



Hewlett Packard
Enterprise



LOCATION, LOCATION, LOCATION! SUCCEED AT THE EDGE WITH HPE EZMERAL AND NVIDIA

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Matt Hausmann, HPE

Denis Vilfort, HPE

William Benton, NVIDIA

MATT HAUSMANN

HPE Ezmeral Marketing & GTM



WHAT WE WILL COVER TODAY...



Matt Hausmann

Welcome

Denis Vilfort

Edge Computing and why location matters

William Benton

Workflow and development tools for Edge Computing and AI/ML
Edge-2-Core

Denis & Will

A real example of Edge ML/AI for the distributed enterprise

All

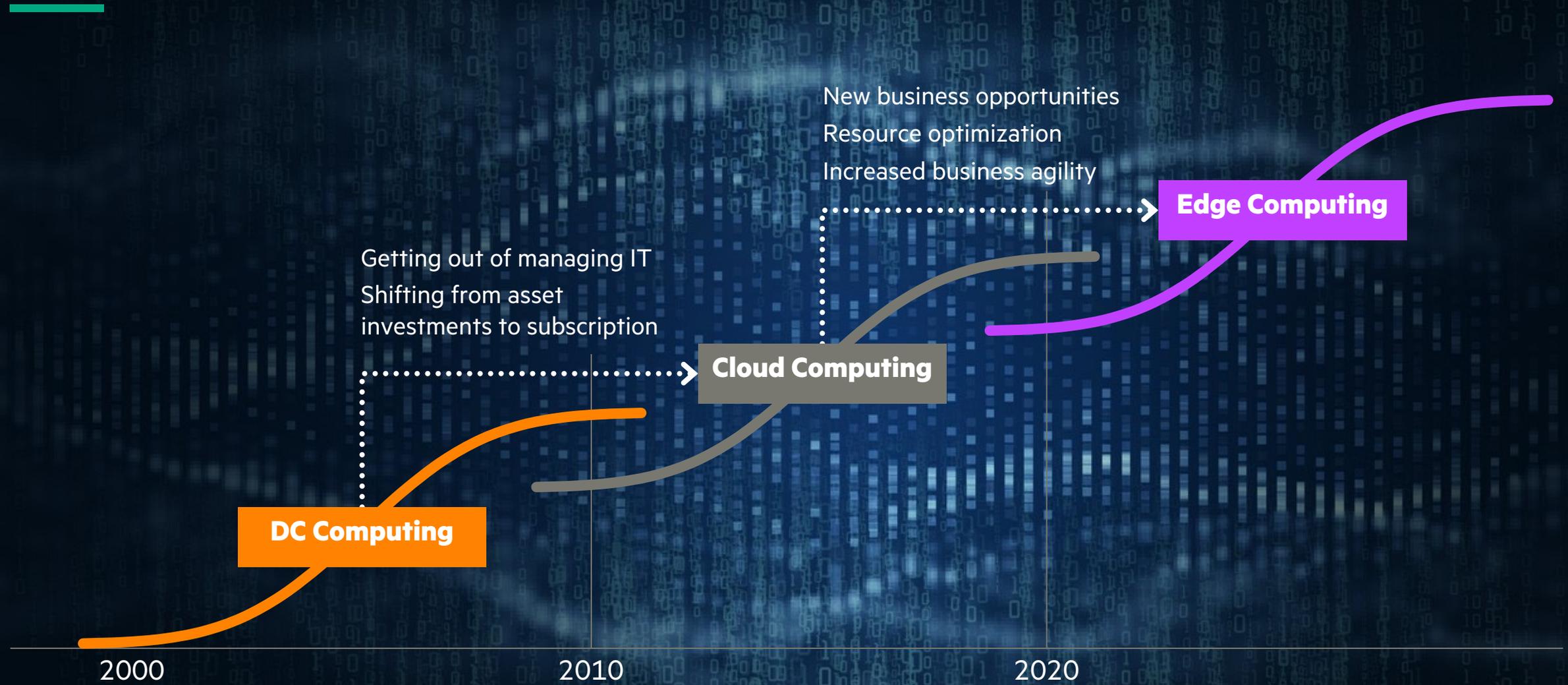
Questions & Answers

DENIS VILFORT

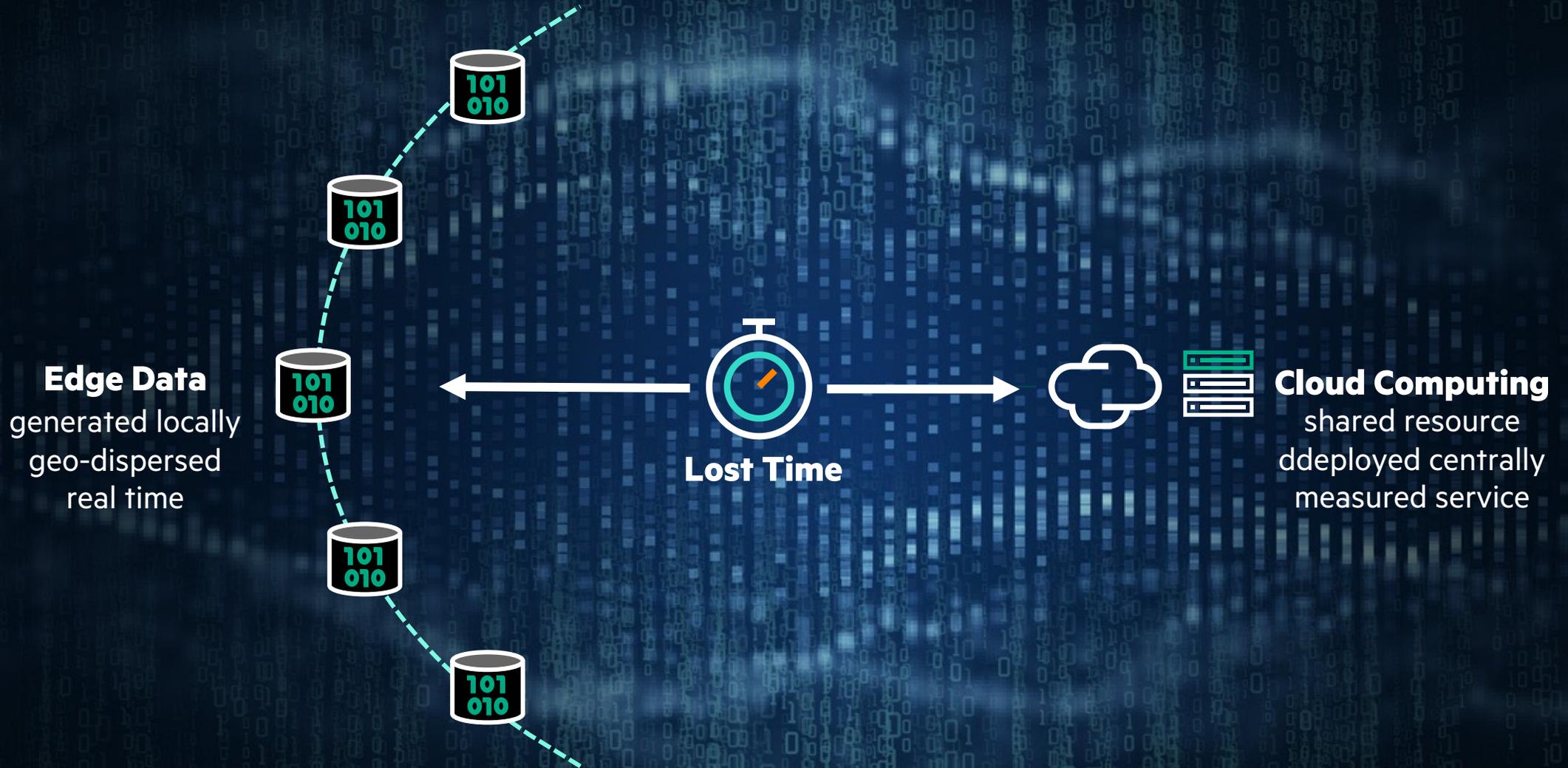
HPE Edge Computing



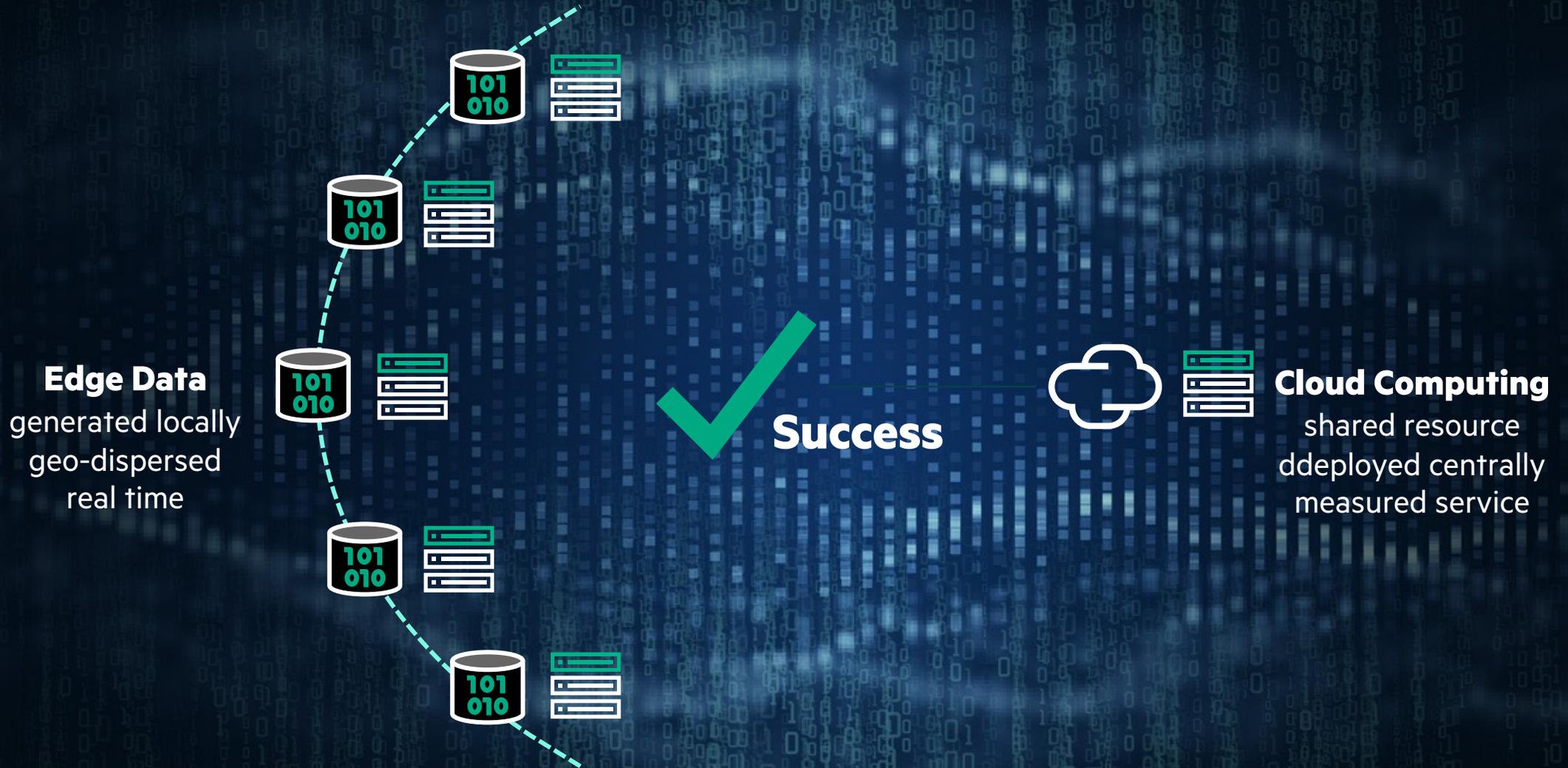
EDGE COMPUTING – THE THIRD WAVE



DATA AND COMPUTE – NOT IN THE SAME PLACE...



EDGE COMPUTING = DATA + COMPUTE POWER TOGETHER



Edge Data Drives the Next Level of Transformation

55B

devices will be
connected worldwide
this year¹

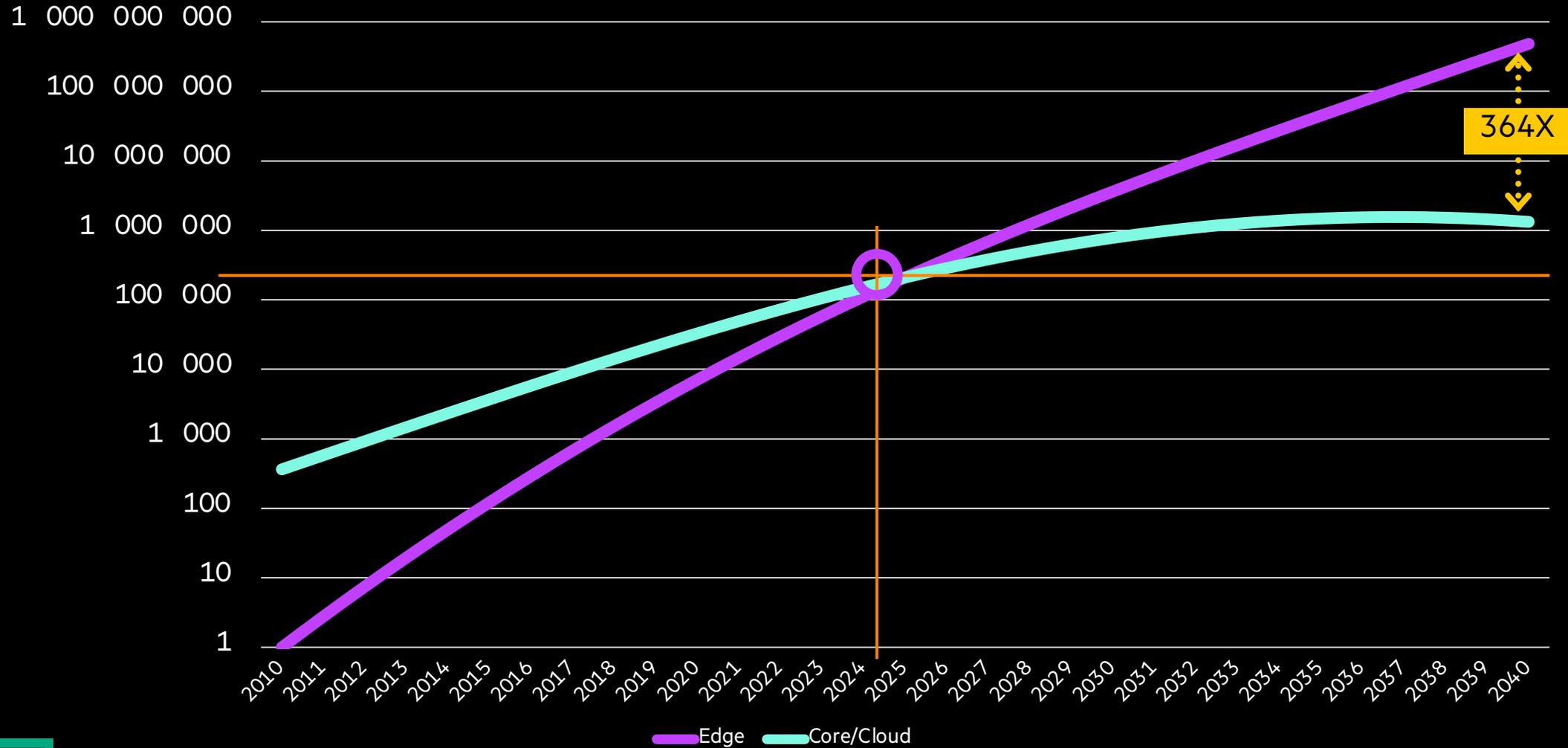
50%

of data will be created
and processed at the edge
outside the traditional
data center or cloud²

1 Source: IDC
