



SUSTAINABLE DIGITAL
INFRASTRUCTURE ALLIANCE

Going up - moving beyond data centers to digital power generation

Or: How the Cloud is slowly killing traditional co-location business

Which one is the more efficient data center?

1

PUE of **1.1** +
average IT hardware utilization
rate of **15%**

2

PUE of **1.4** +
average IT hardware utilization
rate of **85%**

What is the Cloud (IaaS) really?

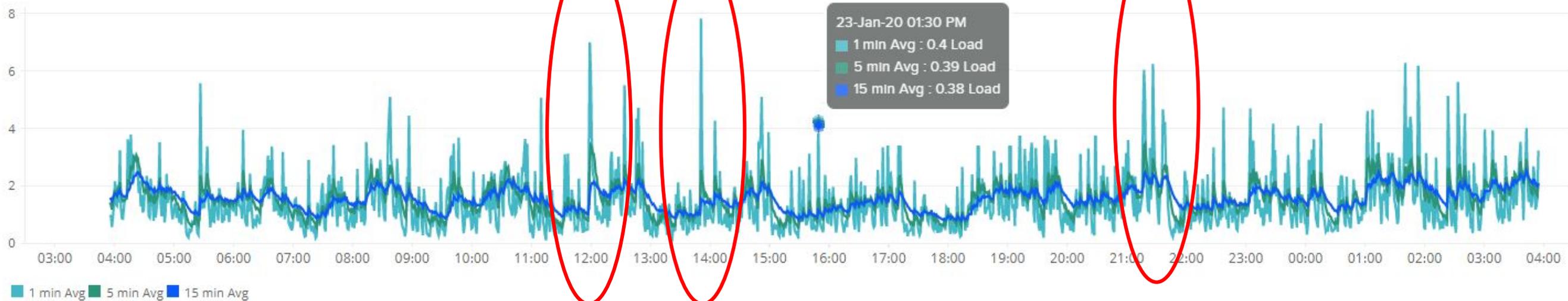
WHAT IS THE CLOUD?

AWS was born out of the realization that Amazon is not utilizing most of its infrastructure.

Load Average 



	Average	Minimum	Maximum
1 min Avg (Load)	1.46	0.11	7.83
5 min Avg (Load)	1.55	0.51	3.46
15 min Avg (Load)	1.57	0.79	2.52



