Call to action:

Measure holistically data centre carbon footprints!!!

……. followed by data centre decarbonisation actions in the 21st century open source collaborative commons and its circular economy

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Agenda:

What are your data centre carbon footprints and Scope 2 & Scope 3 relationships

We are all just slaves to the economists models & 21st century embedded economy

Killing the myth that being green costs more money

Open Source ICT hardware is well rotted horse shit for growing the Circular Economy

Yes! open source software eats data centre hardware by 90%

Q&A

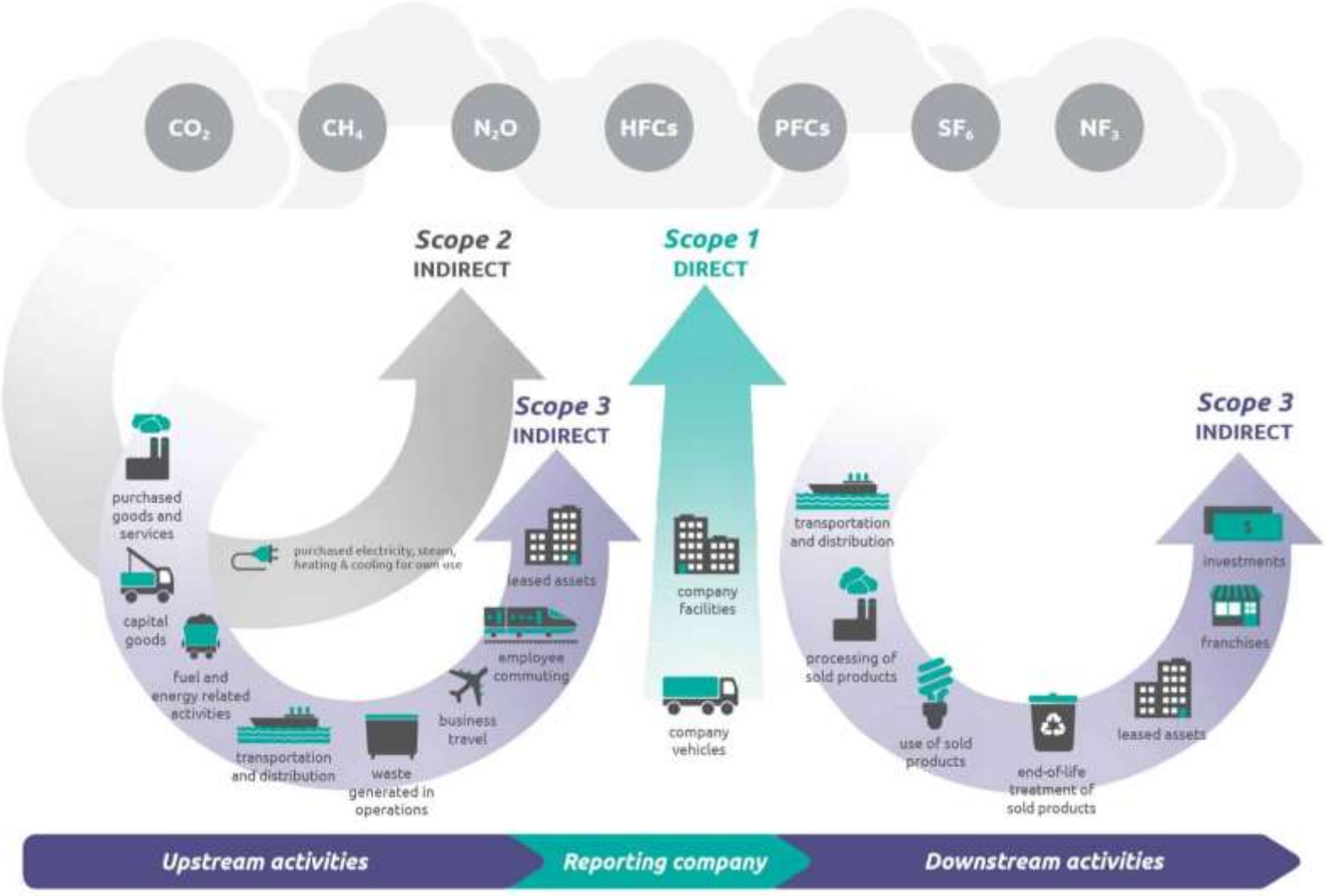
Data Centre CO2 emissions

“If you don’t measure them, you can’t improve them.”

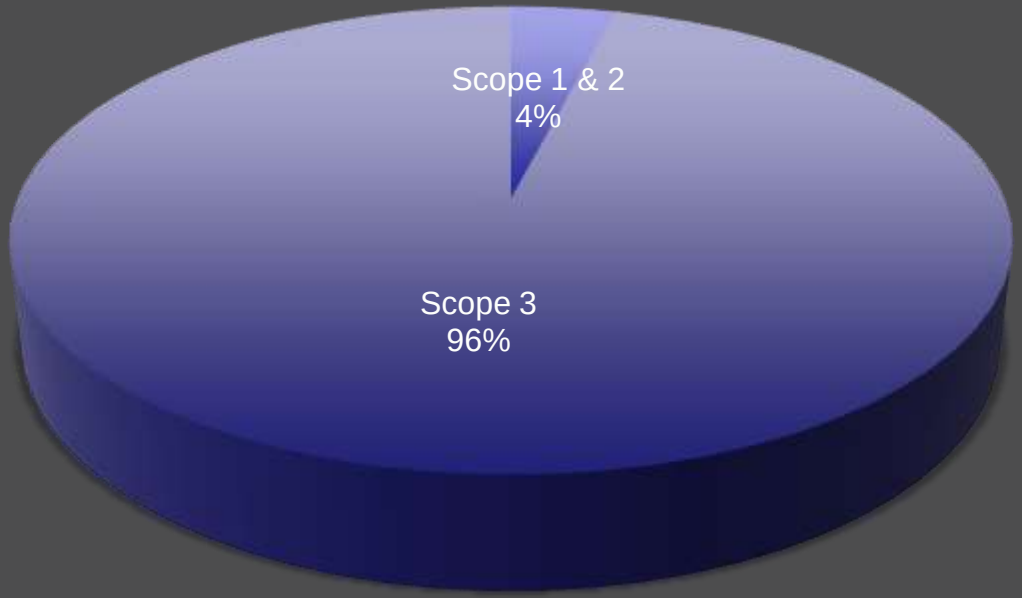
Now I could be wrong …what do you think?

