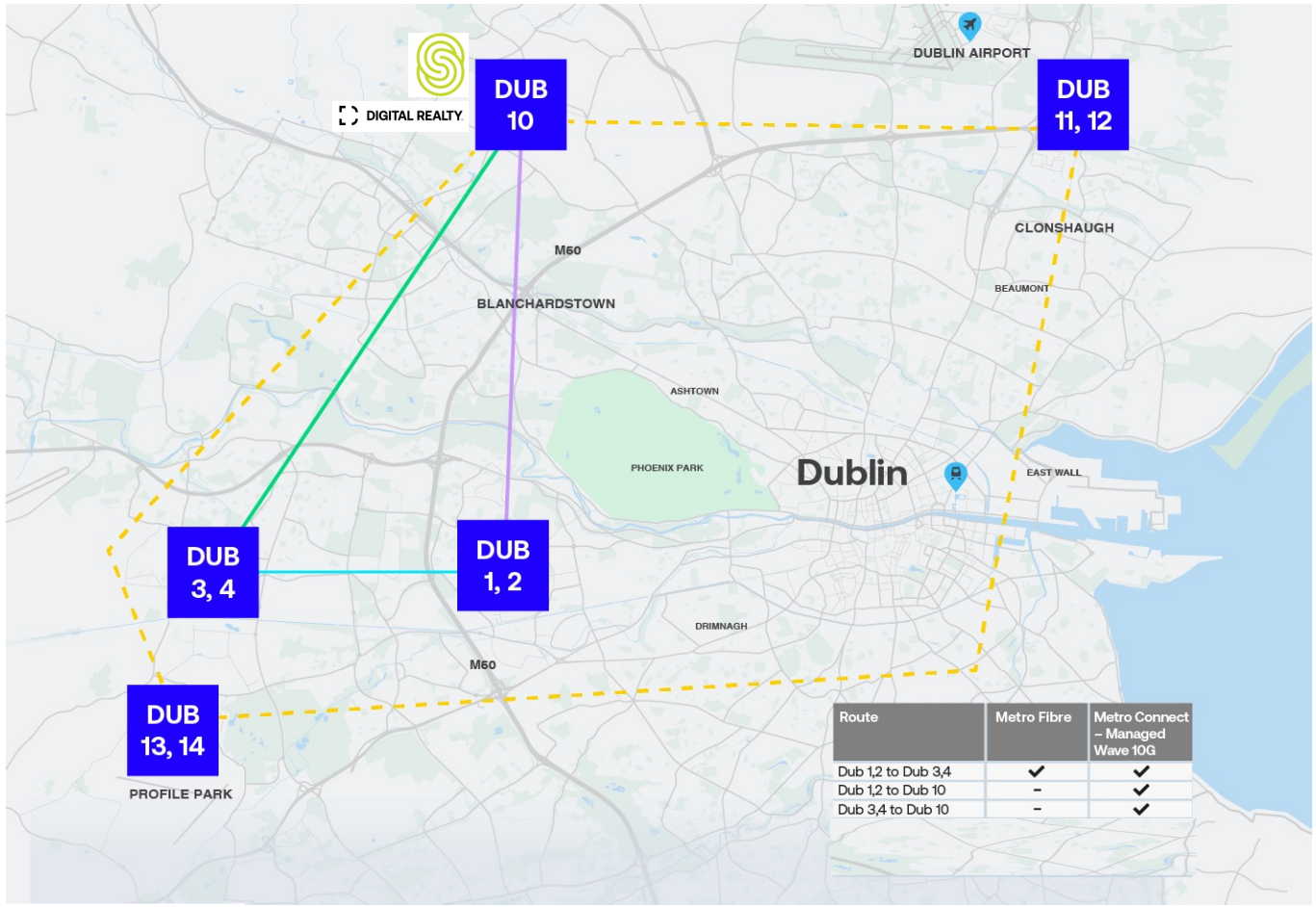
Dublin Overview



Route	Metro Fibre	Metro Connect – Managed Wave 10G
Dub 1,2 to Dub 3,4	✓	✓
Dub 1,2 to Dub 10	-	✓
Dub 3,4 to Dub 10	-	✓

