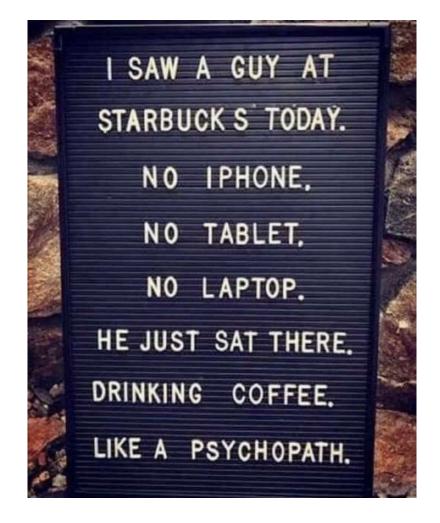


# Welcome to the presentation: "The cloud is not in the sky"

Starting soon....







# The Cloud is not in the sky The importance of the digital infrastructure for OUR society

Presented by:

Bastiaan Janssen
Managing Partner, EPI Europe



# Why this presentation?

Our digital infrastructure drives innovation and enables sustainability!



#### **Agenda**





















Bastiaan Janssen
Managing Partner
EPI Europe

# About



#### **History & Global Locations**

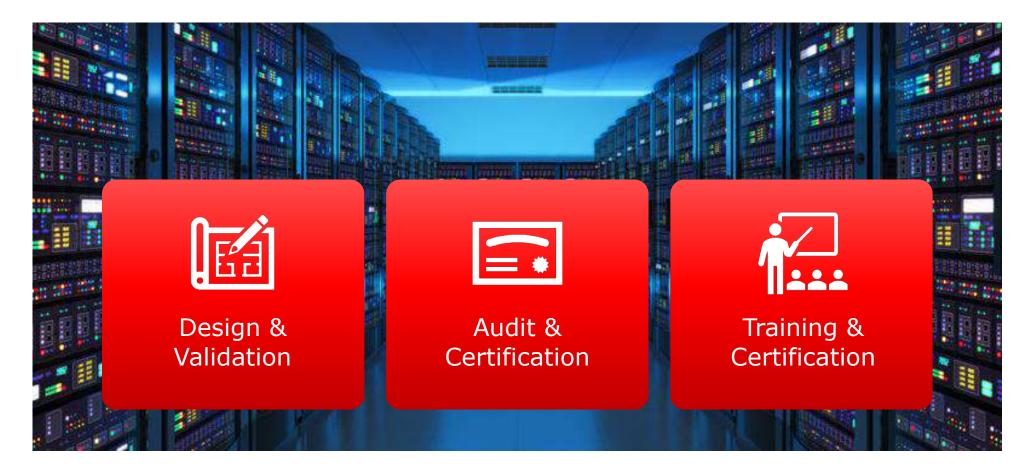






#### **Data Center Expert**









# The digital society Can we live without IT?



#### Society of today: always online (?)









# Thesis

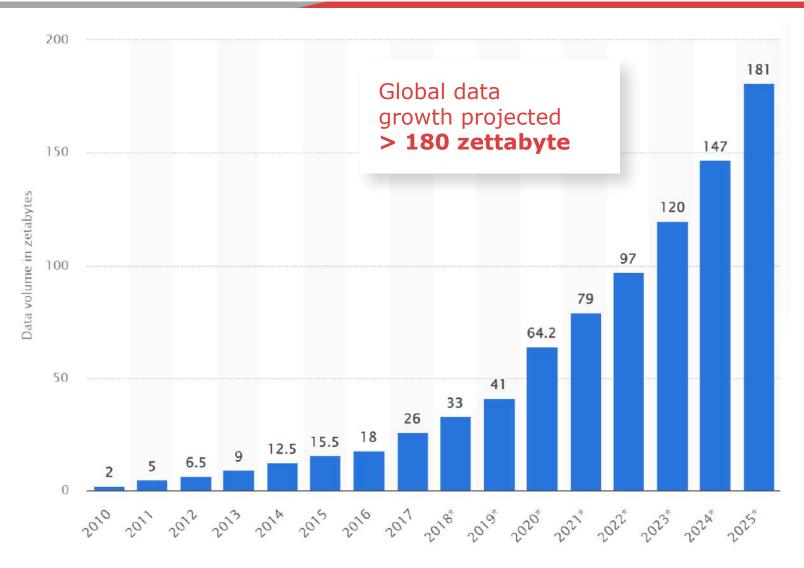
Without a good digital infrastructure there is no (modern) society