2 Source: Gartner

EDGE TIPPING POINT ONLY 4 YEARS AWAY

Data Growth-Factor Edge vs. Core/Cloud



Large Global Electronics Manufacturer

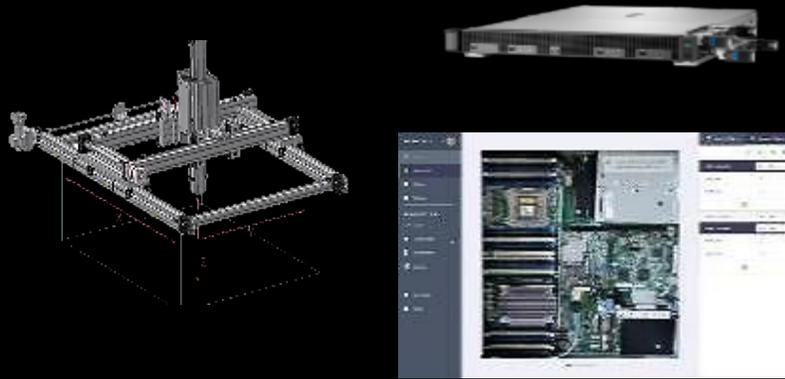
21

times faster

Using high-resolution cameras combined with Edge Computing AI for quality assurance, HPE manufacturing moved from Cloud to Edge Computing and reduced pass/fail time from 21 seconds to 1 second.

LARGE GLOBAL ELECTRONICS MANUFACTURER

Edge video analytics and AI QA



Automated Product Quality Audit using Gantry Robot, Cameras, HPE Edgeline EL4000, and User-intuitive, Flexible, and Scalable AI Training



Factory contains 5 progressive assembly lines, for ~45,000 servers/month.
The system saves 96 sec on each server assembly audit



ROI

~1.5 years*

* Depends on factory volume



Product quality

First pass yield +1%
Out of box audit -25%



Customer experience

Defect on arrival -25%

Each inspection uses 5 cameras and creates **75MB** of high-resolution photos at the rate of 600Mbps which **must be processed real-time**



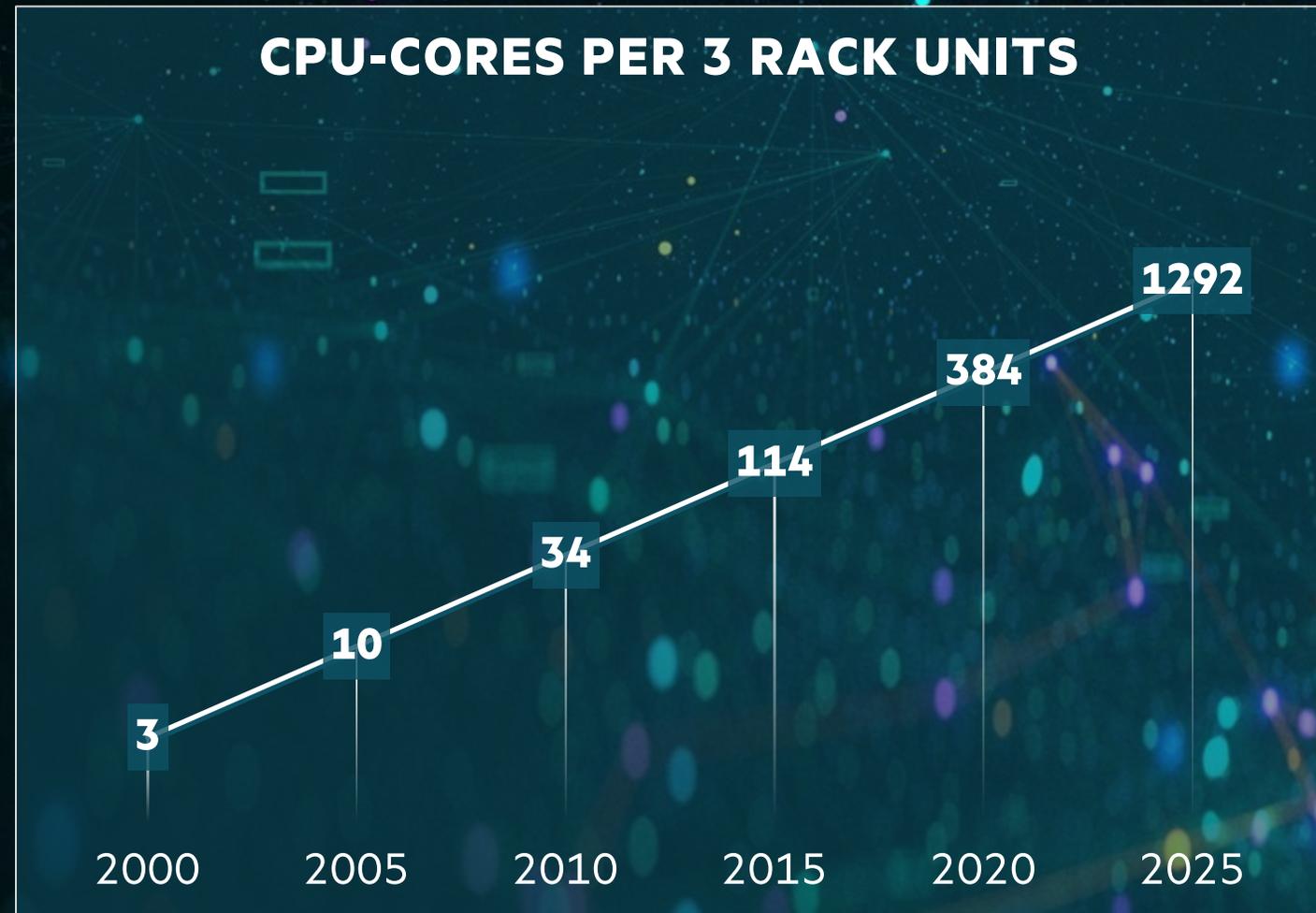
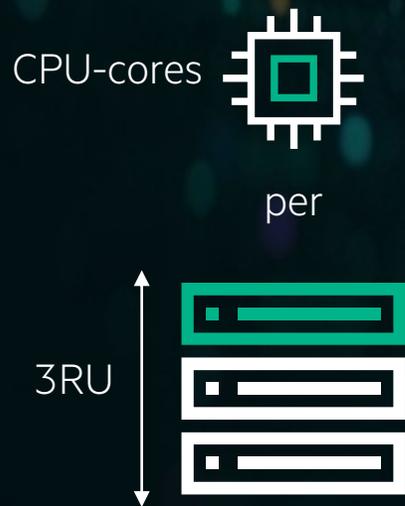
Processing time