Green House Gas Protocol

Available Since 2001

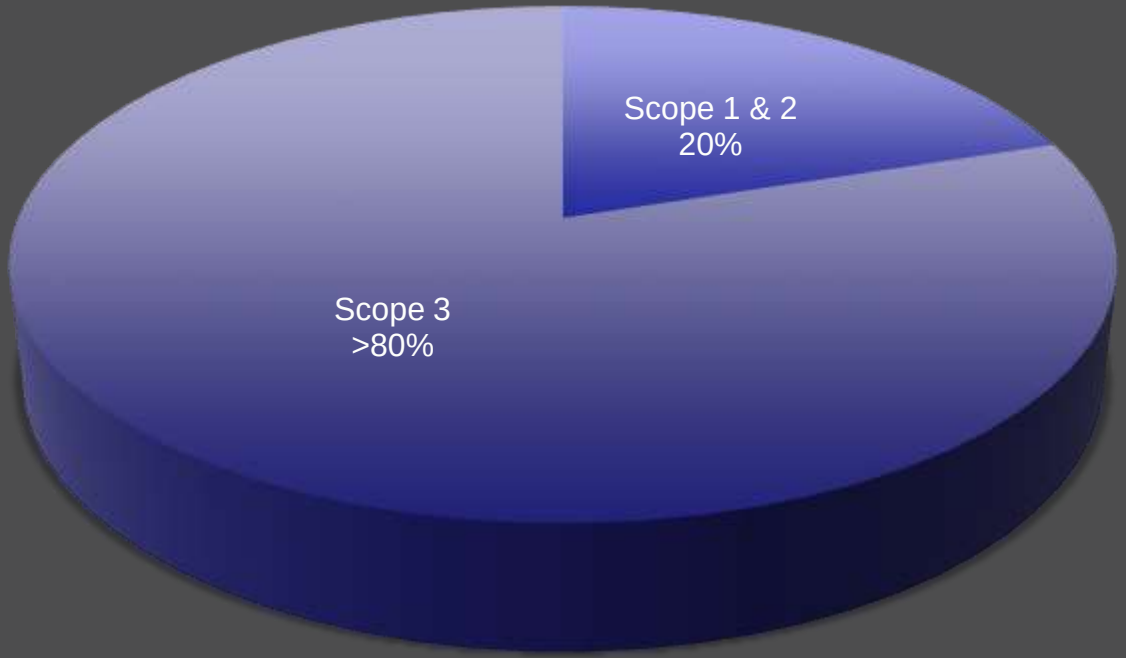


City of London Corporation CO2 Emissions



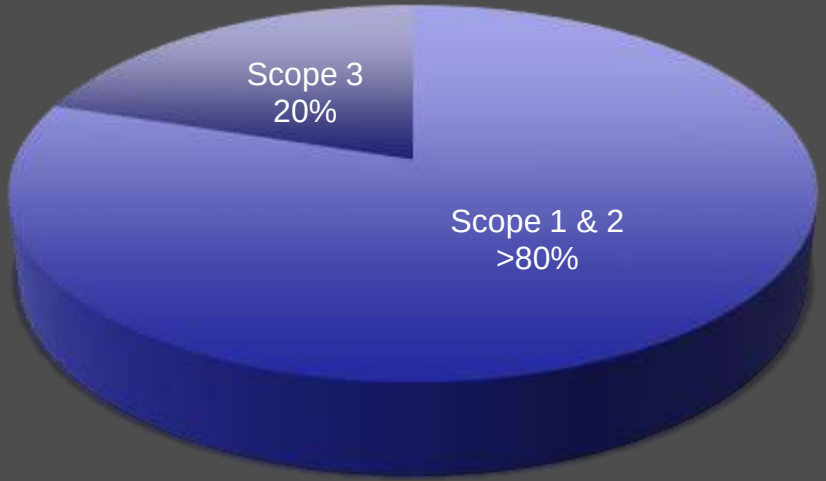
https://www.cityoflondon.gov.uk/assets/Services-Environment/climate-action-strategy-2020-2027.pdf

All Sectors

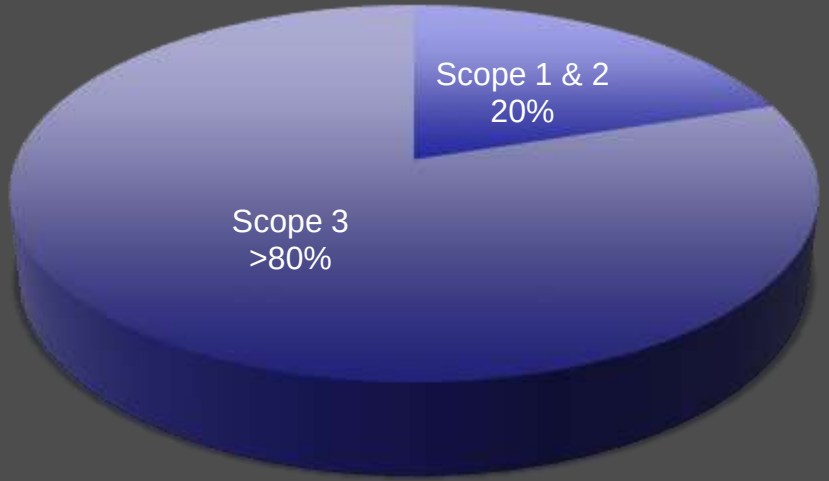


https://www.youtube.com/watch?v=q8VMsHKcywg&t=

A) Data Centre CO2 Emissions ?