Source: Statista 2022

#### **Exponential Data Growth**







#### **The Data Centre Market**



#### Data Centre Growth and Co-location Market Size by Region in 2024

North America CAGR:6.4%

**US\$23.4B** 

**EMEA** 

CAGR:11.1%

**US\$17.2B** 

APAC

CAGR:12.2%

**US\$28.0B** 



#### **Sweden Colocation & Hyperscale Facts** (1 September 2023)



**72**Facilities
Colocation

#### 139 MW

IT Power available *Colocation* 

#### 242 MW

IT Power under construction / planned Colocation

#### 409 MW

IT Power available

Hyperscale

Pb 7

**42**Operators *Colocation* 

Source: Pb7 Research 2023 ©

62.050

**m2** 

White Space *Colocation* 

#### 950 GWh

Residual heat potential *Colocation* 

3250

**GWh** 

Residual heat potential

Hvnerscale



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#### **Generative AI**



The data center industry is seeing a massive increase in:

- 1. Amount of infrastructure
- 2. Density of infrastructure
- 3. Size of deployments



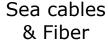


#### The Engine For Innovation And Growth



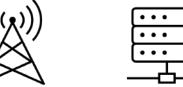
- In the last 2 decades society has digitalized strongly
- Digitalization changes the way we work and live
- Data grows exponentionally and demands more innovation
- Generative AI will be (or is already) a big game changer as well

#### The digital infrastructure is:





Telecom



Datacenters



Hosting & cloud providers



Internet connections



**Devices** 





## **Digital infrastructure**



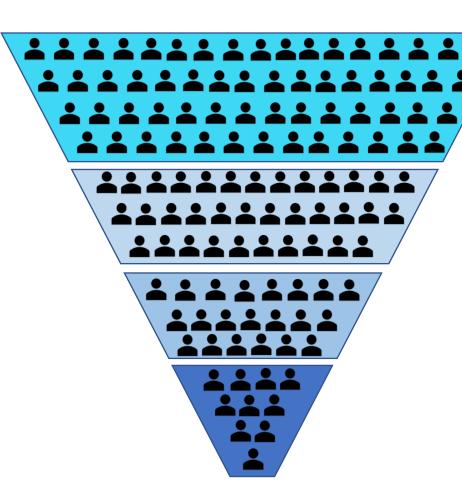
100.000

Users

1.500 Employees

50 Employees

15 Employees



End customer

Company

Hosting provider

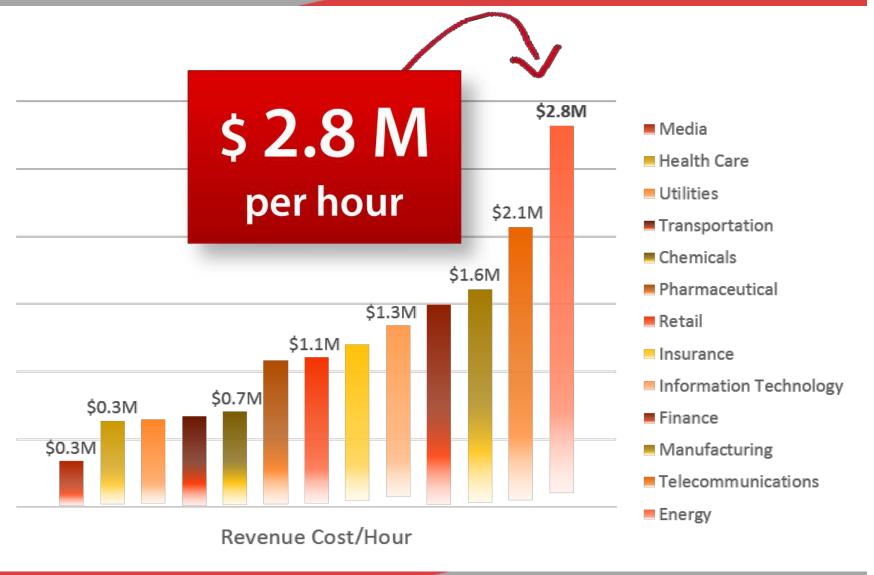
Datacenter



Source: META Group

#### **Downtime: Disruptive & Costly**



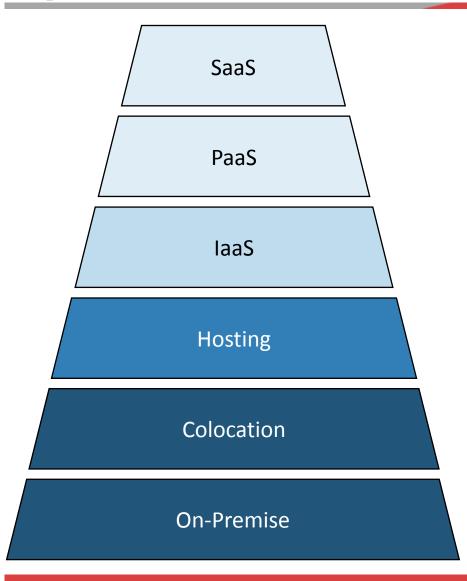




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#### **Explanation of some cloud definitions...**





