



asut

Lunch-Forum

Zürich, 31. Mai 2024

**Gemessen, nicht geschätzt – Effizienz
und Nachhaltigkeit im Rechenzentrum**

Raymond Freppel, SDEA



DATA
CENTER

EFFICIENCY

GEMESSEN, NICHT
GESCHÄTZT:

EFFIZIENZ UND
NACHHALTIGKEIT IM
RECHENZENTRUM



Schneider
Electric

2022



energieschweiz



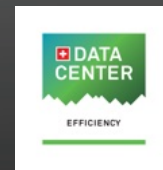
SWISS
DATACENTER
ASSOCIATION

asut

Lucerne University of
Applied Sciences and Arts

HOCHSCHULE
LUZERN

2020



Hewlett Packard
Enterprise

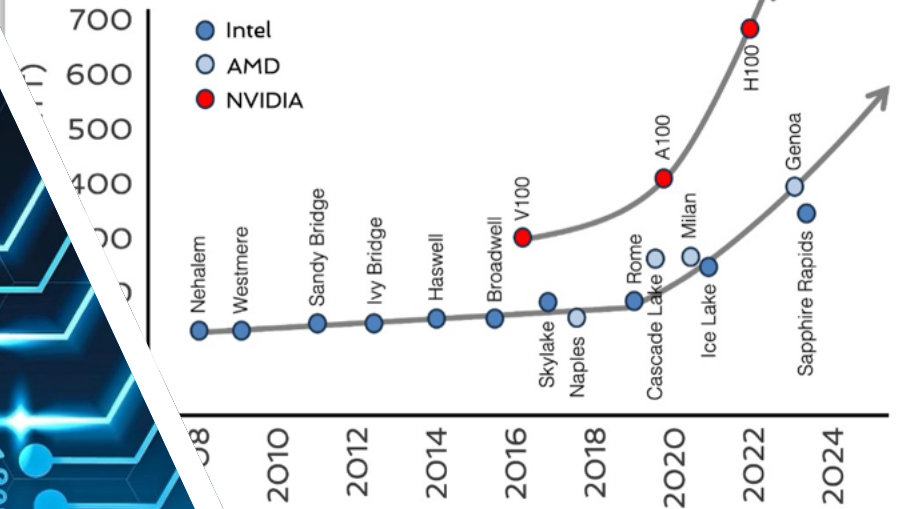
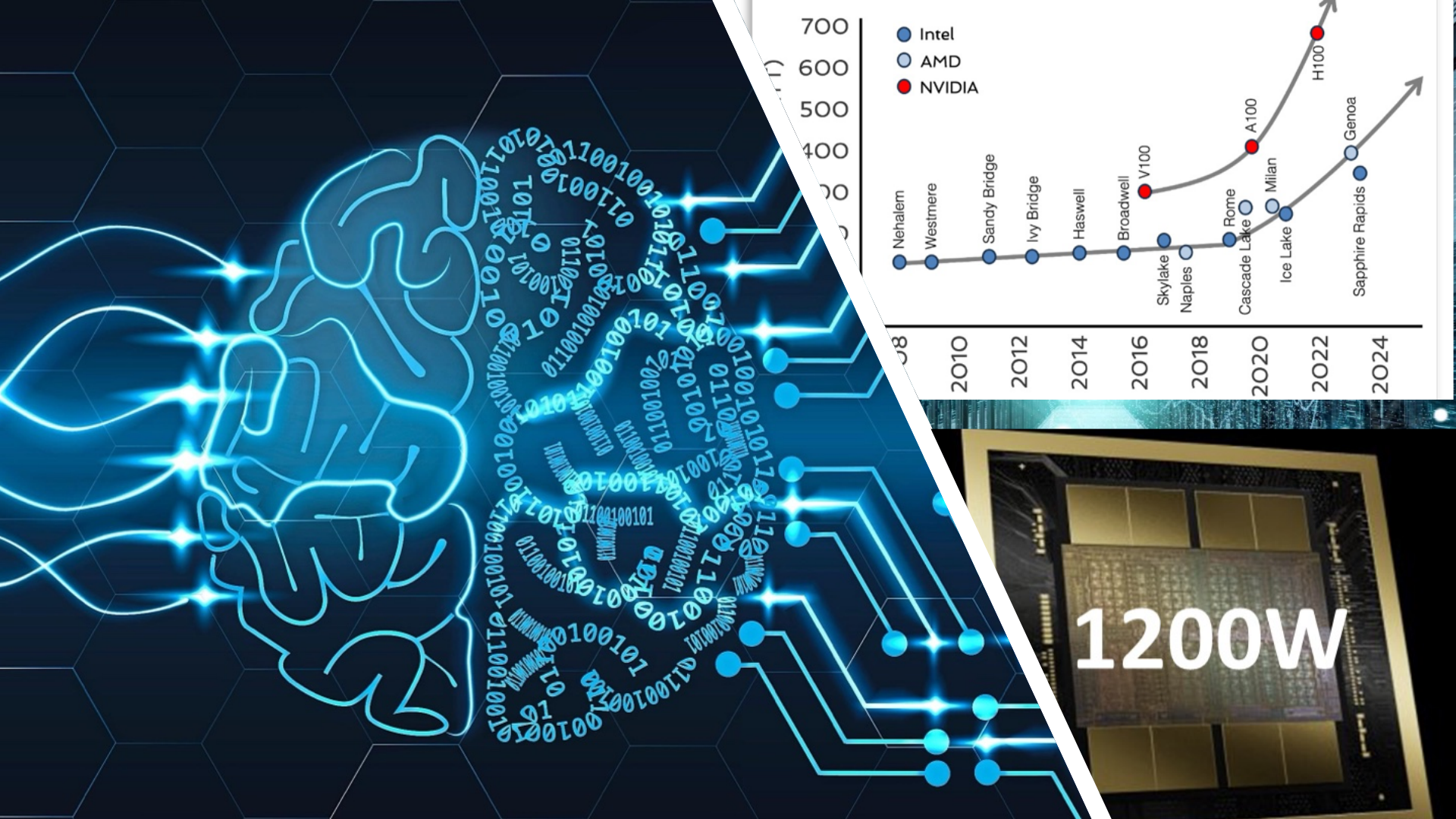
digitalswitzerland