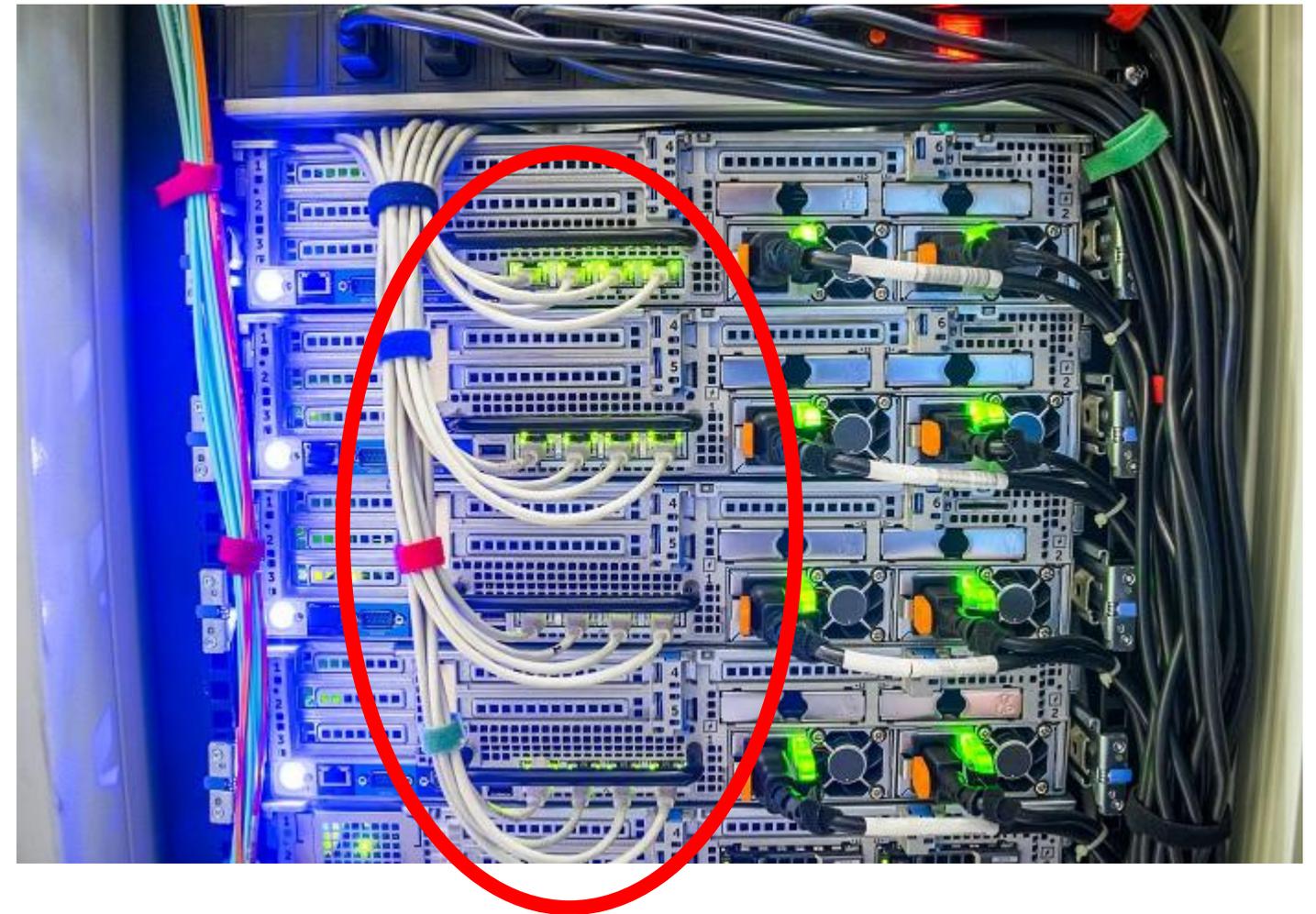
The Cloud is abstraction of resources needed to build & run software: the primitives of the Cloud.



3 commodities which, when combined, create value => applications & services

WHAT IS THE CLOUD?

When I treat these resources as commodities, I can build underlying hardware & infrastructure cost-optimized.