Cloud
21 seconds

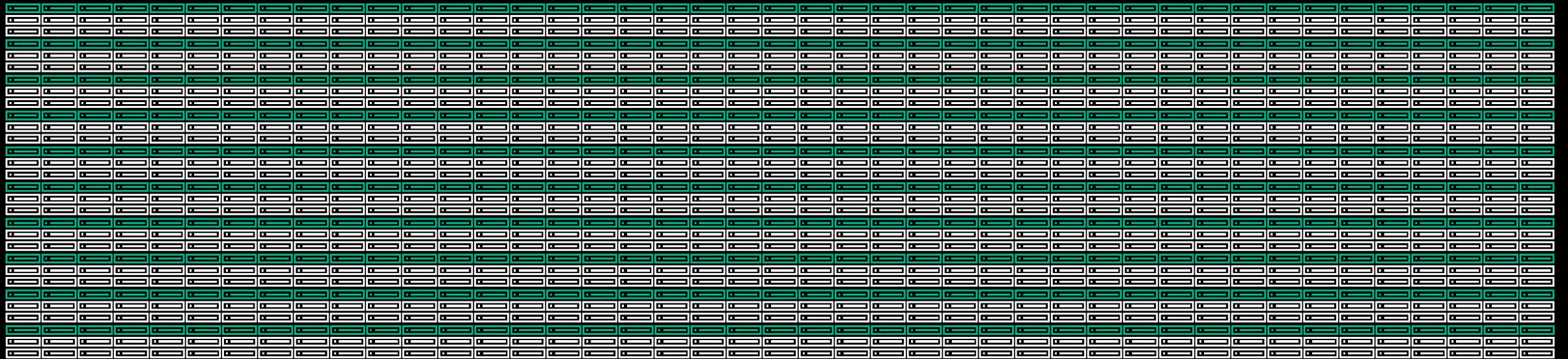
vs.

Edgeline
1 second

THE EDGE IS AS POWERFUL AS YESTERDAY'S DATA CENTER



THE SCALE-OUT DATA CENTER - 21 YEARS AGO...

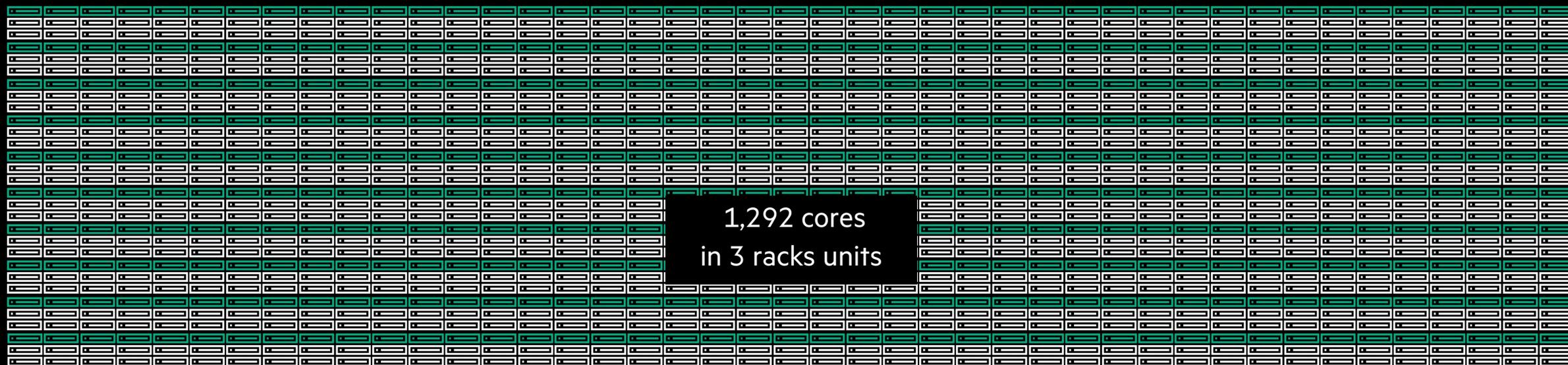


1,292 servers – in 43 racks

The Data Center - Year 2000



THE 3-PIZZA-BOX DATA CENTER – 3 YEARS FROM NOW ...