2018









1200W

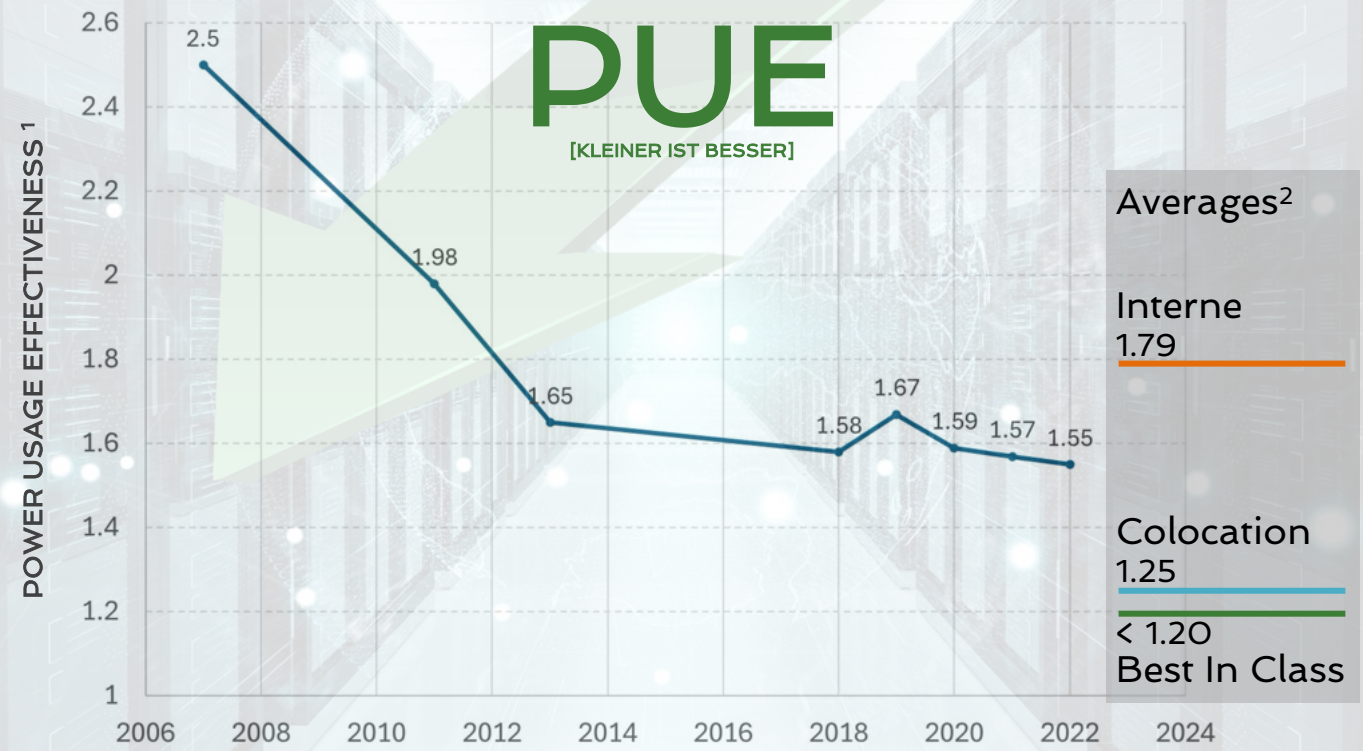


2.1 TWh

3.6%
(2019)

PUE

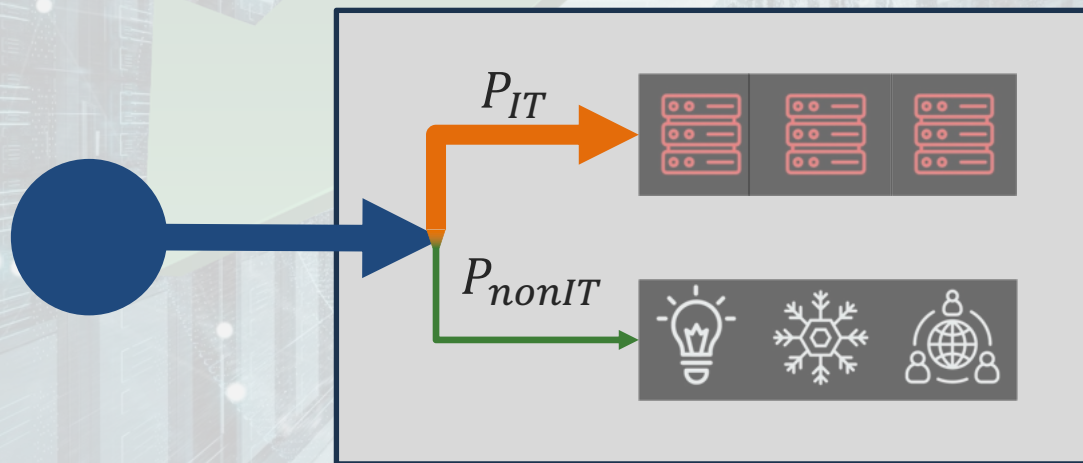
[KLEINER IST BESSER]