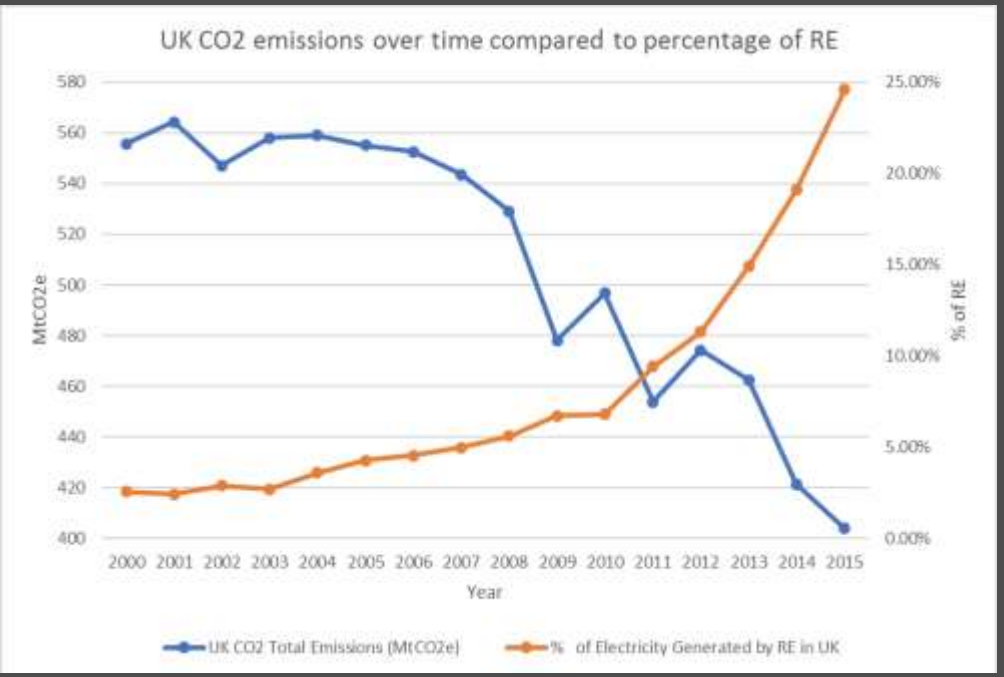


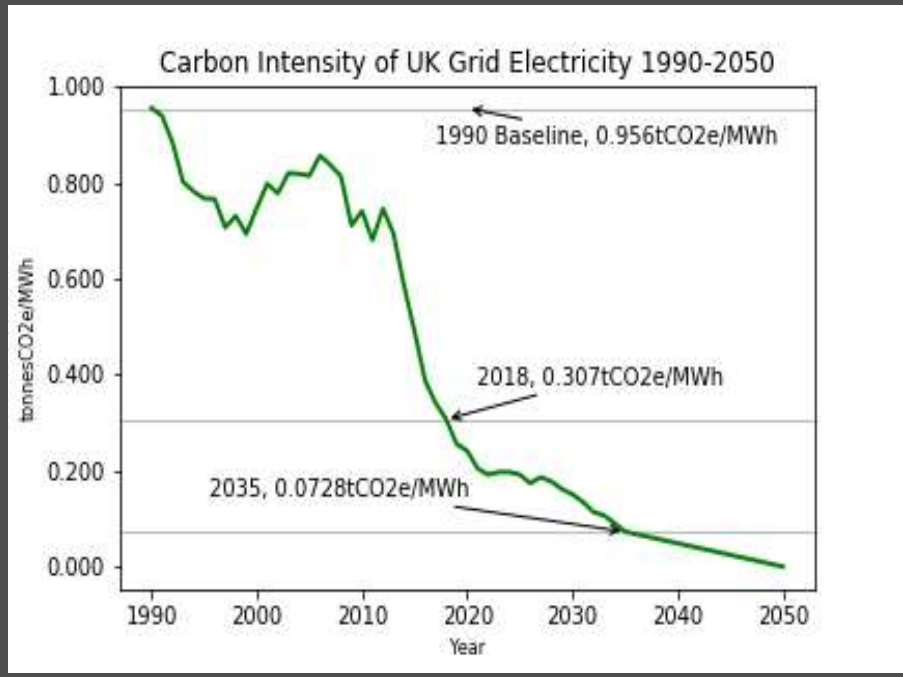
B) Data Centre CO2 Emissions ?



Which pie chart is nearer to reality for a data centre in Europe?

Data Centres - as Scope 2 approaches ZERO Scope 3 approaches 100%





Data Centres it's more than just energy efficiency and PUE!

Thanks to EcoDataCenter for photo

Wooden Data Centre Facility
Sweden

How would this impact Scope 3?

Ask Lars Schedin for the answer

PS: Lars is not a Data Centre Expert

So my call to action for the data centre industry

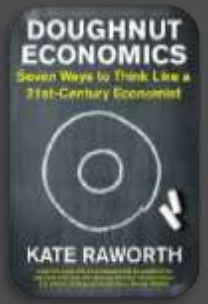
Start measuring holistic CO2 emissions

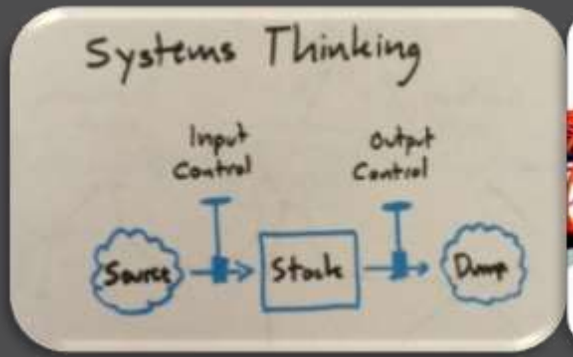
and don’t forget Scope 3

“Practical men who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist.”

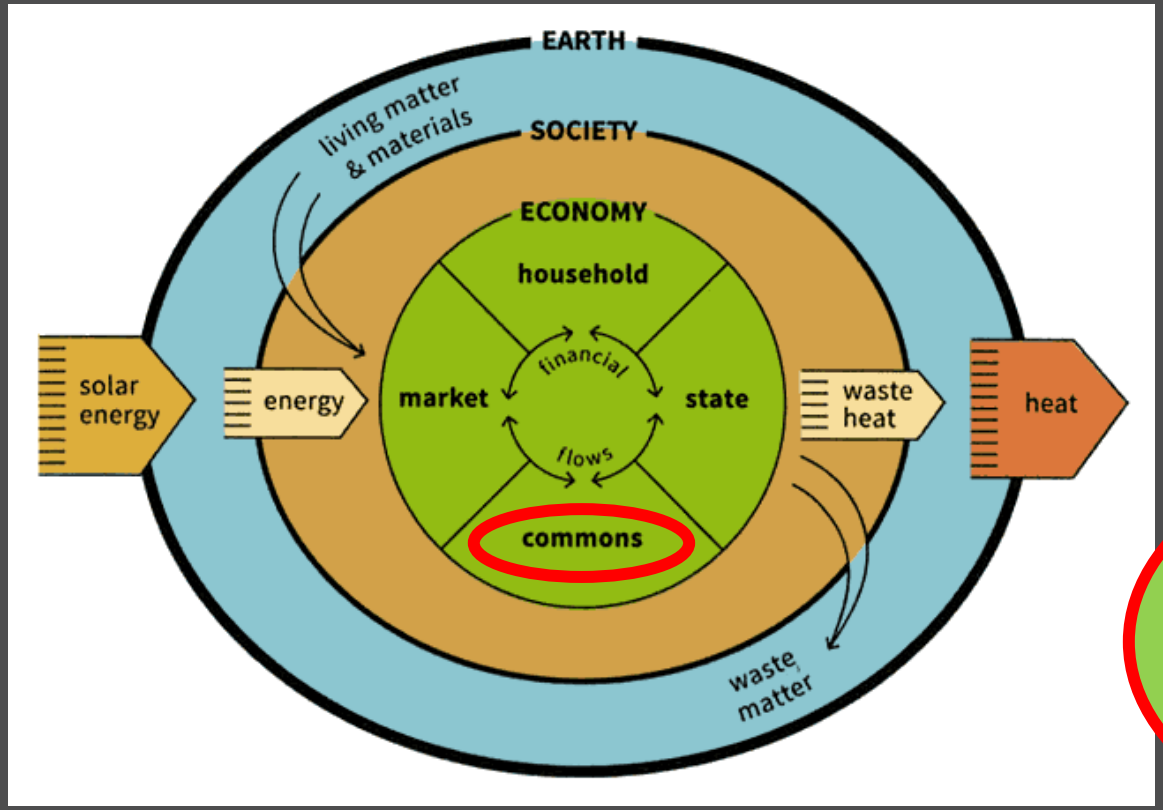
John Maynard Keynes

Gender economics in the 21st century





21st century embedded economy model



Commons

Open source technology collaborative commons

Green Deal is Europe's Man on the Moon Moment

EU border Tax
Scope 3
CO2

EU Public Money
& open source technology policies

European Commission > Strategy > Shaping Europe's digital future > Funding opportunities >