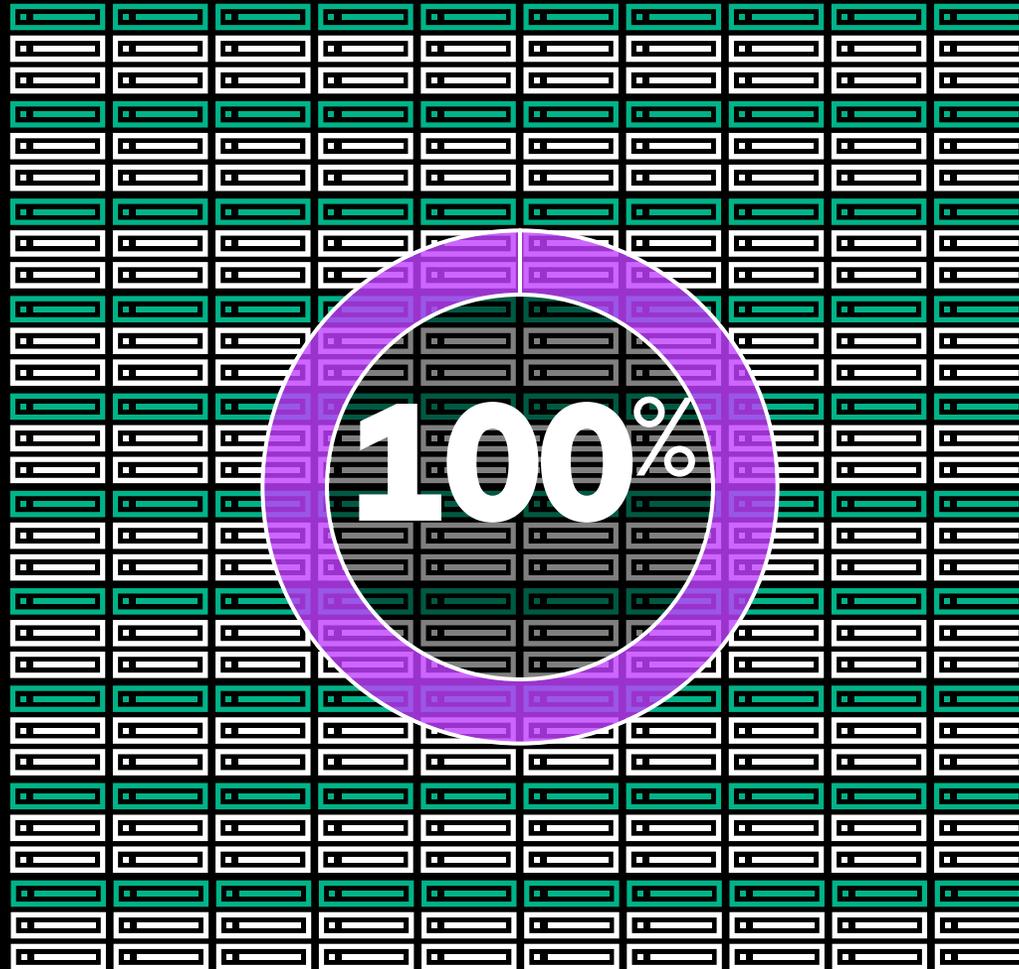


← 1,292 servers – in 43 racks →

Year 2005



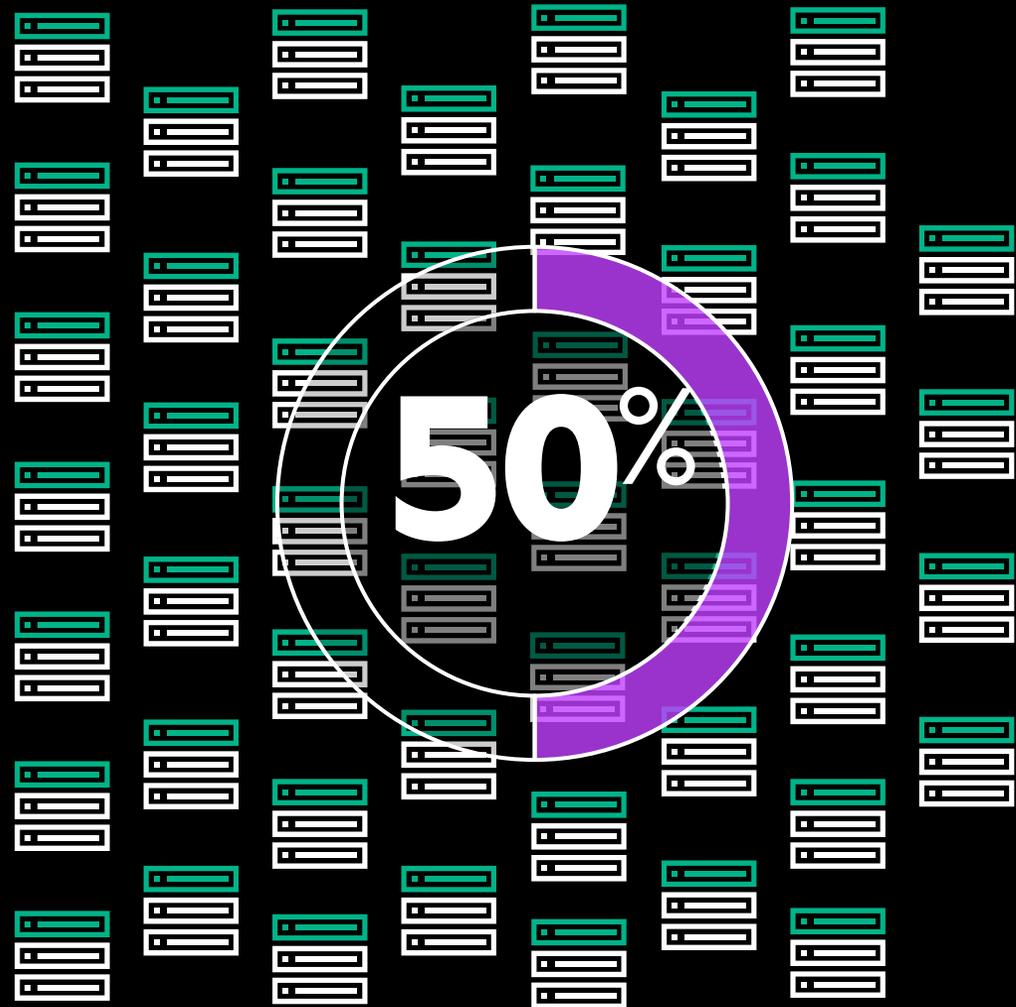
THE CORE-DRIVEN ENTERPRISE - 22 YEARS AGO...



Data Center – Year 2000



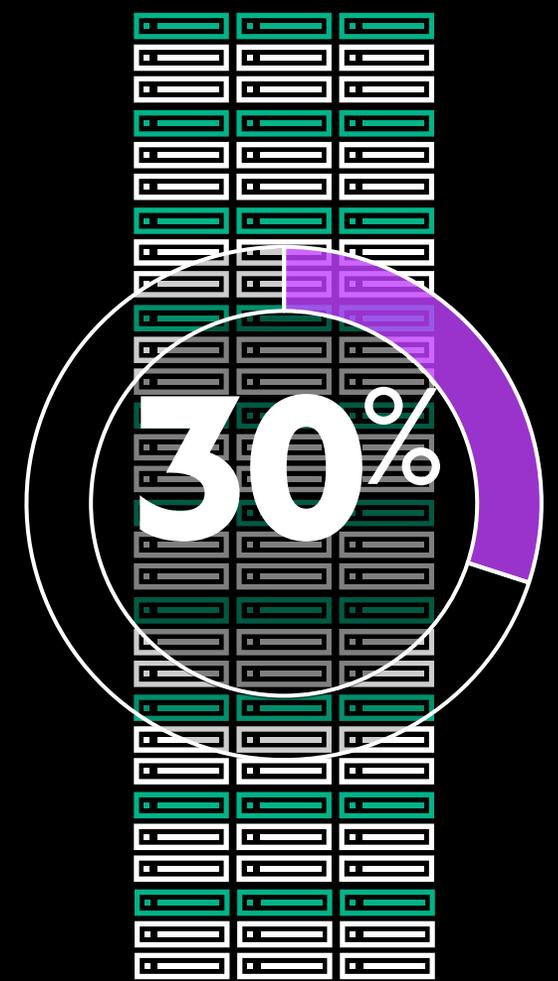