Connectivity

- Direct access to INEX
- 47+ fixed and mobile carriers, ISPs and CDNs
- 7 Subsea Cable
- Direct access to AWS and Microsoft Azure
- Access to Public Cloud (IBM Cloud, Google Cloud, Alicloud etc.) via ServiceFabric

Community

- 100% renewable energy
- Diverse enterprise community ranging from small national companies to large multinationals

Location

- 8km from the city centre
- 25km from Dublin airport

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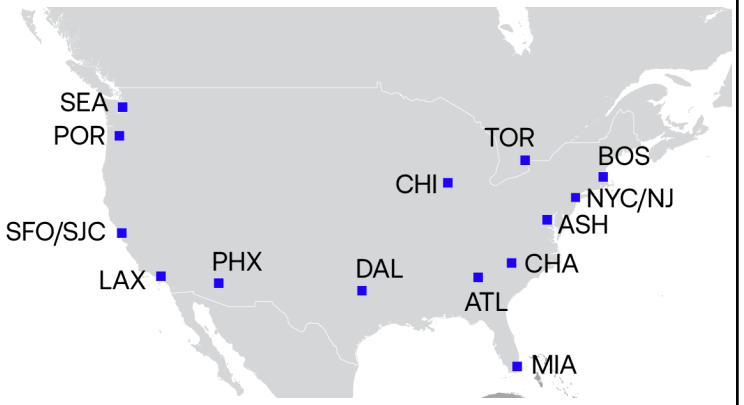
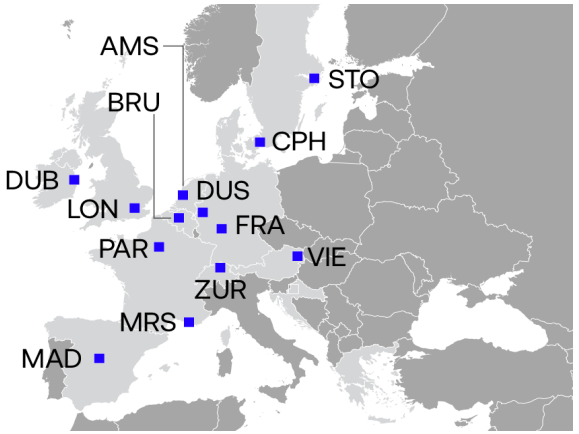
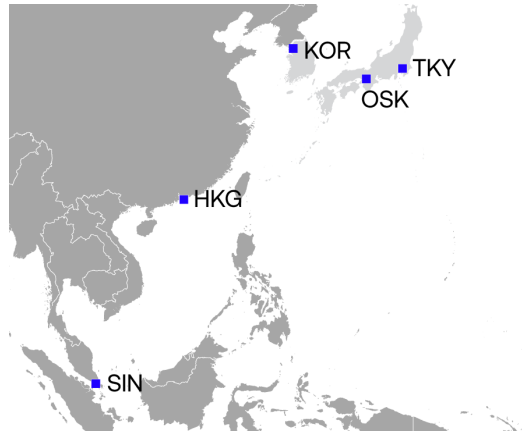
Platform Digital - ServiceFabric™

	North America 14 Markets	EMEA 13 Markets	APAC 5 Markets
Regional Capabilities	• 10G / 100G native ServiceFabric™ ports • 100G backbone • Available from 58 sites	• 10G native ServiceFabric™ ports • 100G backbone • Available from 67 sites	• 10G / 100G native ServiceFabric™ ports • 10G backbone • Available from 8 sites







Legend

■ ServiceFabric™ Availability

160+
Digital Realty Facilities Connected

215+
On Ramps Available

110+
Global Cloud Regions

350+
3rd Party Enabled Data Centers

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Introducing PlatformDIGITAL® ServiceFabric™