**Sofware as a service**Gmail, Hotmail, Facebook etc

**Platform as a service** SAP cloud, RedHat openshift

**Infrastructure as a service** Amazon Web Services, Azure

**Hosting / hosting provider**Website / application hosting

**Colocation**Commercial datacenter

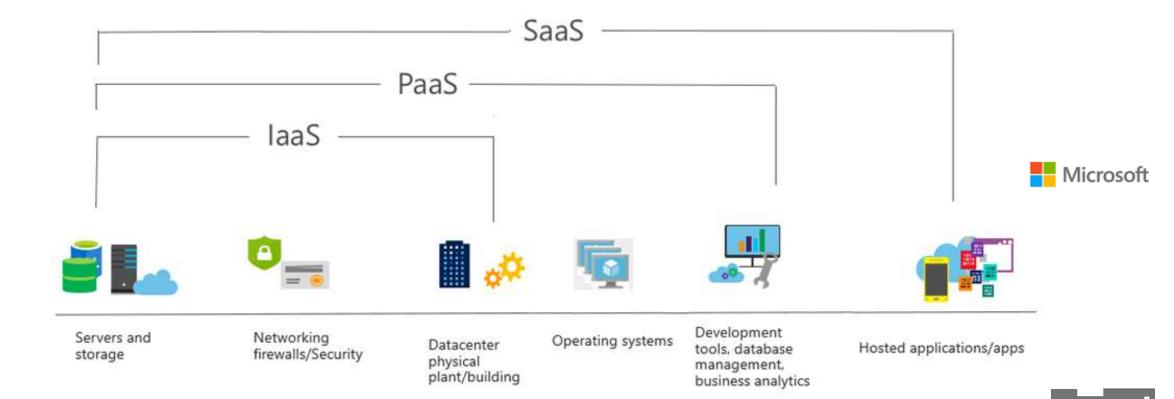
**On Premise**Enterprise datacenter



#### SaaS - PaaS - IaaS



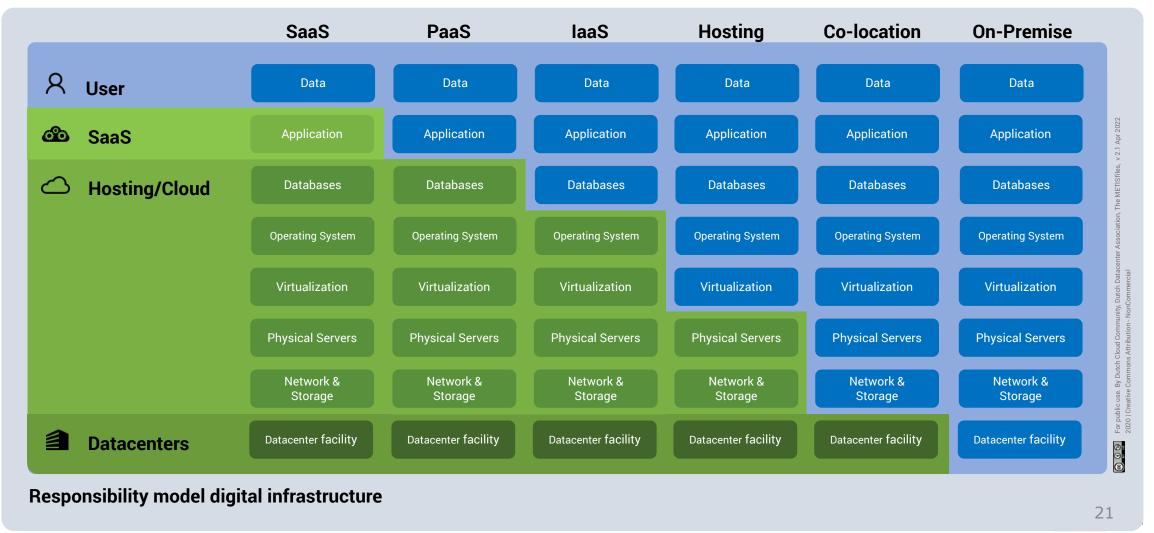
Users connect to and use cloud-based apps over the internet: for example, Microsoft Office 365, email, and calendars.