THE DISTRIBUTED ENTERPRISE – 3 YEARS FROM NOW ...



Edge



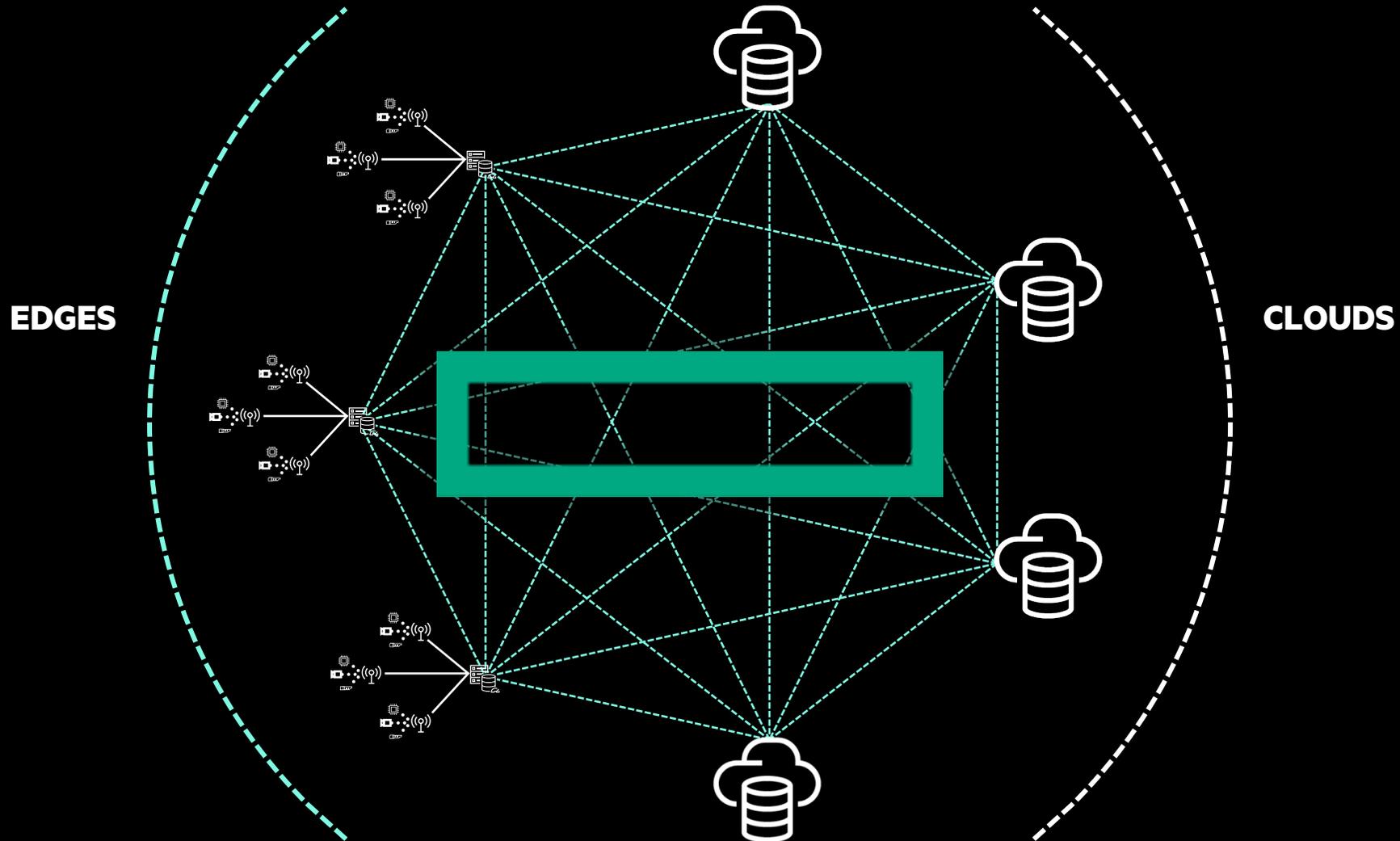
Core Data Center



Public Cloud

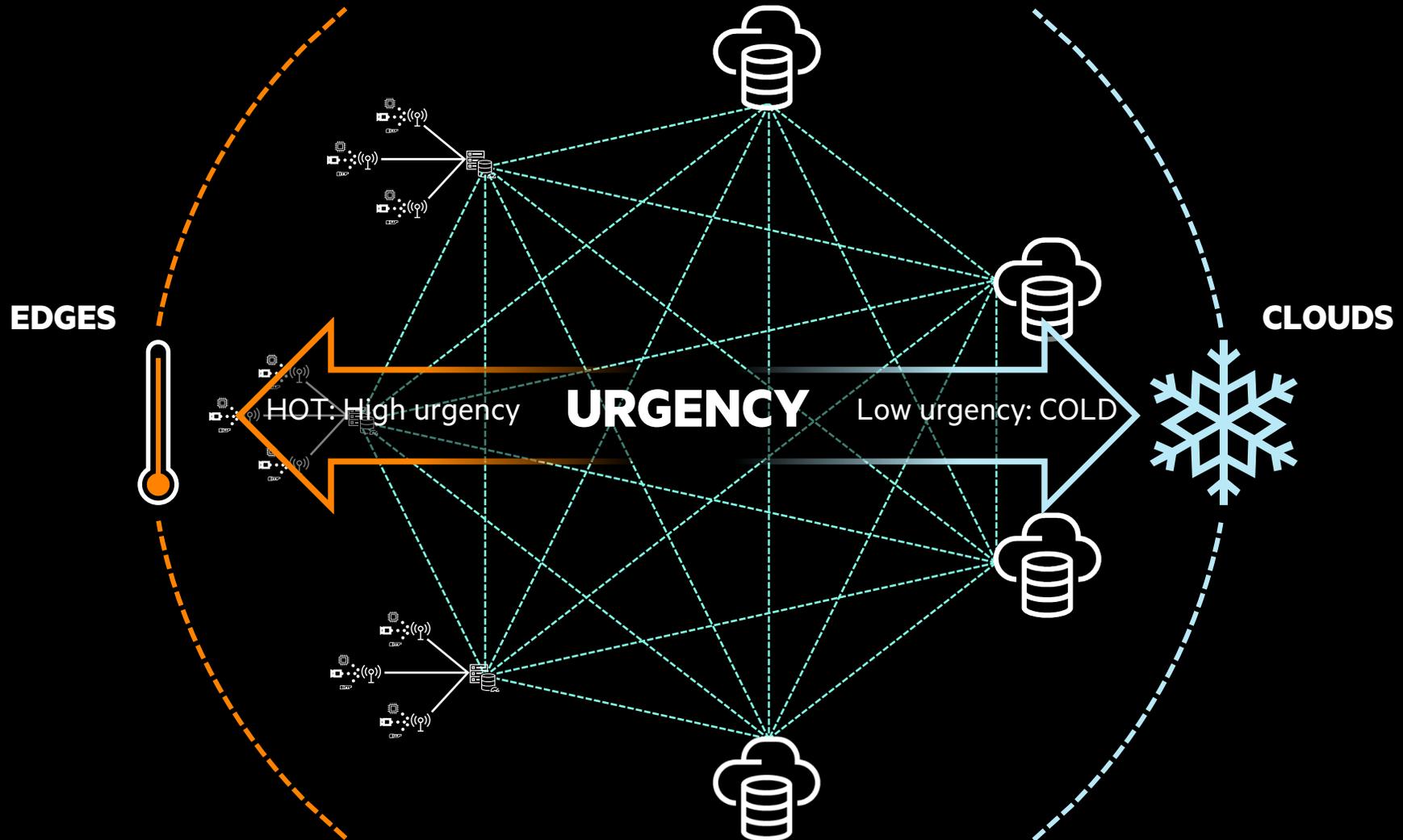
DISTRIBUTED COMPUTING

Drives the need for a holistic operating platform for data and workload lifecycles