Partners

Customers

Developers

APIs

INTERFACE

Portal

Orchestration Layer

Removes **complexity**

Interconnection Layer

Connect seamlessly to **open partner ecosystem services** built on global backbone

Data Center Layer

Implemented on **best-of-breed infrastructure and services** in multiple metros globally

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ServiceFabric™ Components

Orchestration is a critical component to every Enterprise's strategy

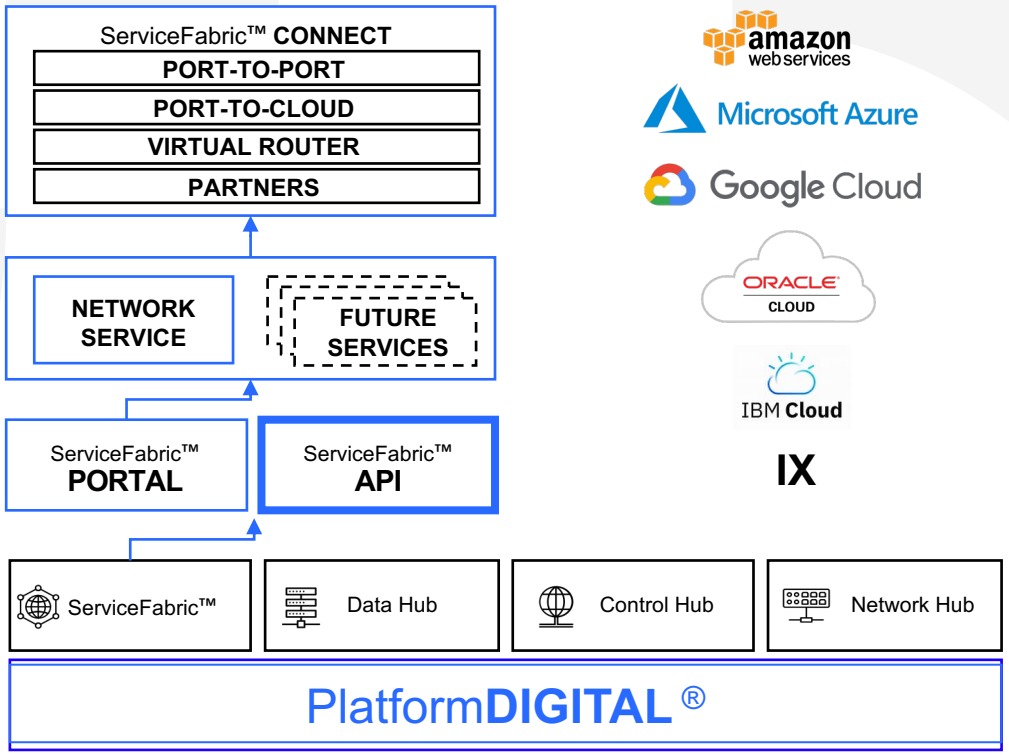
ServiceFabric™ Connect

Ports	10G, 100G*
Virtual Router	1G, 2.5G, 5G, 10G
Connections	Up to 10G **Destinations:** Native Digital Realty, Megaport **Destination Types:** Cloud, Self, Other (Customers/ Partners/ Service Providers) **Distance:** Metro, Intercity