## Digital responsibility model

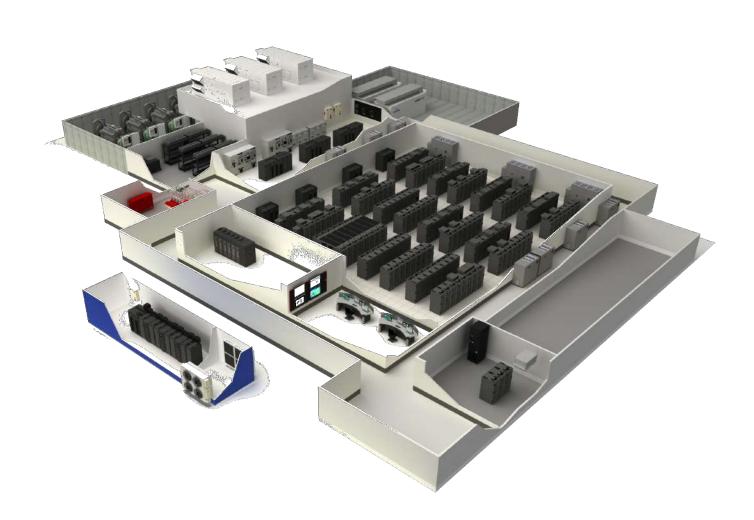


#### Responsibility per layer of the digital infrastructure.



## **Datacenters: Complex Environments**







## **Datacenters: Complex Environments**







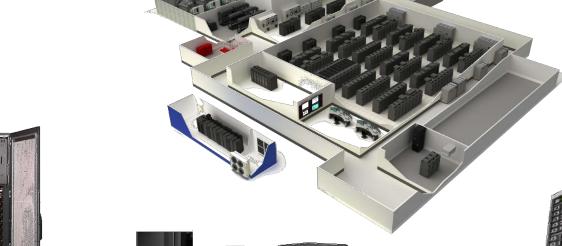


















#### EPI - IT & Data Center Framework®



#### **IT & Data Center Strategy**

CSF Analysis, Business Systems Planning

#### Governance, Risk, Compliance & Quality

ISO/IEC 38500, ISO 31000, ISO/IEC 27005, DCOS

#### IT & Data Center Organization

ISO/TC 260, DCOS

#### **Data Center Operations Management**

DCOS

#### **IT Management**

ISO/IEC 20000

#### IT Infrastructure

EN 15221

#### **Facilities Management**

EN 15221, DCOS

#### **Data Center Infrastructure**

ANSI/TIA-942

Information Management DMBOK

Monitoring/Reporting/Control ISO/IEC 9001, DCOS

**Environmental Sustainability** 

50001, DCOS

14000,

20

Organizational Resilience BC/DR ISO/IEC 22301, DCOS

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& Crisis Management OHSAS 18000, DCOS

Safety

Service Management ISO/IEC 20000, DCOS

ustomer

Security Management

Project Management

Agile, DCOS

PMBOK,



## **Types of datacenters**

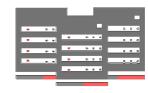


Hyperscale	Large	>50 MW - >5 hectares	Single tenant
International	Medium	>5 MW - >5000 M <sup>2</sup>	
National	Medium	1-10 MW - >2000 M <sup>2</sup>	Colocation datacenters / Multi-tenant
Regional	Small Medium	0,5-10 MW - >200 M <sup>2</sup>	
On-Premise	Small	0,01-10 MW - >10 M <sup>2</sup>	Single tenant