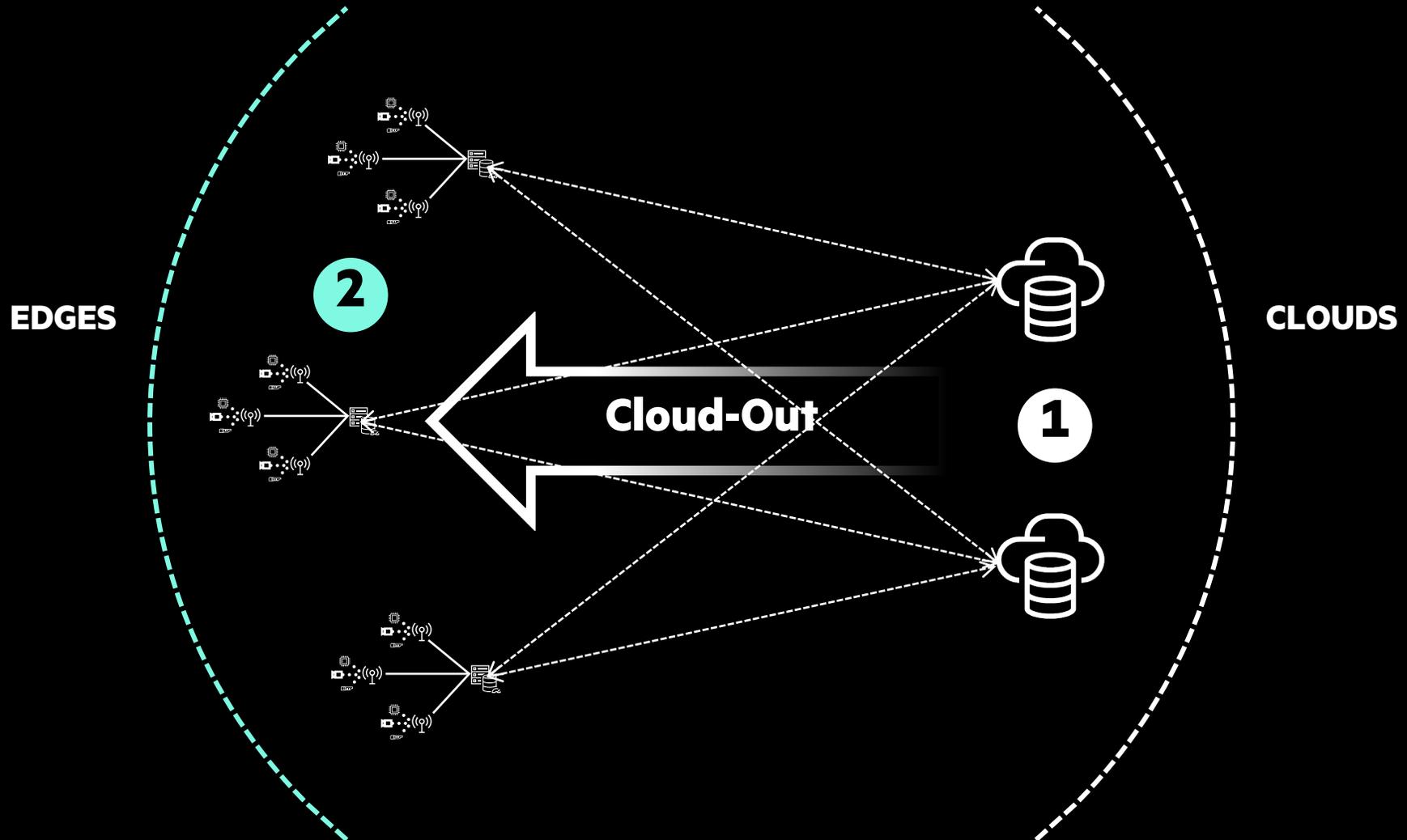
HOT EDGE – COLD CLOUD

Edge-to-cloud data placement is differentiated by data urgency



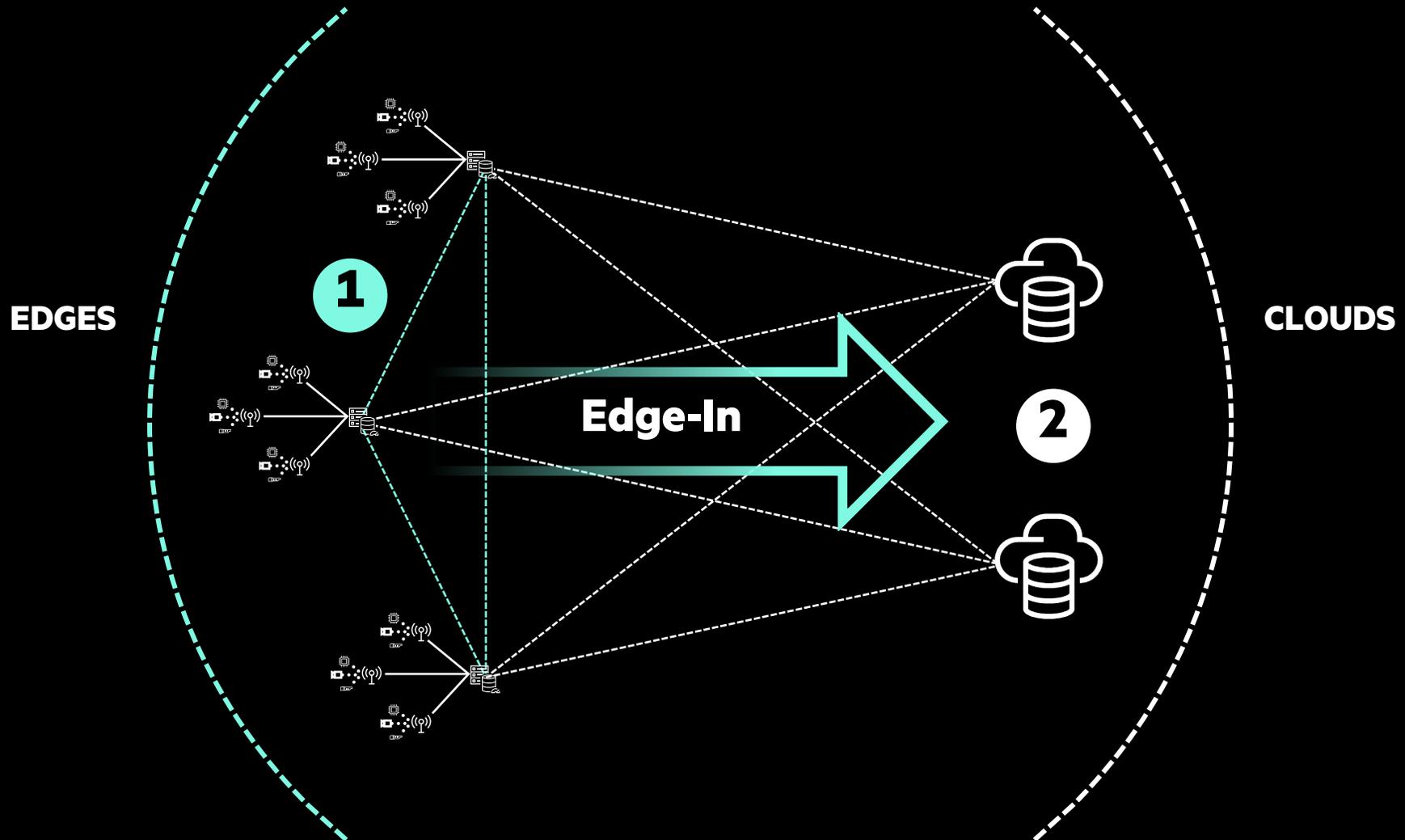
CLOUD-OUT STRATEGY

Starting with Cloud first – then treating the Edge as an extension of the Cloud

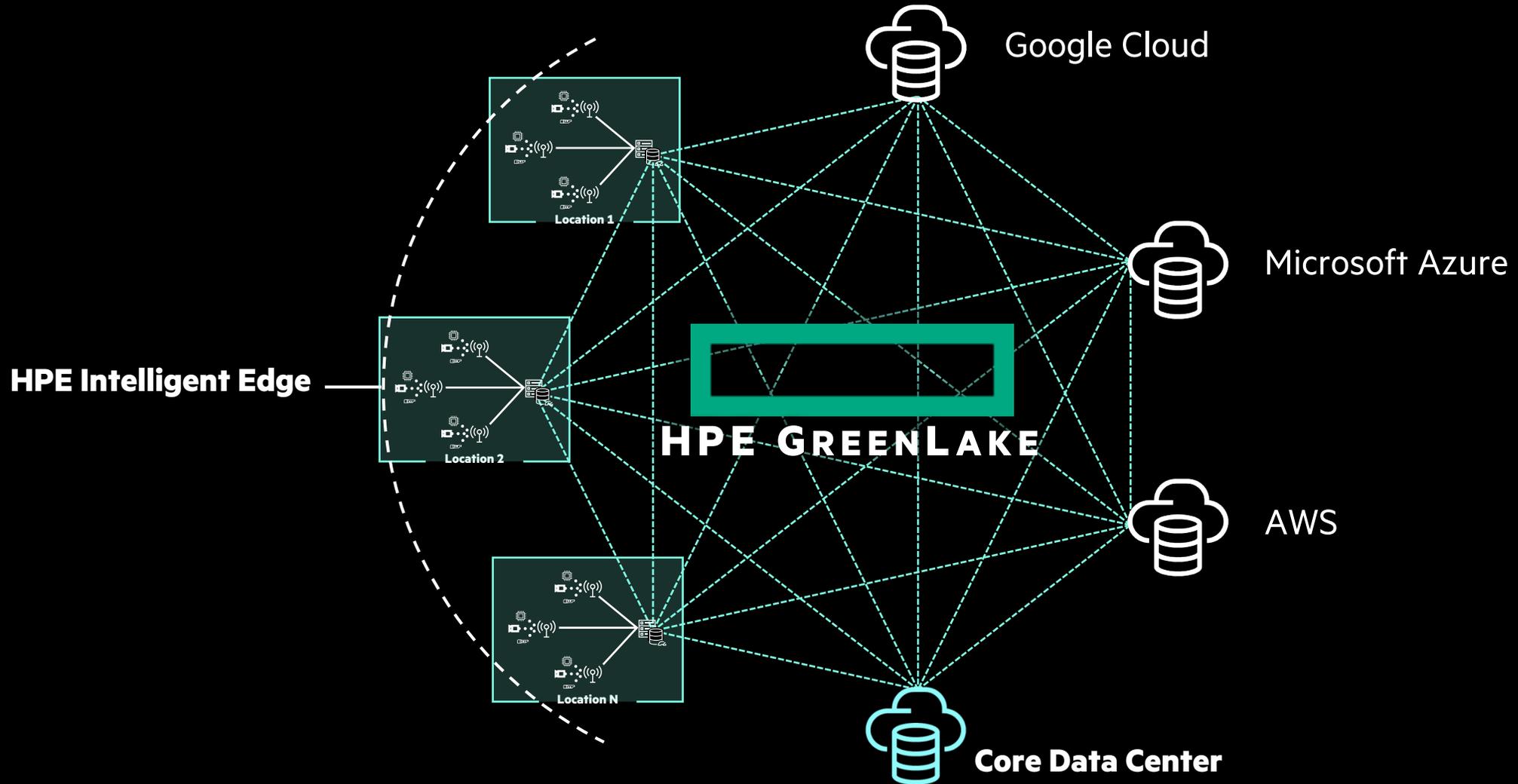


EDGE-IN STRATEGY

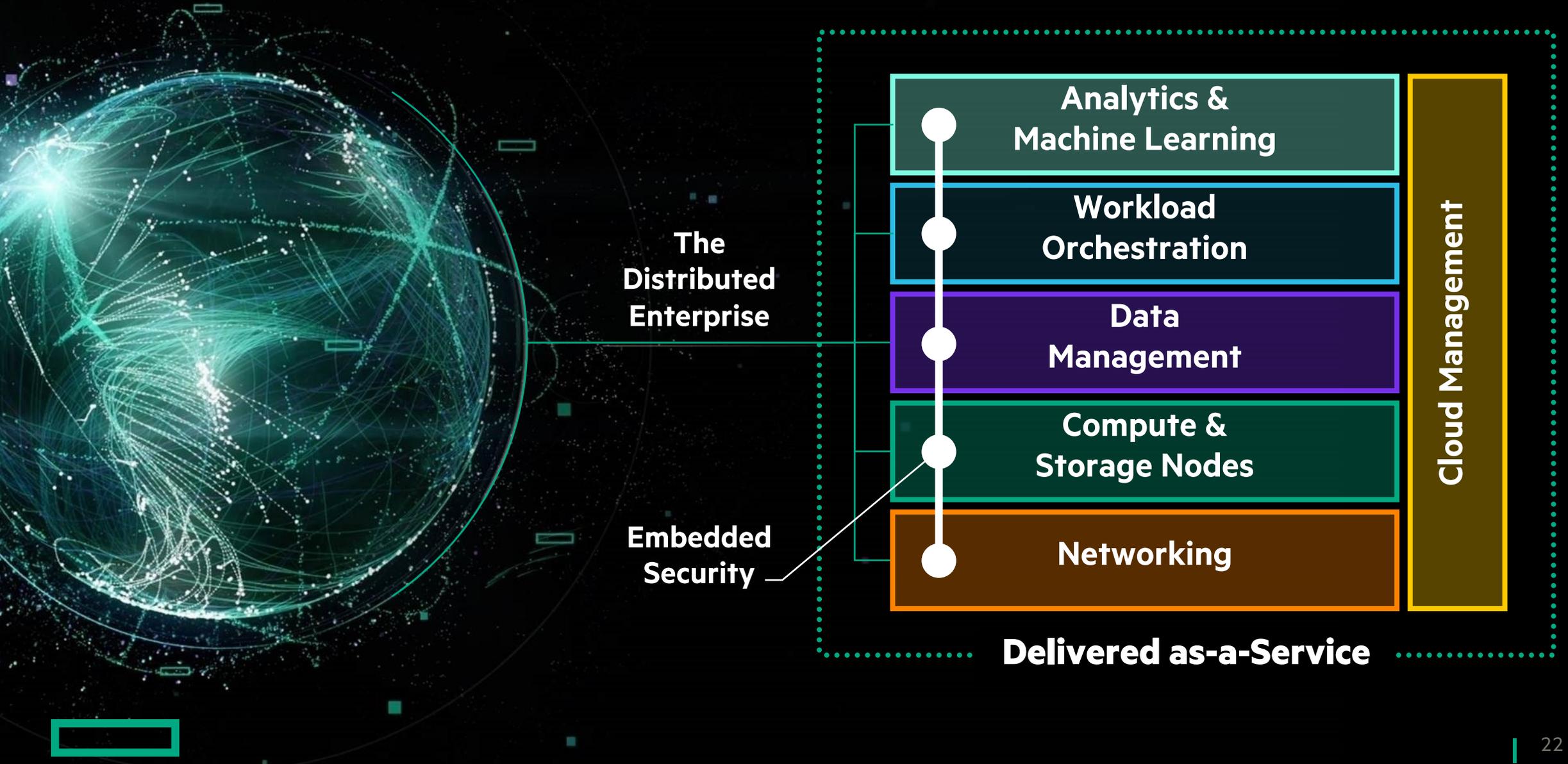
Starting with decentralized Edge first - then backfilling with centralized Cloud