ServiceFabric™ Portal & API

Partners	Megaport

Components



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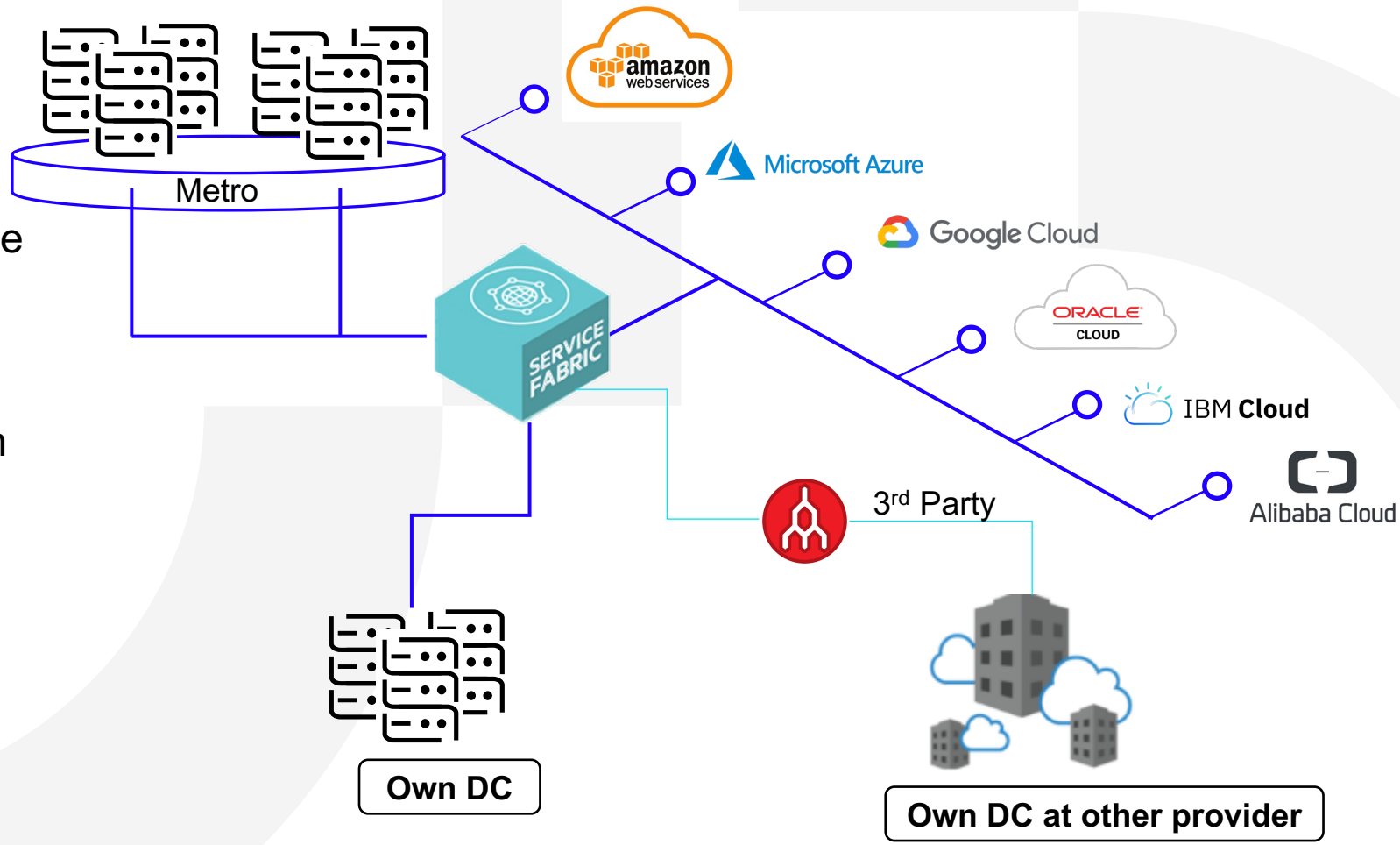
ServiceFabric **Connect**

1. **Establish a Port** which supports multiple virtual private connections

2. **Create a Link** for direct, private connections to multiple Cloud Service Providers, Network Providers, SaaS Providers and other participants of the platform

3. **Add Services (optional)**
   Optimize and secure workflows

4. **Press** CREATE
   and the connection will be available within a couple of minutes



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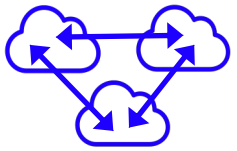
ServiceFabric™ Additional Use Cases

Multi-Cloud Connectivity and Beyond

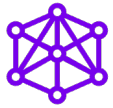


Multi-Cloud Connectivity

One port to many CSPs

Redundant Cloud Connectivity

Redundant cloud availability zones



Inter-metro/ Inter-region Connectivity

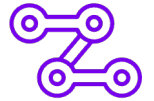
Connect to B2B Partners or your own deployments global