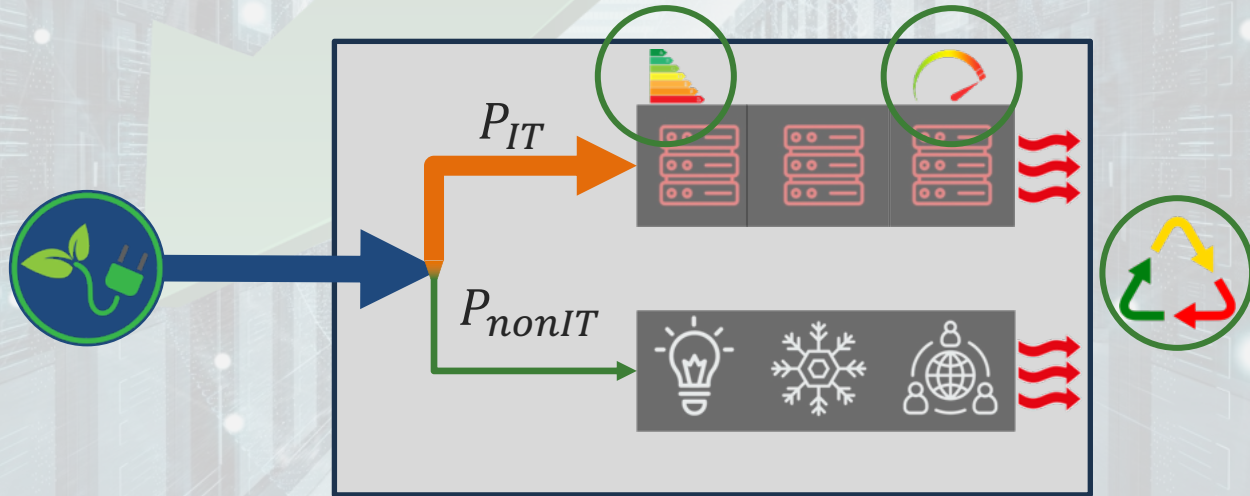
¹ Uptime Institute 2022

² asut – Energetische Auswirkungen IT-Verlagerung Rechenzentren [April 2023]