Shaping Europe's digital future

CALL FOR TENDERS | 4 July 2019 to 9 September 2019

Call for tenders: Study on the impact of Open Source Software and Hardware on technological independence, competitiveness and innovation in the EU economy

The European Commission is launching a study which shall investigate in detail the economic impact of open source software (OSS) and open source hardware (OSH) on the European economy. The study should identify strengths, weaknesses, opportunities and challenges of open source in relevant ICT policies.

EU Public Money Policies

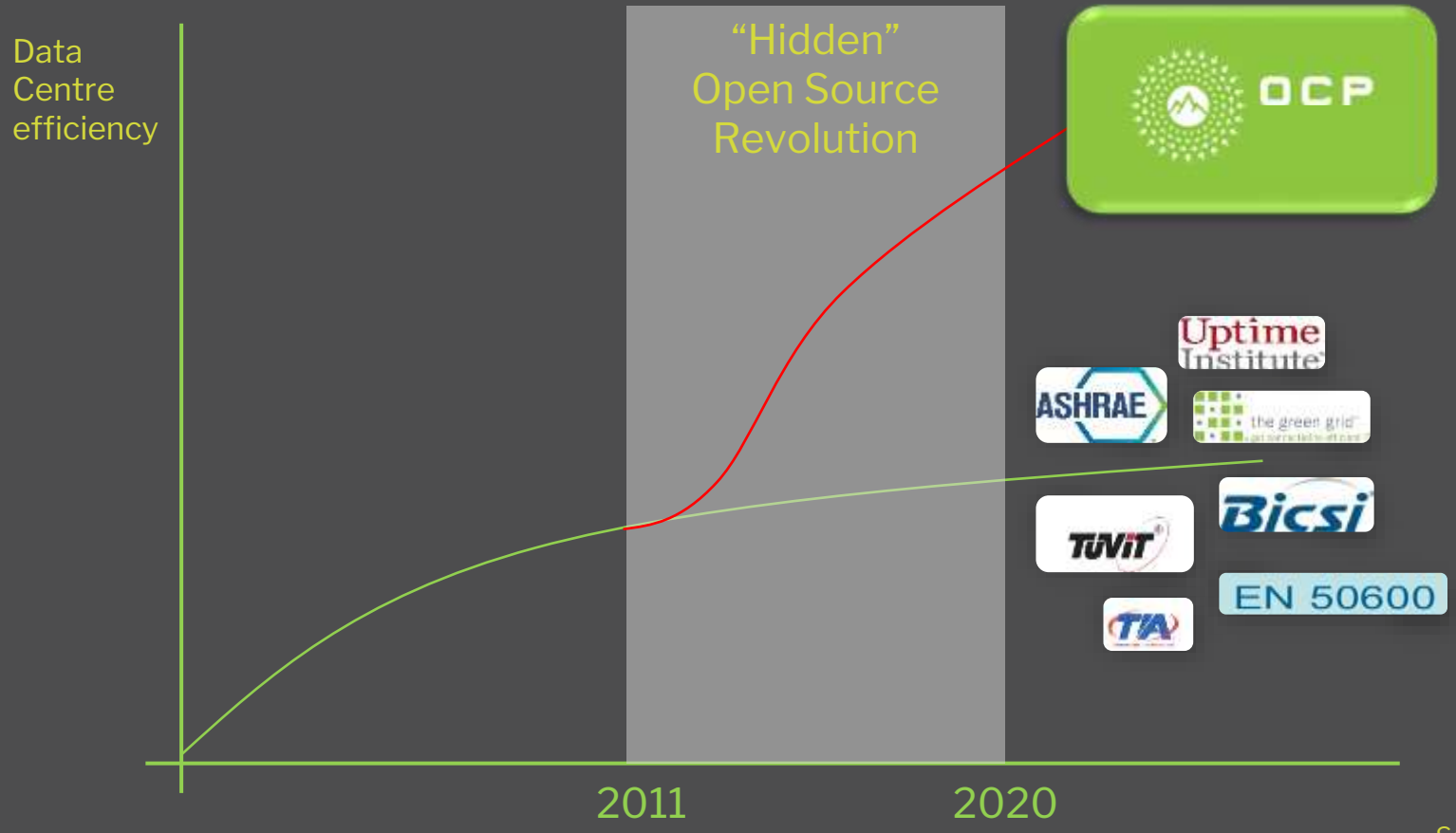
Open Source Technology

https://www.youtube.com/watch?v=iuVUzg6x2yo

Killing the myth that being green costs more money

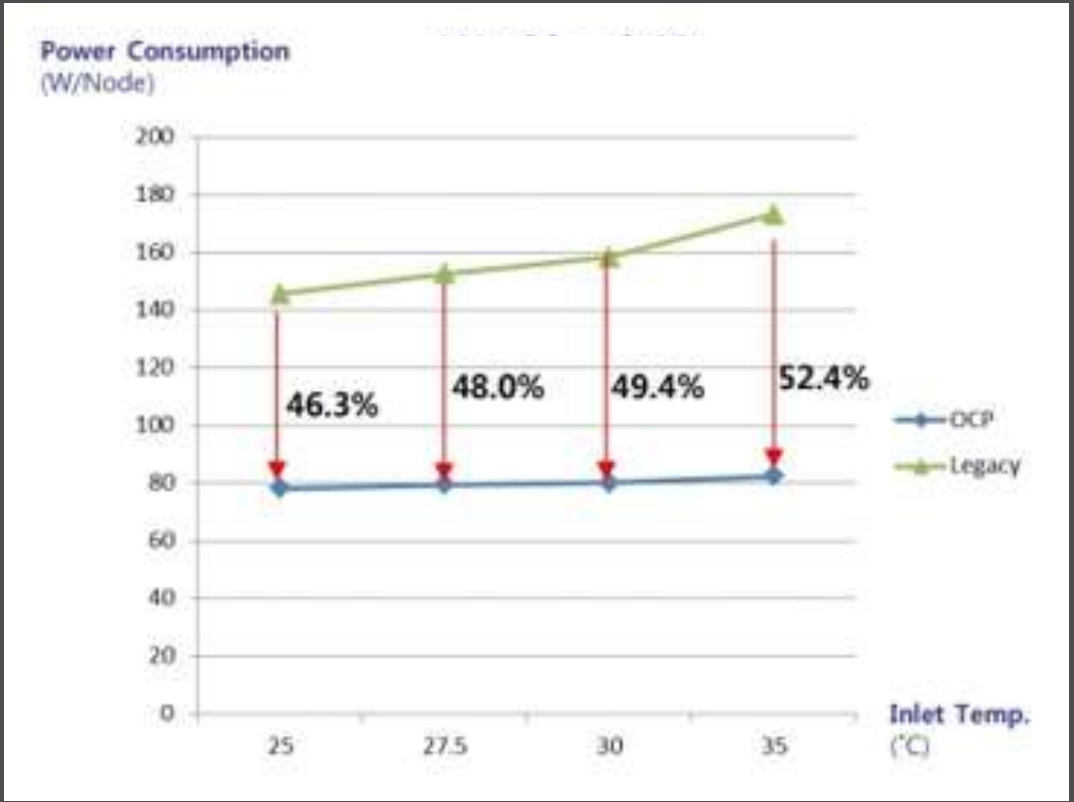
“If you want creativity, take a zero off your budget.
If you want sustainability, take off two zeros.”

Jamie Lerner



Source: Stijn de Kruijf

50% less energy for OCP Servers at idle & EcoDesign includes idle energy in 2020



Source: SK Telecom

Basic System of Computer Server Power Supply Unit

So why do we need hundreds of different incompatible PSU’s?

Gratuitous Product Differentiation for Server Power Supply Units

Google

server power supplies

All | Shopping | Images | News | Videos | More | Settings | Tools | Collections | SafeSearch

pinout | 12v | lipo charger | redundant | 24v | mining | 1000w | 24 pin | 48v | motherboard | inside