Connectivity to ecosystems in 3rd party facilities

Connect to any of the partner-enabled data centers

Disaster Recovery Set-up

Connect your data center deployments/ Provide redundant connection to your carrier circuits



Service-chain Multiple Services

Utilize virtual router to combine multiple virtual services or exchange data directly between CSPs / AI

Can be managed with a single Platform

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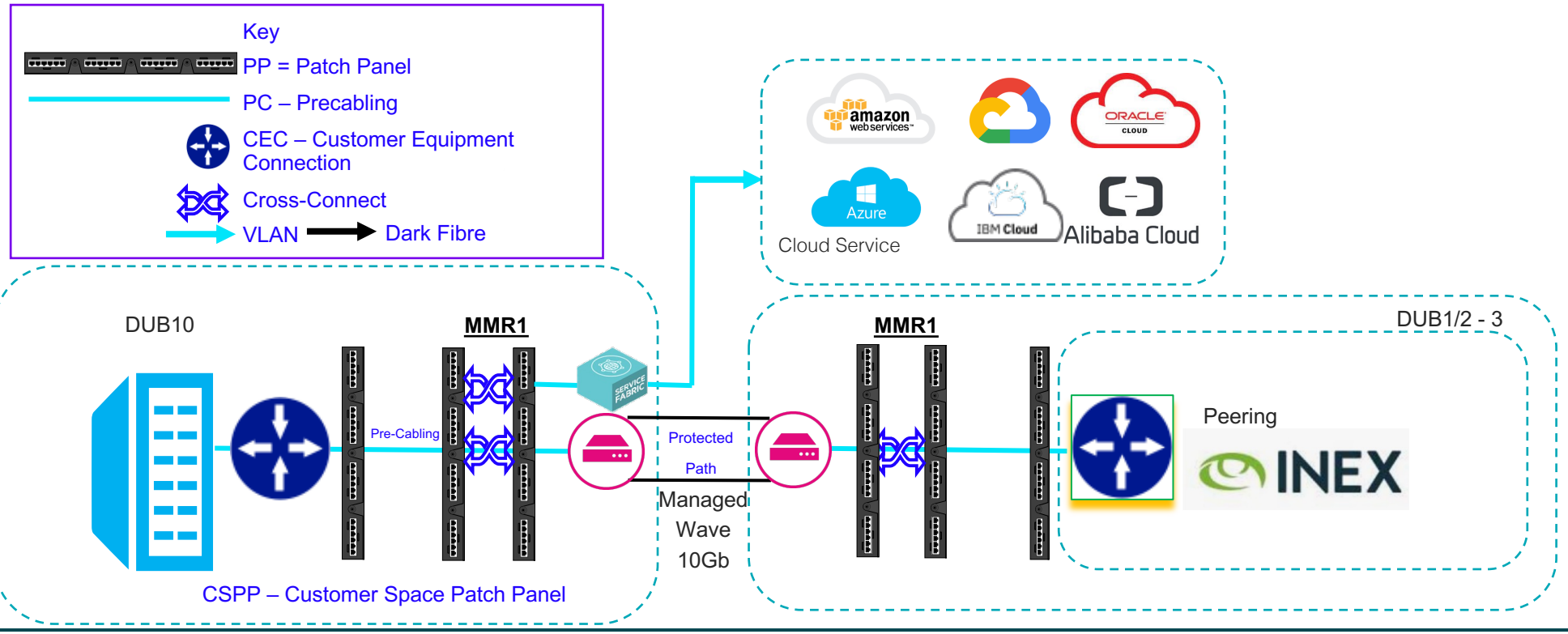
Example of a Colo Requirement + Service Fabric