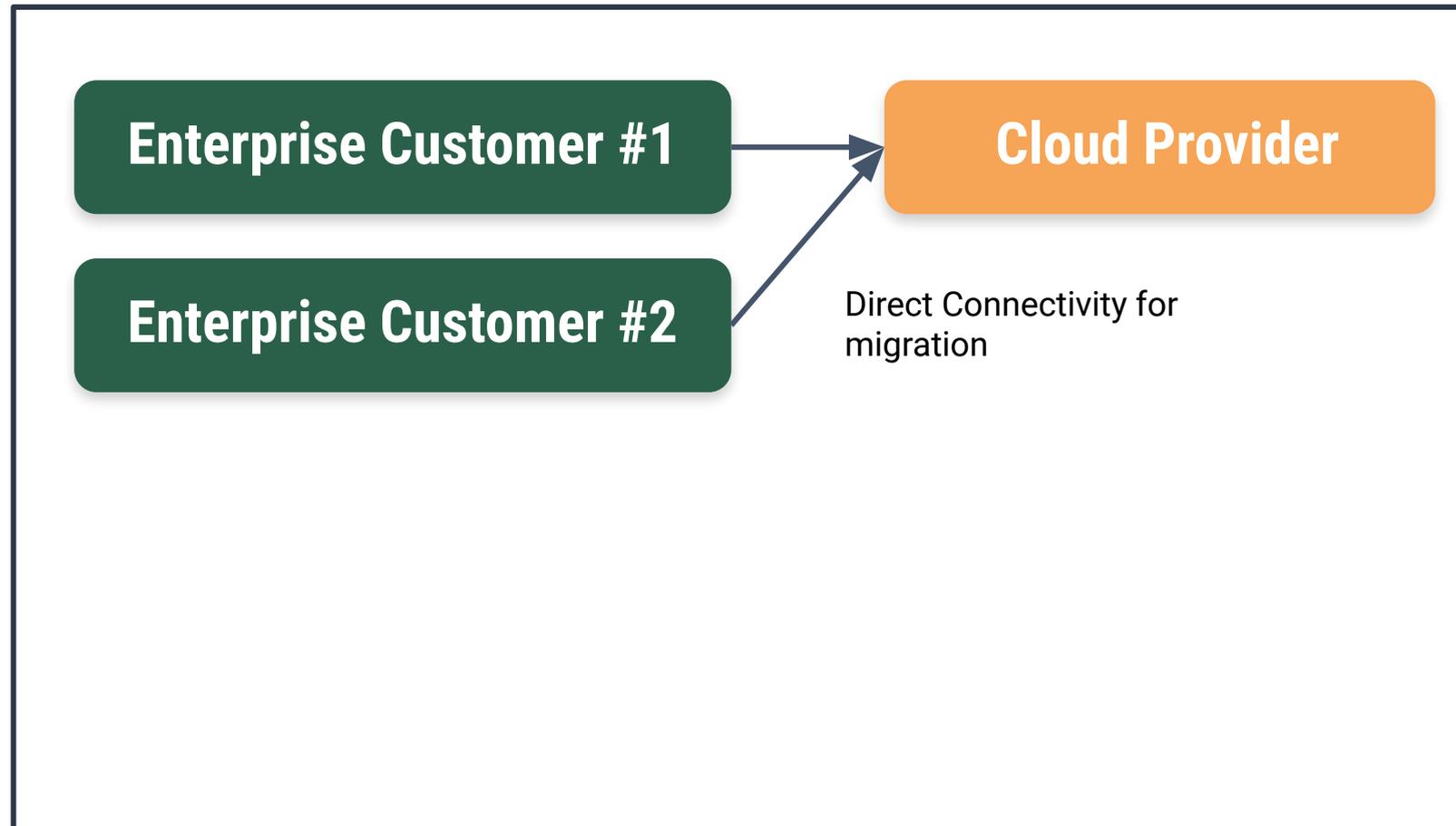




**How is it going to (almost) kill
traditional colocation?**