Sponsored

Seasonic 300W PC Power Supply, 100 → 240V dc Input, -12 V dc, 3.3 V dc, ...
£40.92
RS Components UK

Seasonic 300W PC Power Supply, 100 → 240V dc Input, -12 V dc, 3.3 V dc, ...
£40.92
RS Components Un...

Dell PowerEdge R620 R720 R720XD 1100W Power Supply - GDPF3
£48.00
Bytestock

HP 2400W HE Platinum Power Supply 6-Pack
£106.66
Refurbished
Techbuyer

Dell PowerVault MD1200 MD1220 600W Power Supply - NFCG1
£120.00
Bytestock

HP 1500W Power Supply Unit
£142.20
Refurbished
Techbuyer

HP 2650W Power Supply For ProLiant C7000
£100.73
Refurbished
Techbuyer

Dell 1100W 80+ Platinum Power Supply Unit
£59.26
Refurbished
Techbuyer

RS PRO 400W Computer Power Supply, 230V dc Input, 12V dc...
£47.06
RS Components Un...

User Driven Simple Tool less Design and Product Dematerialisation

Power supply units; graphics units; bezels … and more are removed

Vendor driven closed myopic design mindset

3 to 5 yrs Sweet spot

obsolescence

Cisco routers & software

Closed Proprietary User lock-in

Gratuitous product differentiation

Power Suplies

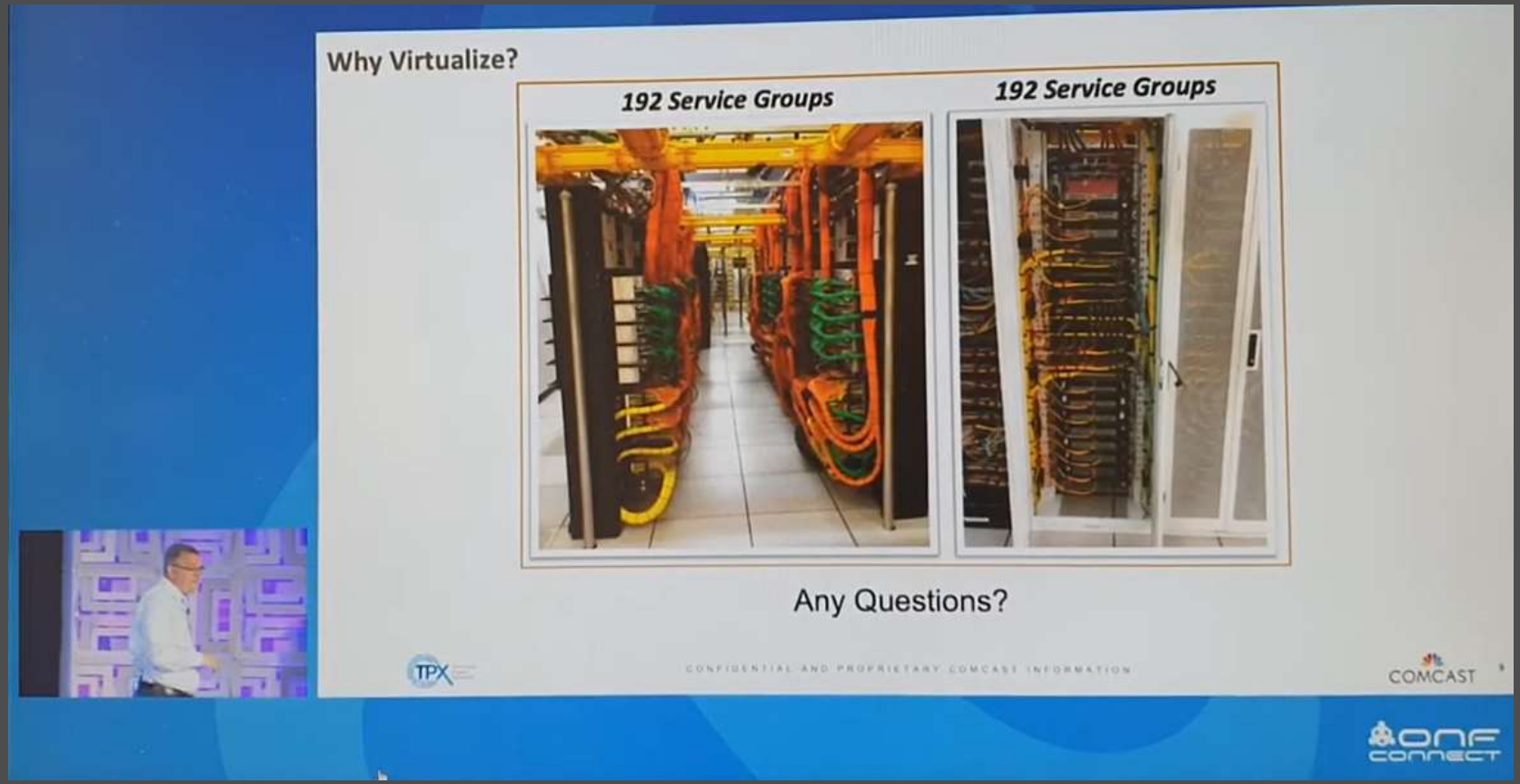
monolithic integration

Proprietary firmware

Prosumer driven open source design mindset

- Software Eats hardware
- dematerialisation
- Openness
  - Right To repair
  - Open firmware
- Simplicity
  - Tool less
- unbundling
  - disaggregation