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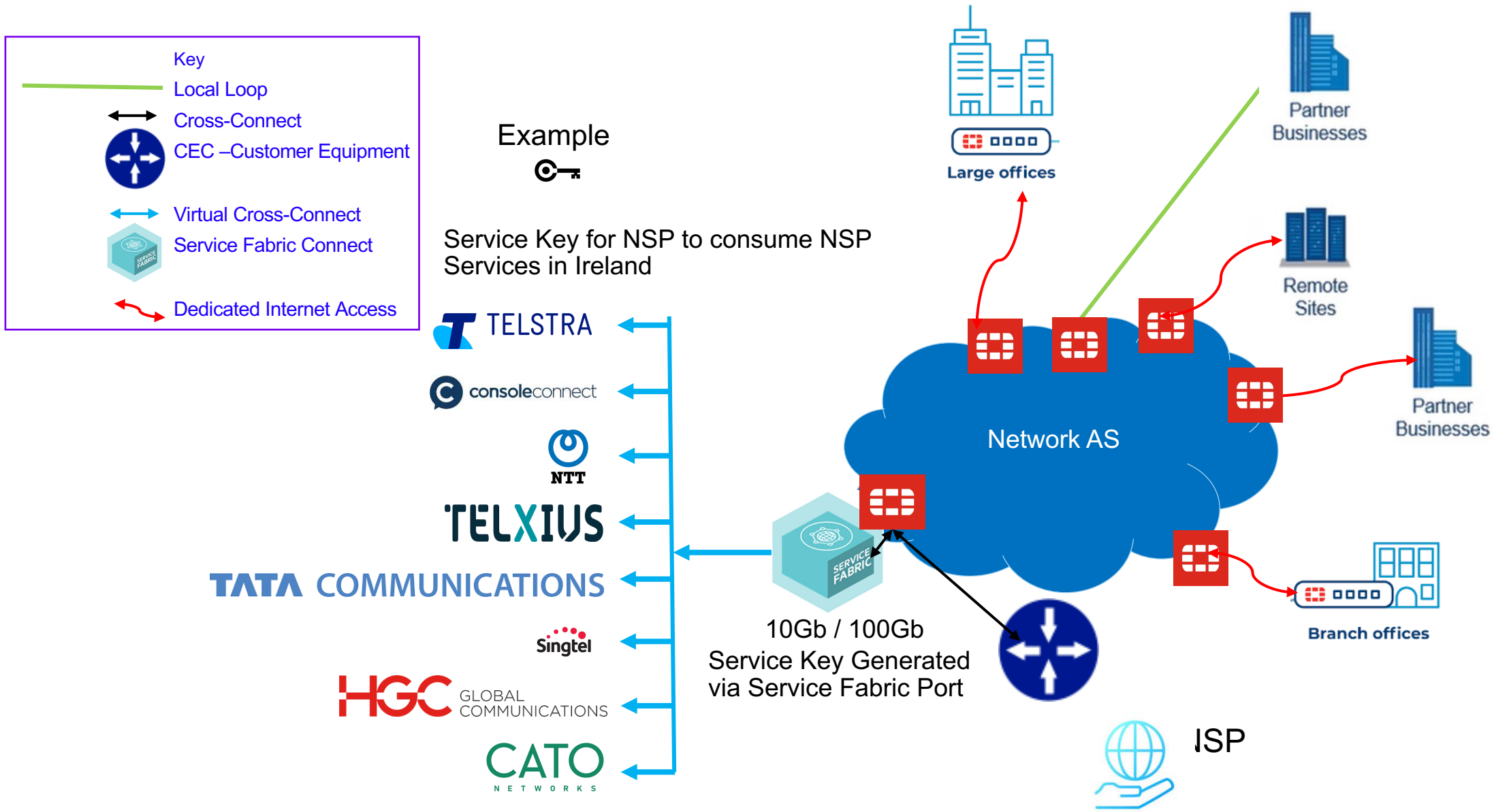
Service Key for Port to Port Connectivity