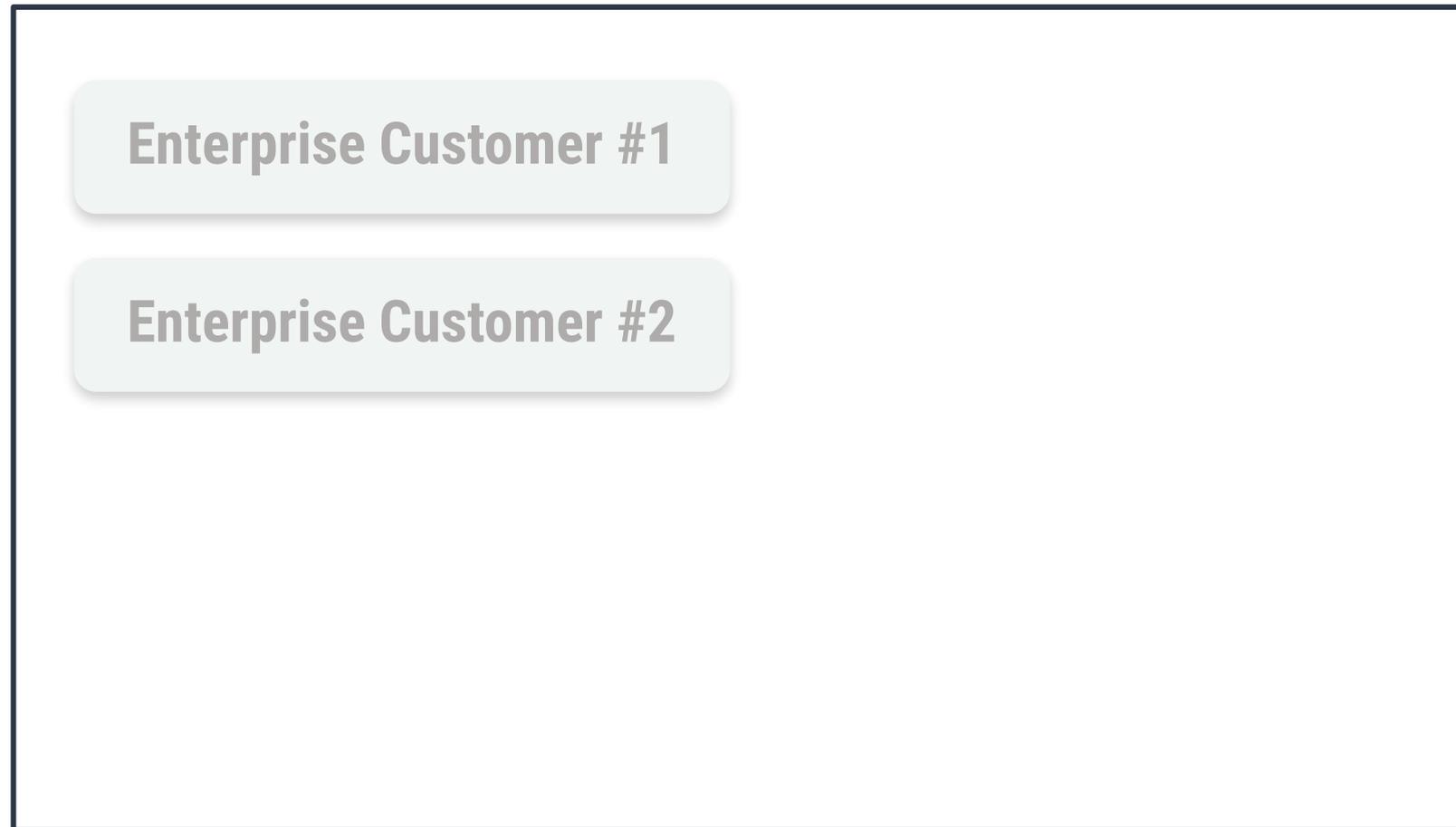
Step 1 & 2: Move in with them & migrate data