Open Source Technology and 90% Dematerialisation



https://www.youtube.com/watch?v=Iq12-LrCo_4

Circular Economy

The Circular Economy is an economic approach to sustainability which minimizes waste and makes the most of IT assets. This approach focuses on developing products so they can be reused and repurposed with no residual waste.

As the amount of hardware used in data centers continues to grow, OCP is committed to looking at ways to help reduce waste and embodied energy across all areas of the data center infrastructure.

OCP members have led this effort by creating integrated software solutions based on 2nd user OCP hardware, which enables enterprise companies and public sector organizations to quickly evaluate, adopt and scale their infrastructure using proven hardware.

All integrated solutions on this page are based on a Circular Economy approach and supported by our OCP Members.

ITRenew Report: The Financial & Sustainability Case for Circularity

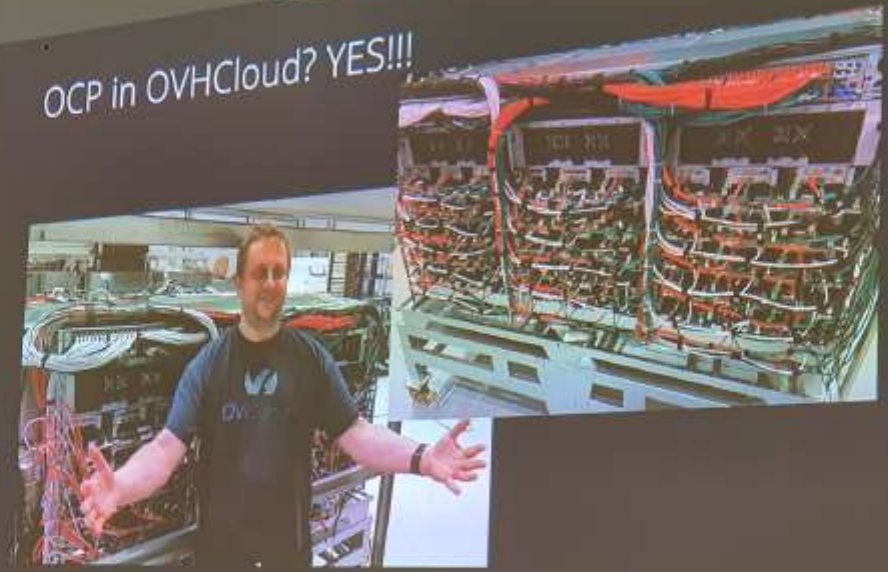
blockheating

Recycling datacenter energy

Circular Economy
OCP air server
hacked for water

Water @ 63°C
for greenhouses
+
Lower customer prices
for cloud services

OCP in OVHCloud? YES!!!



OVH

Patrick-Gilles Maillot – R&D Director - OVHCloud
Open Source Hardware Project – March 10