$$PUE = \frac{P_{IT} + P_{nonIT}}{P_{IT}} = 1 + \frac{P_{nonIT}}{P_{IT}}$$

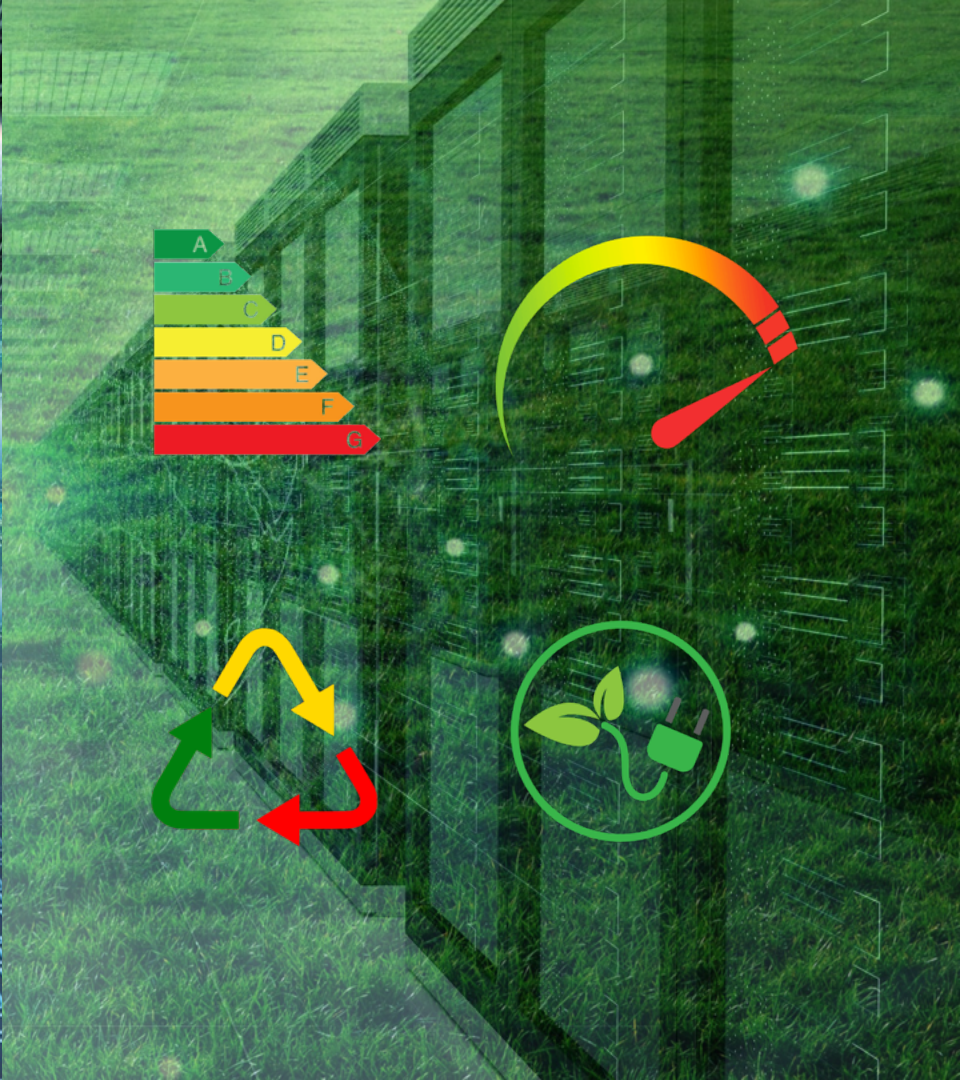


CO₂ | IT EFFICIENCY | HEAT RECYCLING

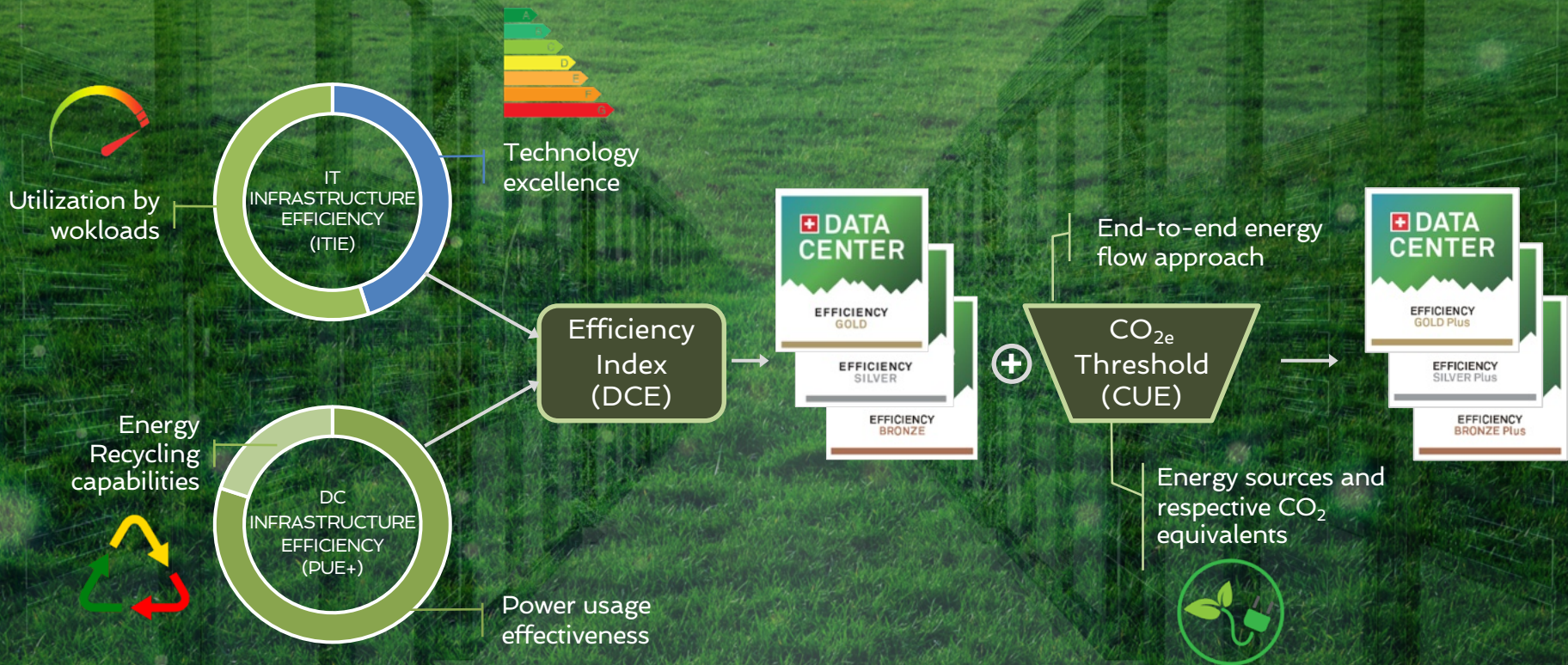




FULL-STACK EFFICIENCY









EFFICIENCY
GOLD

[1.0, 1.20]



EFFICIENCY
SILVER

(1.20, 1.35]



EFFICIENCY
BRONZE

(1.35, 1.50]

DCE



DCE

[1.0, 1.20]

(1.20, 1.35]

(1.35, 1.50]

CUE

≤ 0.1 (100g CO_{2e}/kWh_{IT})

ACCOUNT CREATION

- Create an “SDEA Navigator” account on label.sdea.ch
- Open a dashboard to start using the three calculators (PUE+, ITIE, CO₂)

MEASUREMENT & AUDIT

- Enter your KPIs in the calculators and let the Navigator calculate your index
- Verify resulting label threshold values are met
- Submit KPIs for certification & select independent auditor