Co-Location

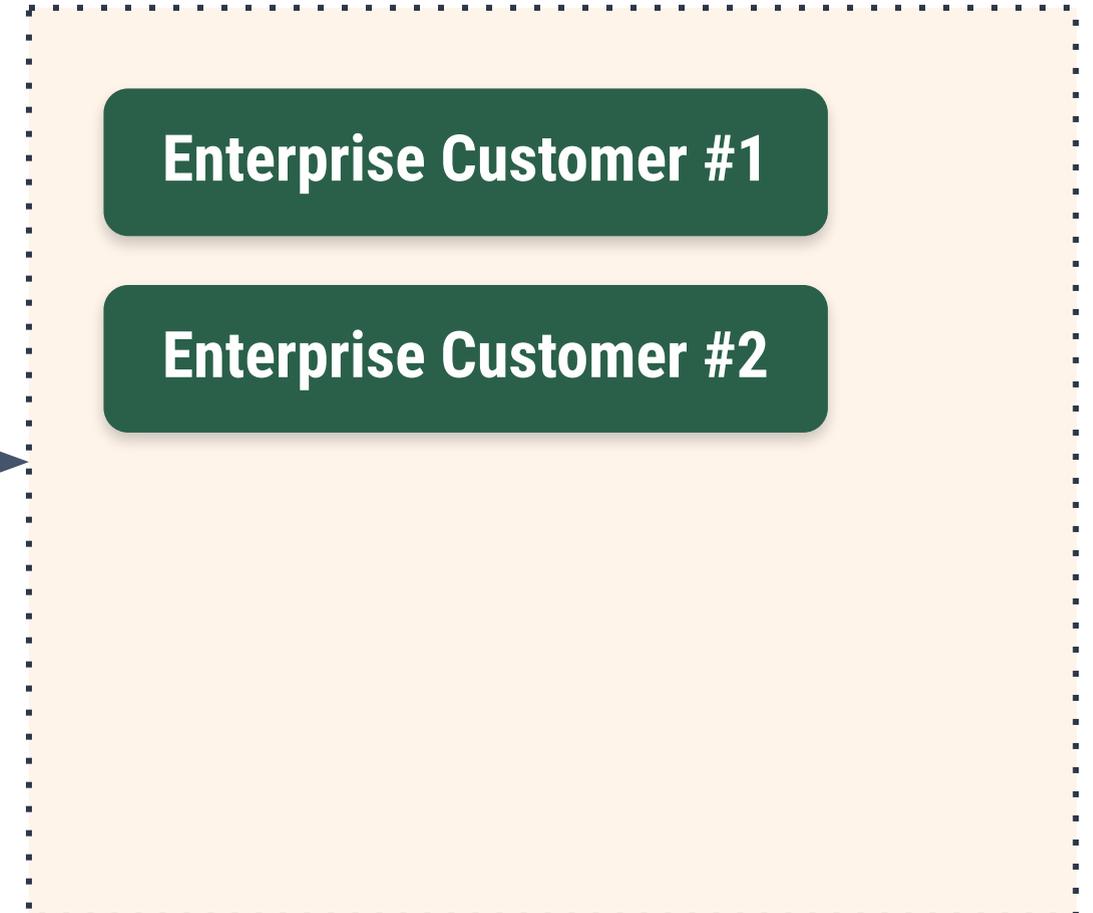


Step 3 & 4: Build own facility, connect and move out

Co-Location