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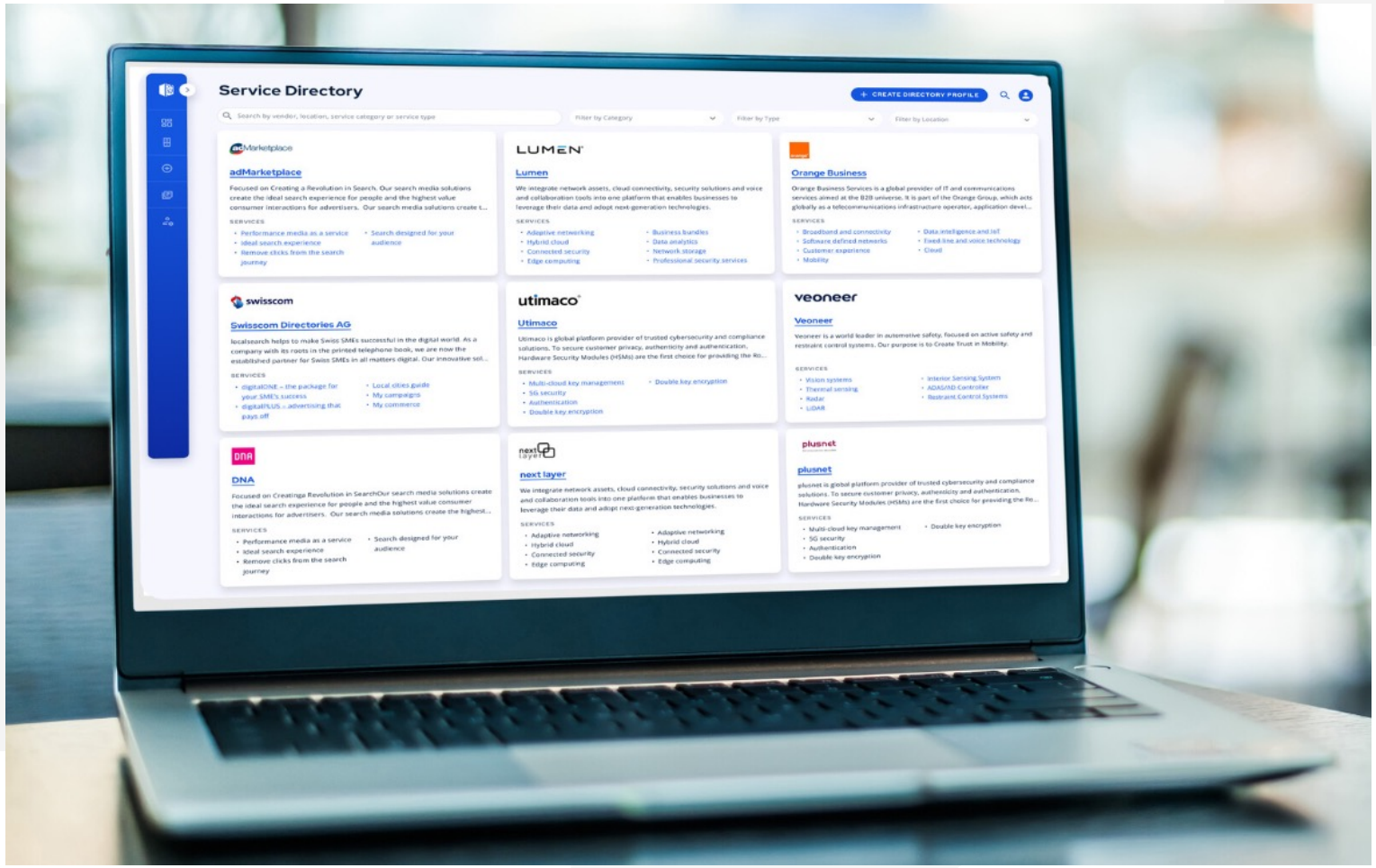
Service Directory: A Bridge Between Customers



- Direct B2B Connections & Collaboration
- Brand Promotion & Revenue Growth
- Showcase Capabilities in Service Directory
- Expand to new markets beyond current territories
- Streamlined Service Access via “Click to Connect”