VALIDATION & CERTIFICATION

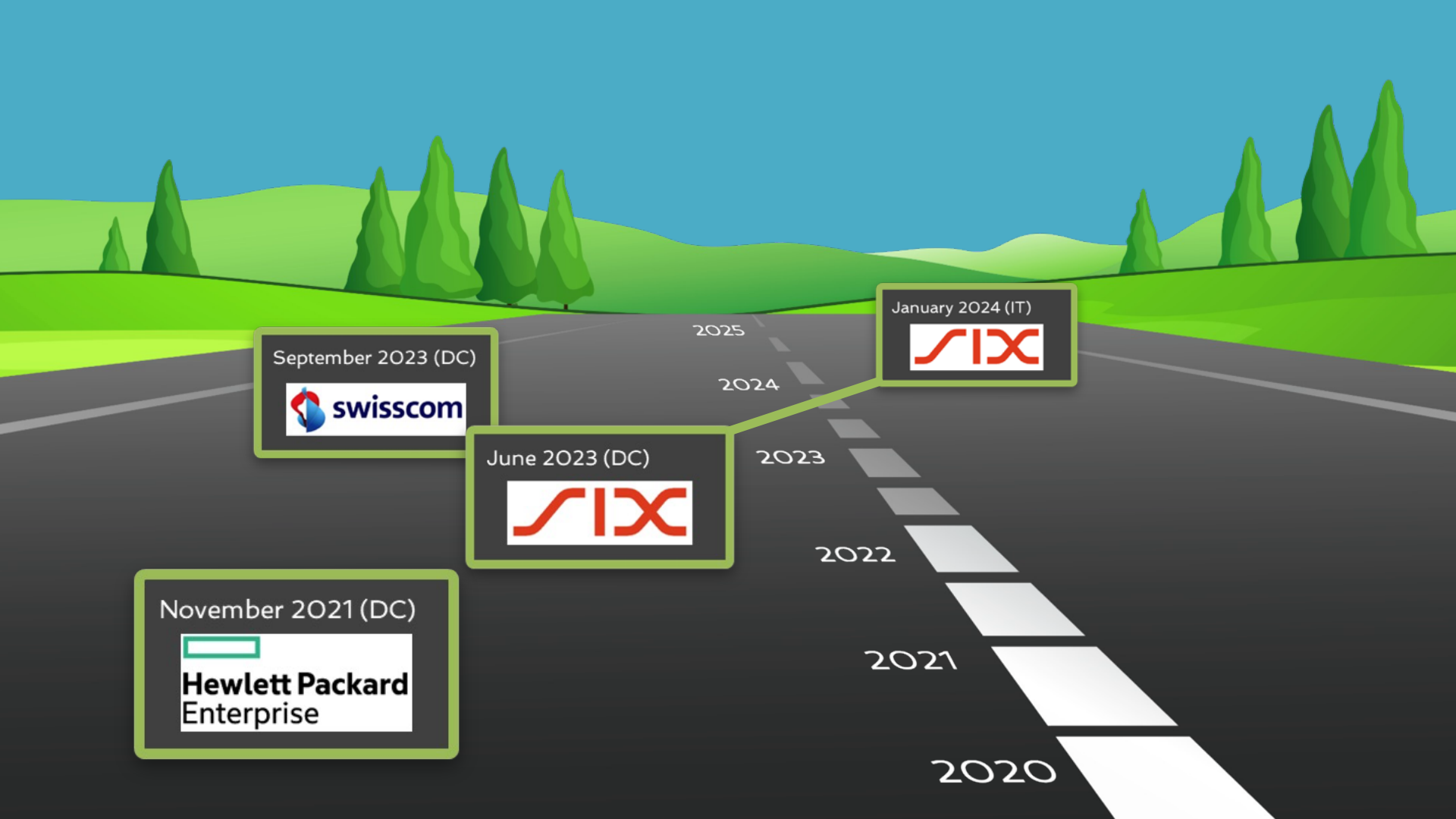
- Auditor sends report to SDEA Board to evaluate application
- Board decides on level to be assigned
- SDEA Label is awarded for three years and subject to a label fee

OPTIONAL: PUBLICATION

- Certified company's logo is listed on SDEA website
- Certification is communicated through press release, blog post on sdea.ch, as well as on LinkedIn







September 2023 (DC)



June 2023 (DC)



November 2021 (DC)



Hewlett Packard
Enterprise

January 2024 (IT)



2025

2024

2023

2022

2021

2020

SWISS DATACENTER EFFICIENCY ASSOCIATION

Die SDEA ist ein Non-Profit-Konsortium aus Industrie und Hochschulinstituten, das sich zusammengeschlossen hat, um einen umfassenden Ansatz für die Effizienz- und Emissionszertifizierung von Rechenzentren zu entwickeln. Die von Hewlett Packard Enterprise (HPE) initiierte Allianz umfasst EcoCloud an der EPFL, die Hochschule Luzern (HSLU), die Swiss Data Center Association (SDCA) und den Schweizerischen Verband für Telekommunikation (asut).



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GEMESSEN, NICHT GESCHÄTZT: EFFIZIENZ UND NACHHALTIGKEIT IM RECHENZENTRUM

MIT DANK AN UNSERE SPONSOREN

Life Is On

Schneider
Electric



swissenergy