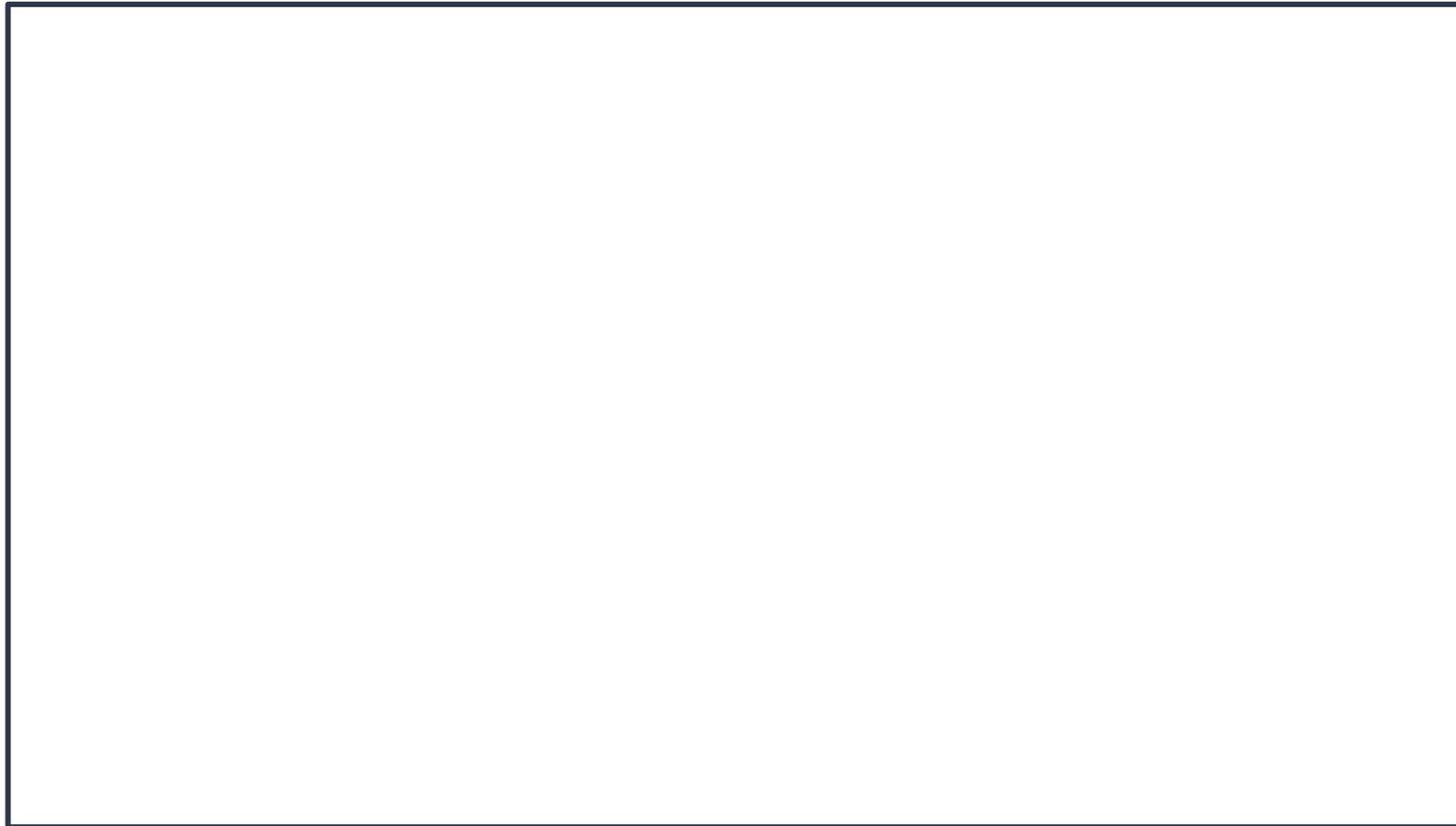


Cloud/Hyperscale facility

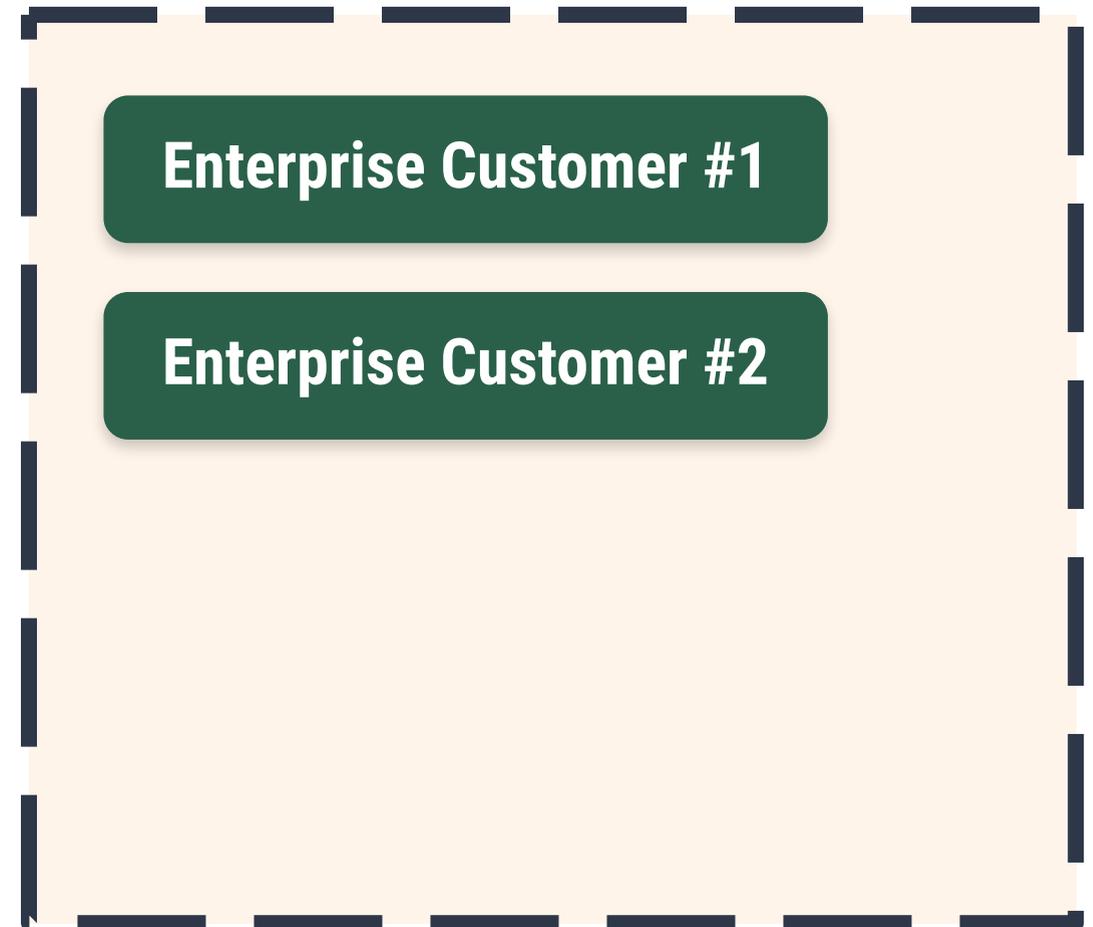


Step 5: Create the moat (outbound data transfer fee)