# **Hyperscale datacenter**







#### **Colocation datacenter**







#### **On-Premise datacenter**







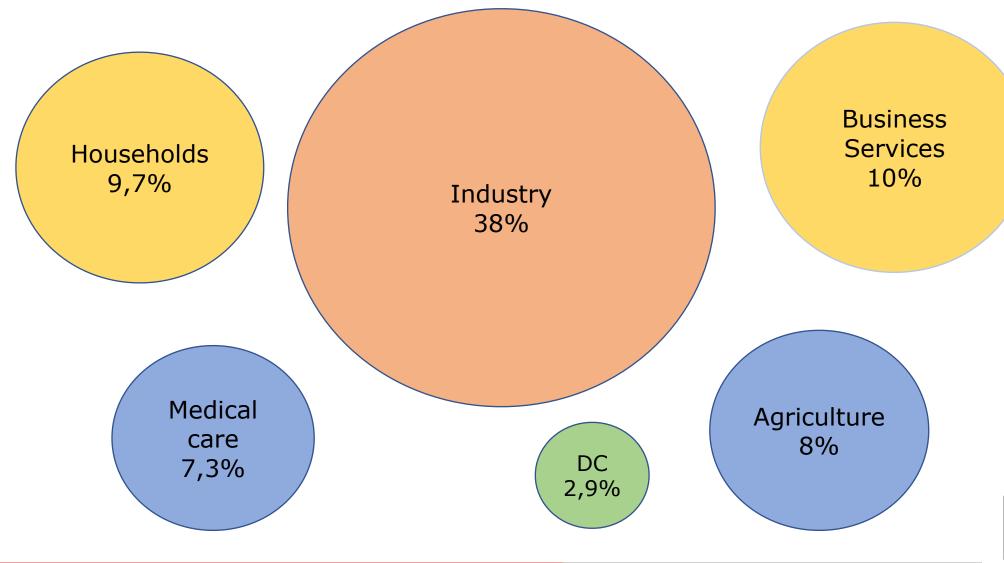
#### **Trends in datacenters**

- 1. Moving into hyperscale datacenters
- 2. Smaller on premise datacenters
- 3. Environmental sustainability
- 4. Adoption of AI and machine learning
- 5. Shortage of skilled labour force



#### **Relative energy consumption**









# The Nordics

Why are the Nordics a good and sustainable place for datacenters?



#### Nordics increasingly popular for datacenters







## **Advantages of Swedish Data Centers**



Sustainable, Economical, and Technologically Advanced

- 1. High percentage of renewable energy sources
- 2. Cool climate: significant energy savings on cooling compared to warmer locations
- 3. Business-friendly policies with incentives for technology investments
- 4. Stable political climate
- 5. Highly ranked for innovation and digital skills
- 6. Committed to sustainability and environmental responsibility







# Conclusions Closing Q&A





#### **Datacenters**

Patacenters are the only
efficient and sustainable way
to facilitate all the computer
power that we need for the
digital infrastructure of
society of tomorrow





#### **Nordics**

The Nordics are an attractive region for datacenters because:

- 1. Cool climate
- 2. Sustainable energy
- 3. Political and economical stability
- 4. Connectivity
- 5. Skilled workforce







# Nordics: Stay ahead!

- Technological developments are only increasing in speed
- The Nordics are leading the way in the digital field
- It is important for the Nordics to maintain and build on this position in order to provide maximum support to the sustainable digital society





#### Would you like to know about datacenters?







#### What is CDCP?



- 2-Day course exposing candidates to all the fundamental knowledge related to design, build and optimize data centres
- Course address Standards and all the technical matters
- Explains design requirements as well as various technologies
- A lot of practical experience from experts in the data centre industry
- Exam; 1 hour, 40 questions, closed book, 27 correct to pass
- Prerequisite: None

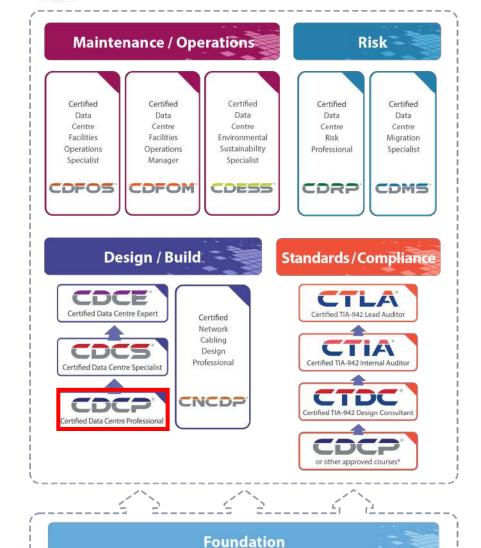






#### **EPI Data Centre Training Framework®**









#### **Course Delivery – 3 options**









#### **ILT**

Instructor Led Training

#### **VILT**

Virtual Instructor Led Training

#### **TOD**

Training On Demand





#### Jovita Januskeviciute

EMEA Research Manager DC BYTE



"CDCP training is a must for everyone that works in the data center industry.



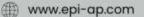
The course is very informative, providing key information on multiple subjects through a number of video recordings, presentation slides and notes provided to the student which will well accommodate all types of learners.

I would definitely recommend others to take this course"









# Thank You!



#### Bastiaan Janssen

EPI Europe | Vijfhart | AT Computing | CIBIT |
Complementair Groep



#### **Bastiaan Janssen**



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