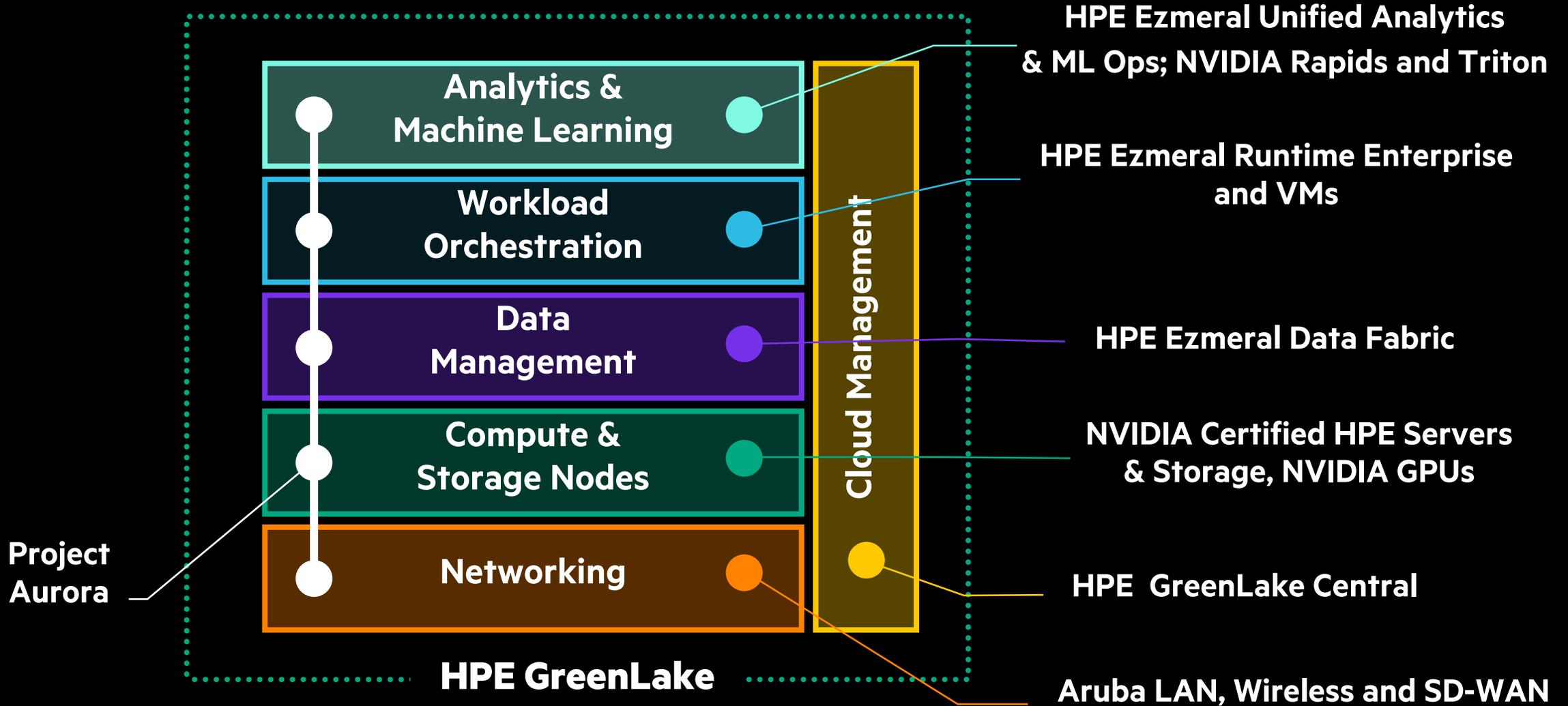
HPE GREENLAKE ... THE EDGE TO CLOUD PLATFORM



EDGE-TO-CLOUD PAAS STACK



HPE EDGE-TO-CLOUD "HOUSE" STACK



HPE INTELLIGENT EDGE SOLUTIONS – HARDWARE & SOFTWARE AS ONE



Financial Services



Healthcare



Retail



Media and Entertainment



Manufacturing



Telecommunications



Oil and Gas



Public Sector

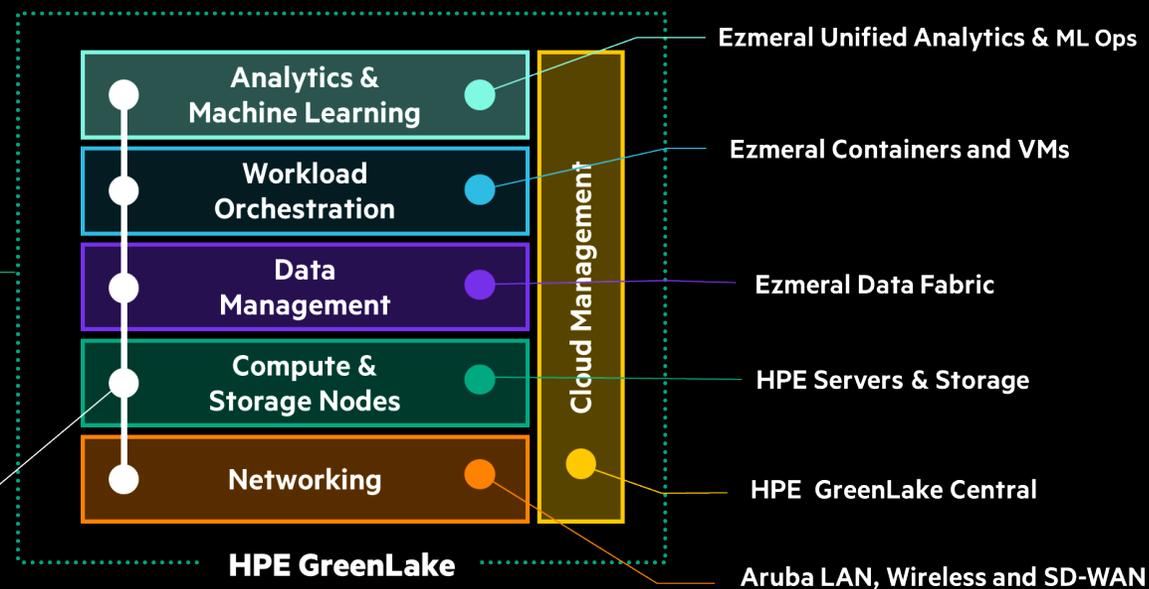
Channel Partners with vertical ecosystem expertise

Edge Cluster

4-node server cluster w/ networking and UPS



Project Aurora



Edges

Data centers & Co-locations

Public clouds

WILLIAM BENTON

Principal Product Architect, NVIDIA



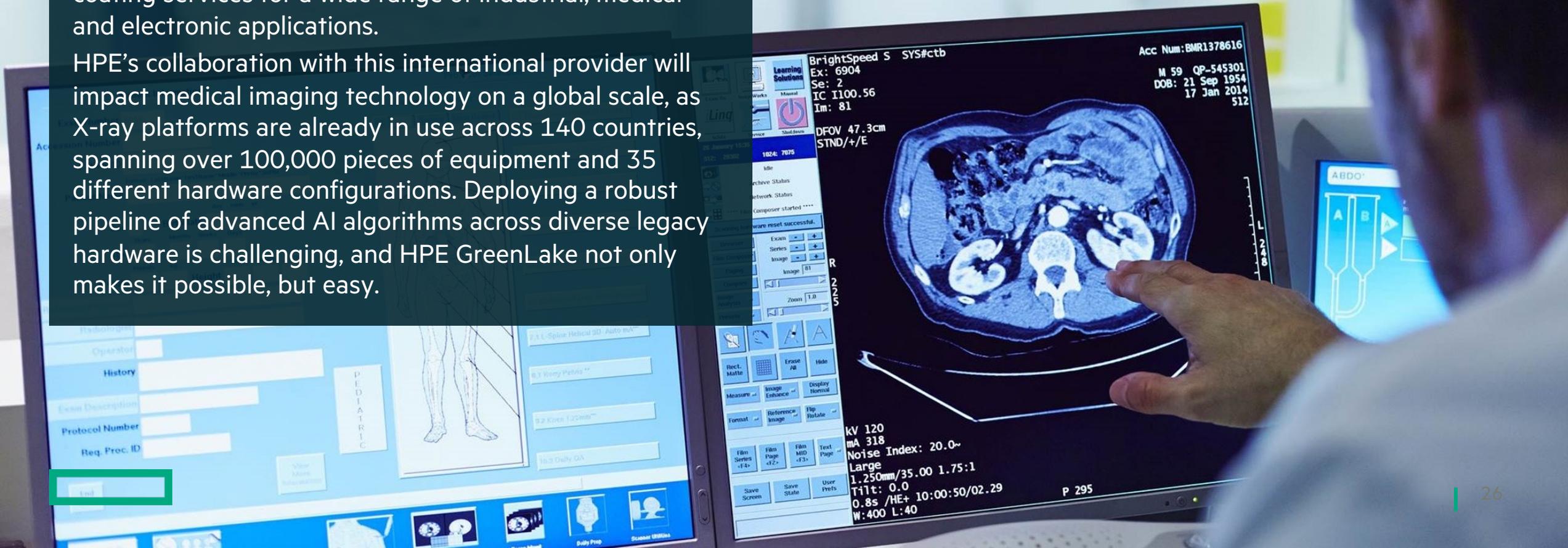
Actual Healthcare Example

A worldwide provider of X-ray imaging systems for medical, non-destructive testing and precision contract coating services for a wide range of industrial, medical and electronic applications.

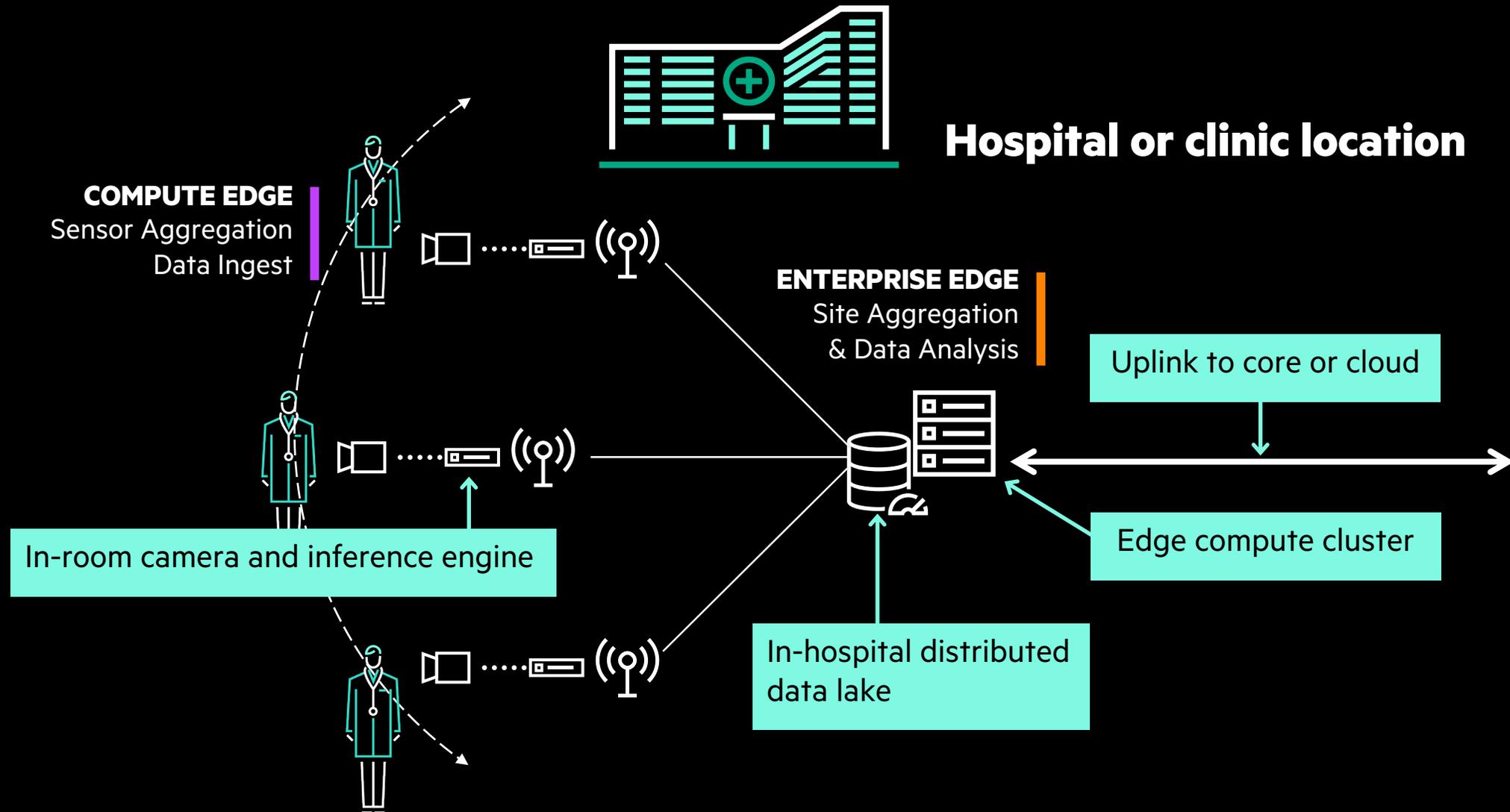
HPE's collaboration with this international provider will impact medical imaging technology on a global scale, as X-ray platforms are already in use across 140 countries, spanning over 100,000 pieces of equipment and 35 different hardware configurations. Deploying a robust pipeline of advanced AI algorithms across diverse legacy hardware is challenging, and HPE GreenLake not only makes it possible, but easy.