Co-Location



Cloud/Hyperscale facility

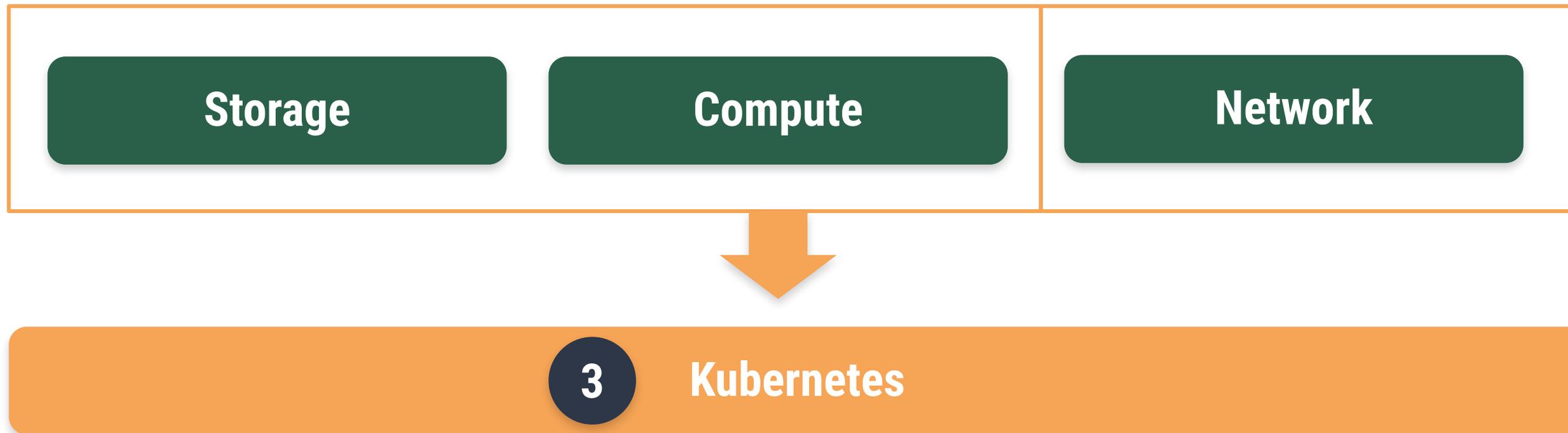


Equinix Metal or how colocation can differentiate?