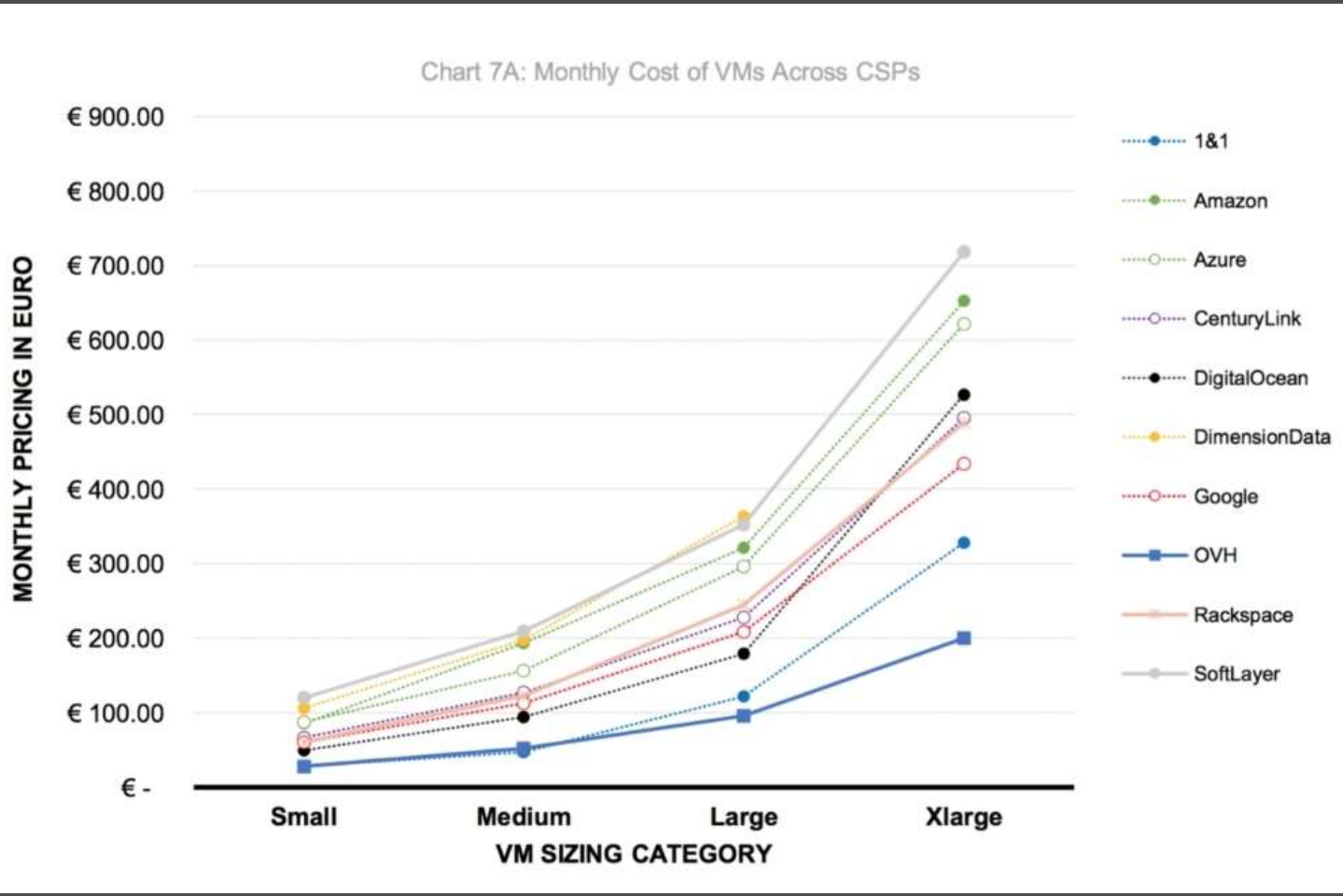
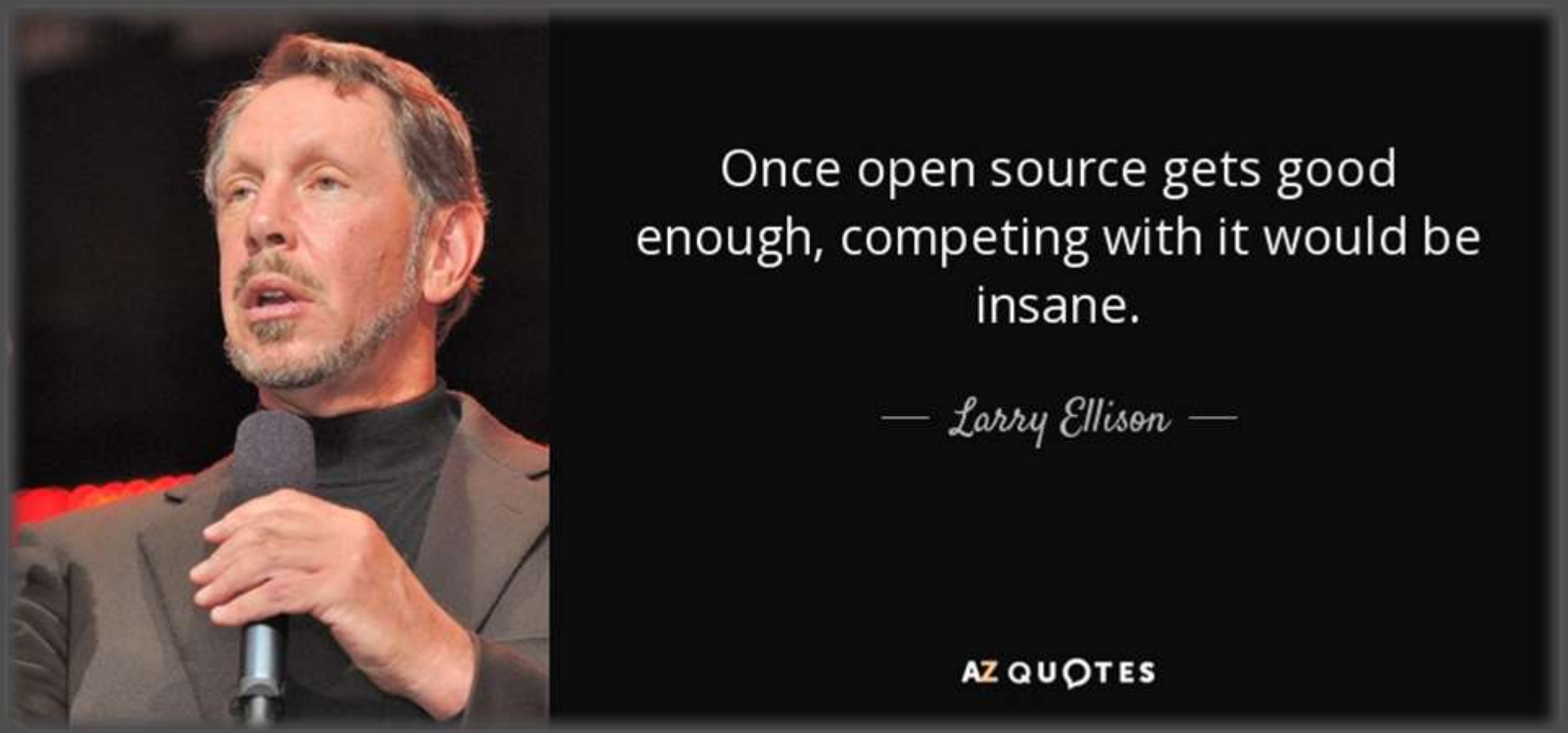


Chart 7A: Monthly Cost of VMs Across CSPs
€ 900.00
€ 800.00
€ 700.00
€ 600.00
€ 500.00
€ 400.00
€ 300.00
€ 200.00
€ 100.00
€ -
MONTHLY PRICING IN EURO
Small
Medium
Large
Xlarge
VM SIZING CATEGORY
1&1
Amazon
Azure
CenturyLink
DigitalOcean
DimensionData
Google
OVH
Rackspace
SoftLayer



Open Source Technologies got good enough in the last decade……. John LABAN Oct 2020

ANY
QUESTIONS
?

Supplementary slides

What is the GHG Protocol understanding Scope 1, 2 & 3

https://www.youtube.com/watch?v=q8VMsHKcywg

REUSE
REDUCE
RECYCLE

Myopic Culture in Data Centre Supply Channel?