140

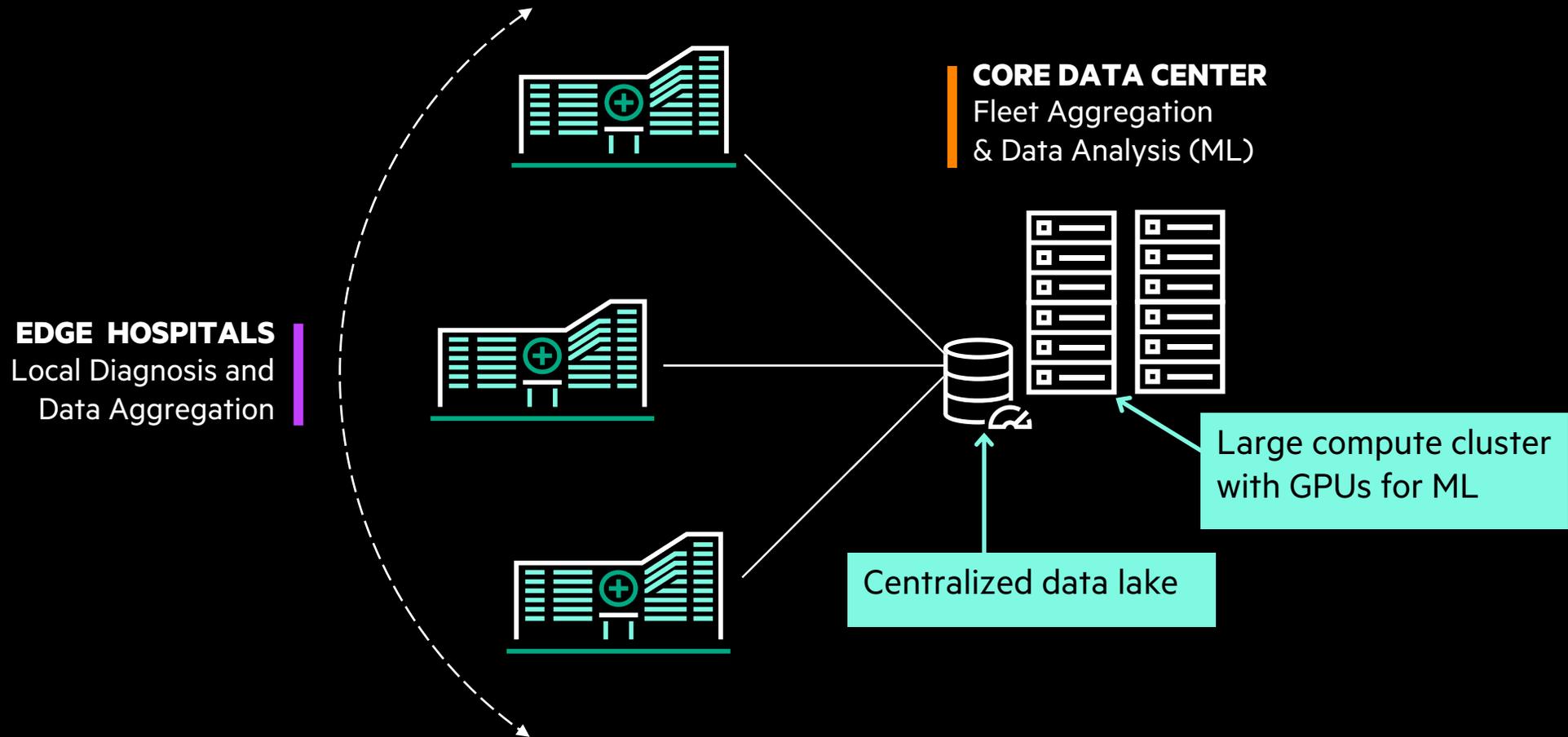
countries world-wide



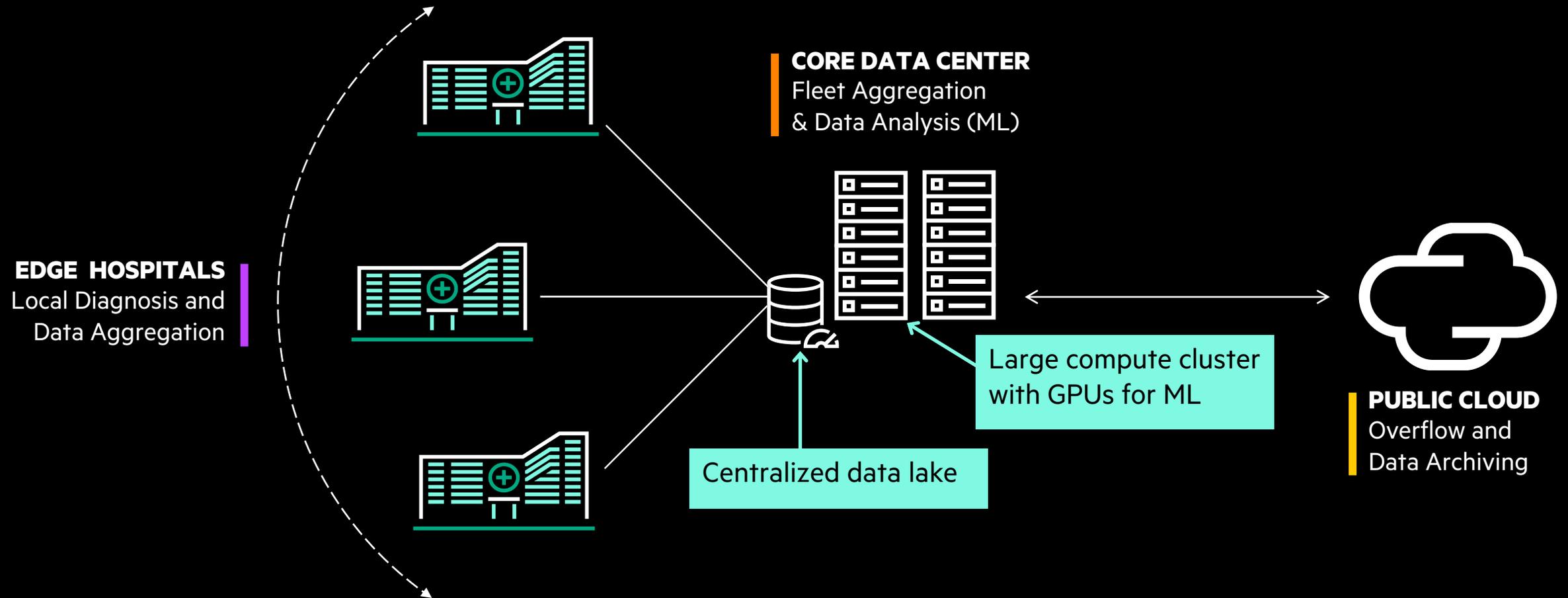
DISTRIBUTED HEALTHCARE AND DIAGNOSIS



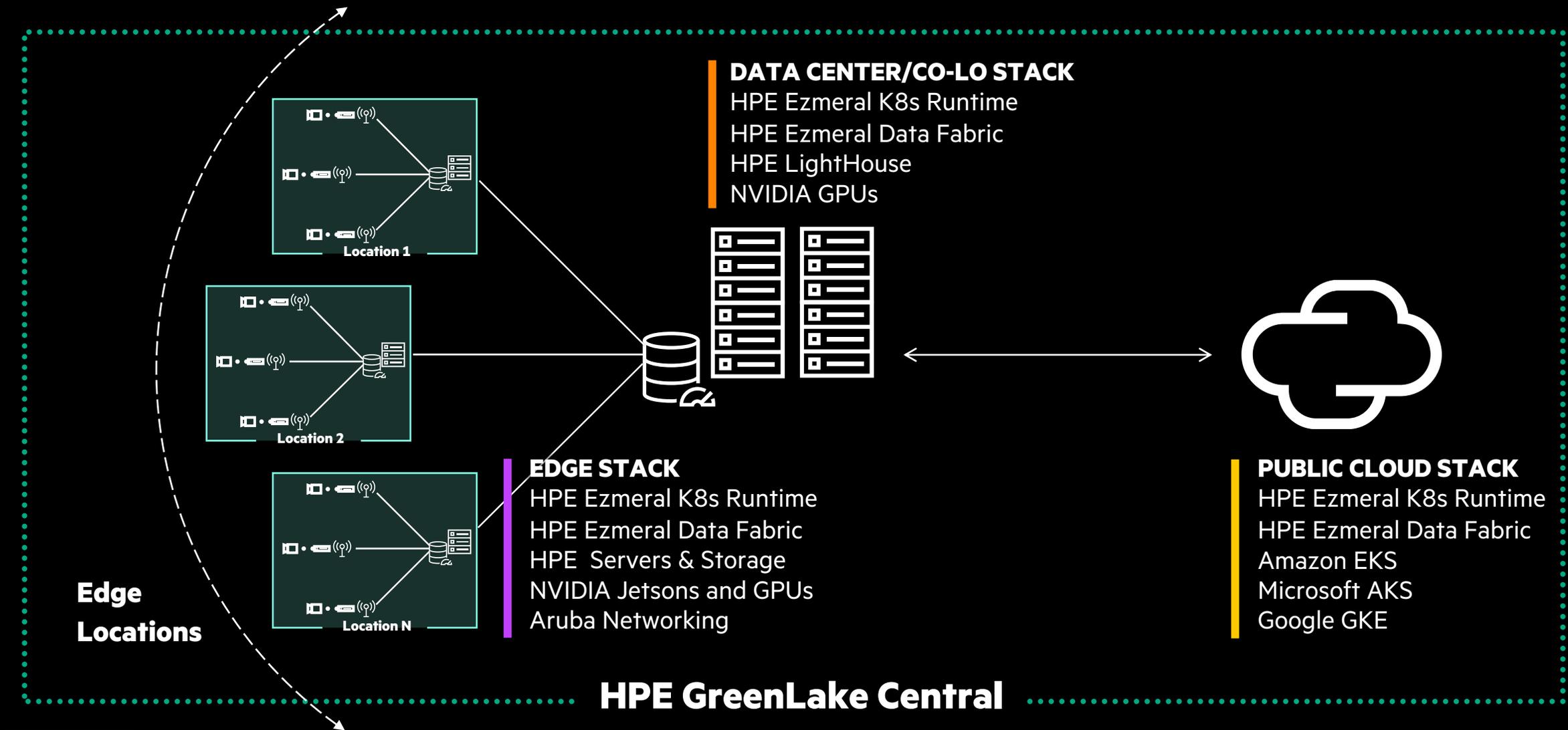
FLEET MANAGEMENT ACROSS ALL HOSPITALS WITH CENTRAL ML



DISTRIBUTED ENTERPRISE WITH PUBLIC CLOUD EXTENSION



DISTRIBUTED GREENLAKE EDGE-IN SOLUTION STACK



GET STARTED ON YOUR EDGE-IN ACTION PLAN..



- 1 What can be done better when local decisions are made in real time?
- 2 Which location would be best suited for project pilot that will prove the benefits of an Edge-In strategy for you?
- 3 What would be the increased economic outcome of your Edge-In strategy at scale?
- 4 To which extent will HPE GreenLake help avoid large up-front cost and help you scale?
- 5 Select HPE to be your Edge-In partner and start to enjoy the benefits now.



THANK YOU