Differentiation only works by going up the value chain - how far is up to you.

1 Infrastructure as a Service (Equinix Metal)

2 Programmable Networks



You have a choice on what you want your core business to be:

Specialized

There will always be some enterprise customers who want specialized infrastructure for some applications (e.g. banks, insurance, financial services)

Cost competing

Become a real-estate company, embrace the commodity of a data center and compete of lowest cost per unit of digital power or square meter.

Verticalized

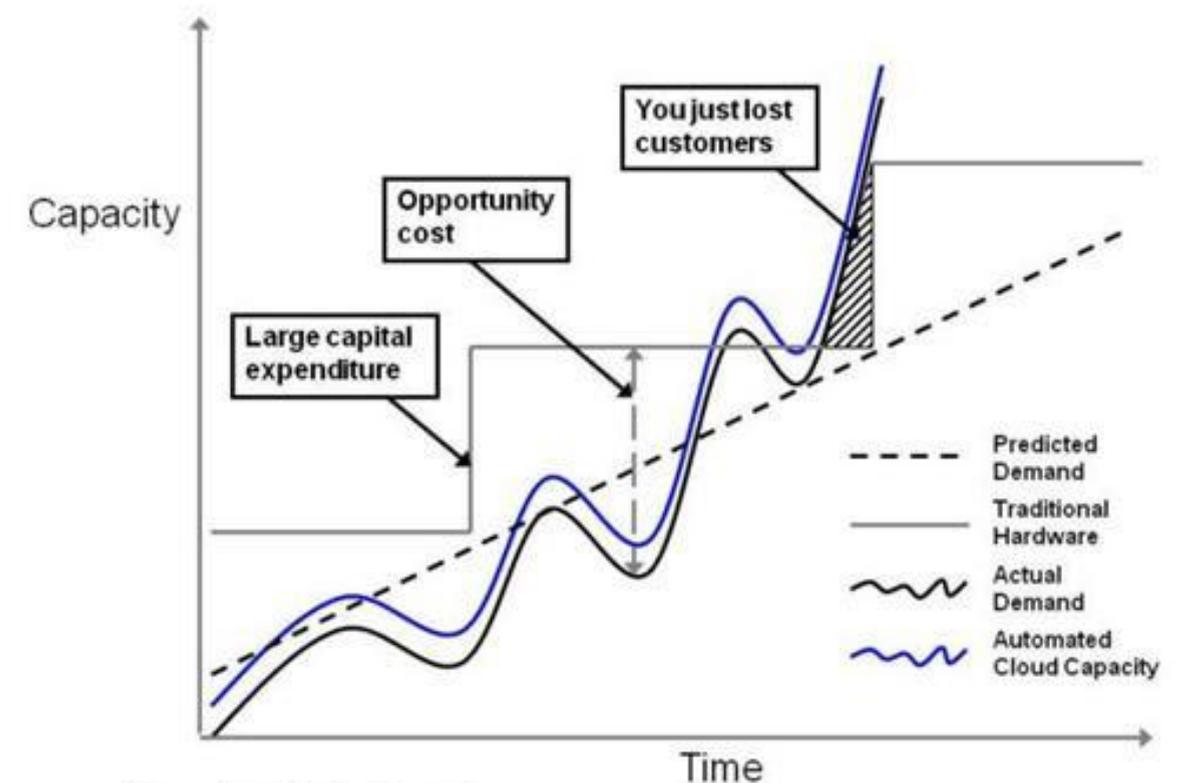
Go up the value chain and offer Infrastructure as a Service or a Cloud platform and benefit from increased margins & opportunities in a new, growing market segment.

**But what does that have to do
with Sustainability?**

Sustainability is a systems problem - if we take a systems view we are wasting resources at a massive scale.

Average Global IT
Server Utilization:
10-15%

Data Center Construction
in US & EU + UK:
> 1000 MW
2020 JLL Report



Based on illustrations by
Amazon Web Services



Thank you.