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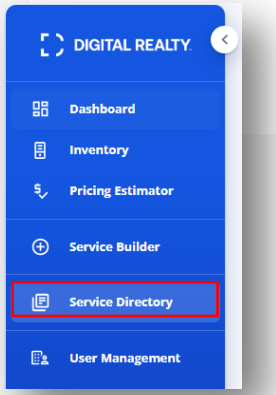
Service Directory Journey: Service Provider

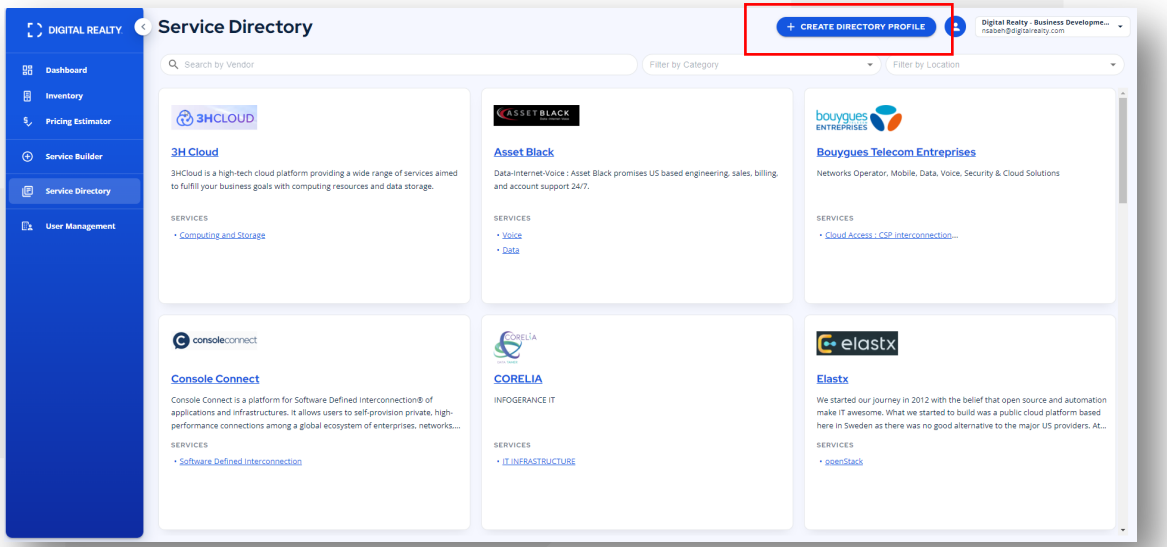
From the ServiceFabric portal > (Directory Role) choose Service Directory

1



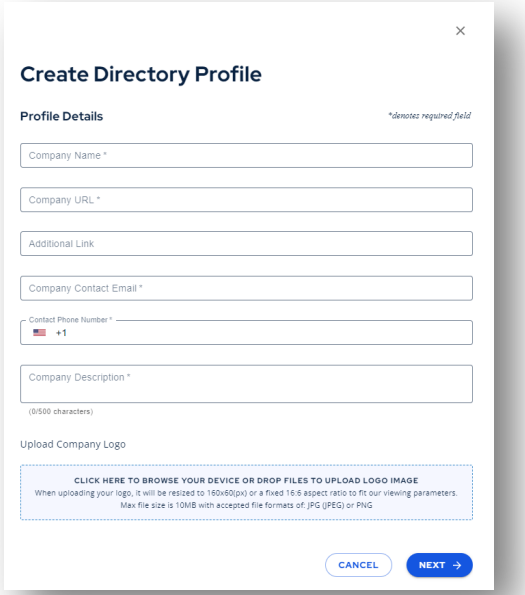
Service Directory landing page choose > Create profile

2



Provide company information.

3



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KEY TAKE AWAY

1. Participate, we are better together
2. Connect to anyone, anywhere, anytime
3. Live Ready so you don’t have to be ready

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Thank you

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