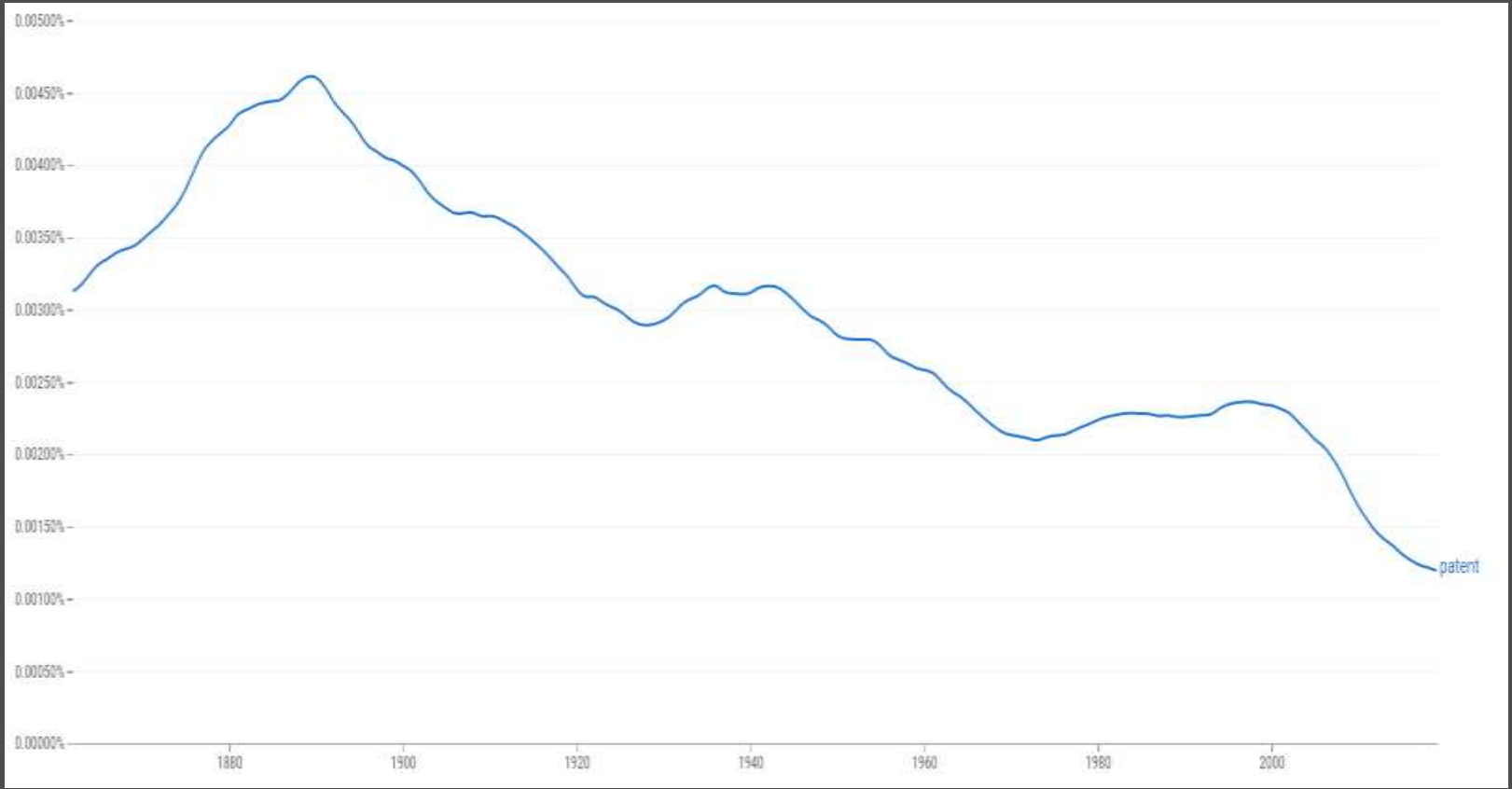
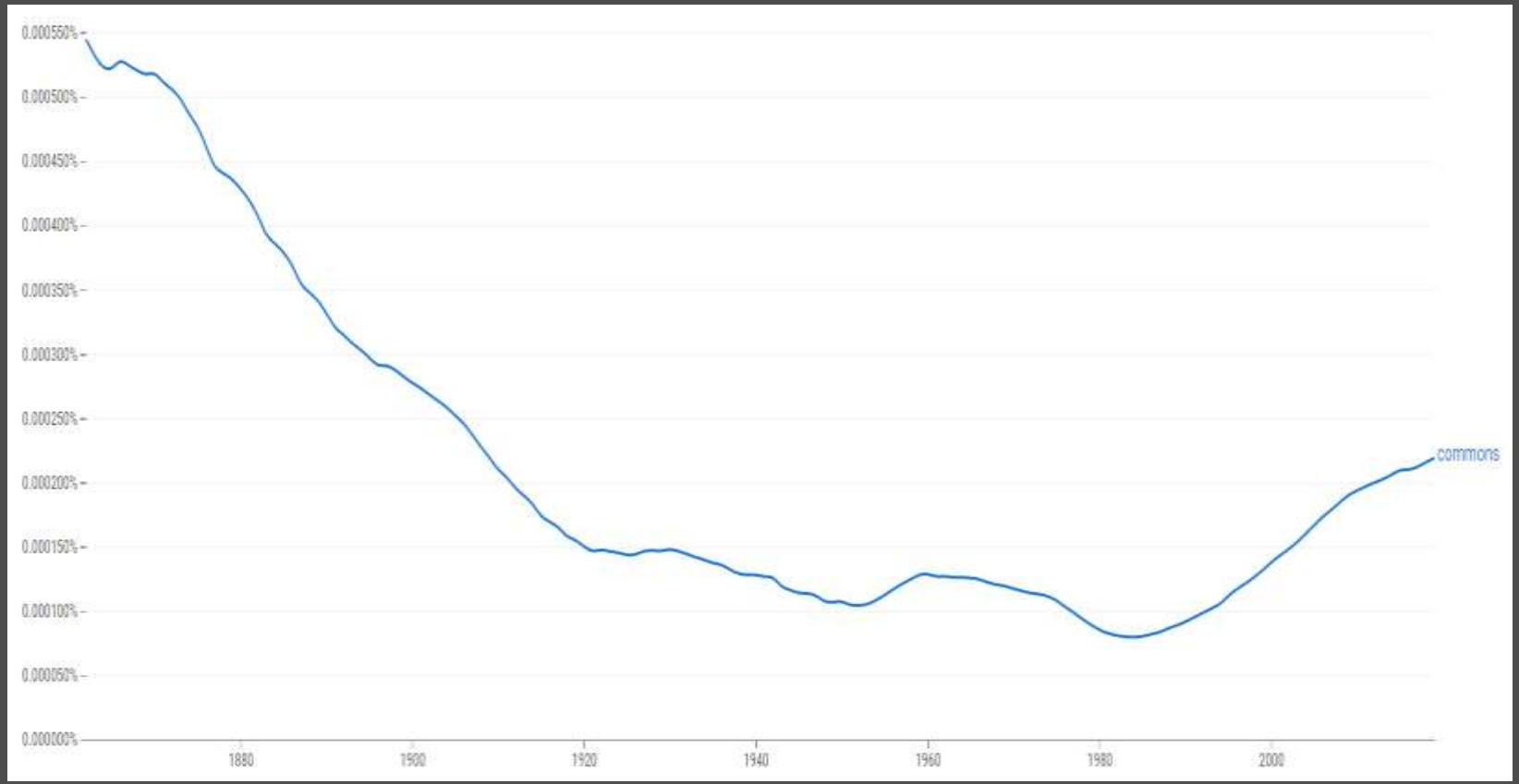
“The Myopic cultures, Levitt postulated, would pave the way for a business to fall, due to the short-sighted mindset and illusion that a firm is in a so-called 'growth industry’.

This belief leads to complacency and a loss of sight of what customers want.

It is said that these people focus more on the original product and refuse to adapt directly to the needs and wants of the consumer.”

https://en.wikipedia.org/wiki/Marketing_myopia

“**Patent** “ …….. *use of word 1860 - 2020*



“**Commons**“ …….. *use of word 1860 - 2020*