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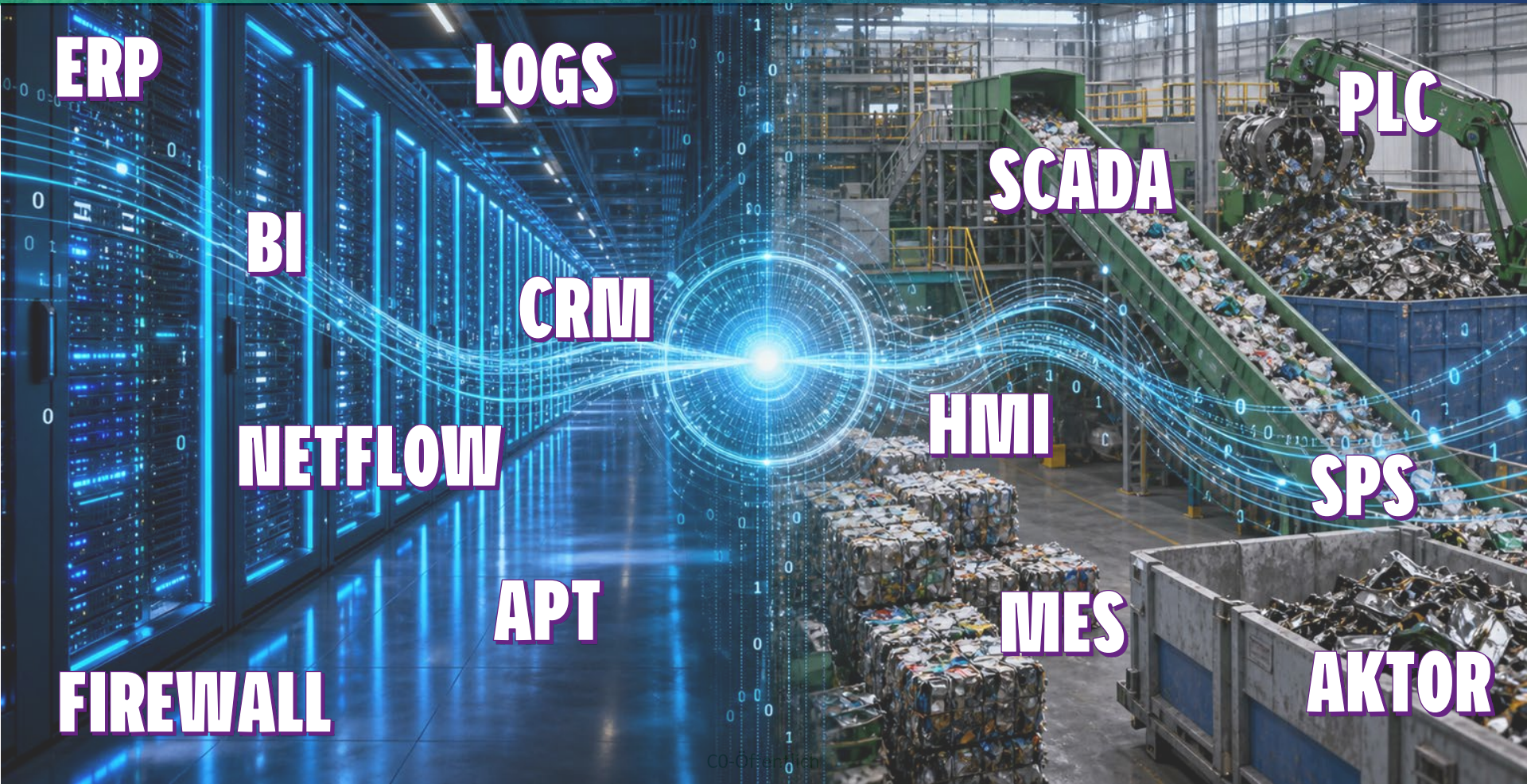
Industrial Data Analytics

Transparenz und Effizienz in der Kreislaufwirtschaft

VINCI ENERGIES

Industrial Data Analytics

- Was ist das?
- Warum brauche ich das?
- Wie mache ich das?



INDUSTRIAL DATA ANALYTICS – WAS IST DAS?

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Warum sollte ich mir darüber Gedanken machen?

- Gesetzliche Regularitäk!
- Gesetzliche Regularitäk!
- Vermeidung von Ausfällen, planbare Wartungen
- Identifikation von Qualitätsproblemen
- Transparenz über Prozesse
- Härtung gegen (externe) Bedrohungen
- Sicherung der Wertschöpfung
- **GESETZLICHE REGULATORIK!**

Brauche ich das überhaupt?

Einige Zahlen aus 2025

- +64% Angriffe auf OT-Systeme gegenüber Vorjahr
- 3.300 betroffene Unternehmen, davon >66% in Fertigung und Entsorgung
- 119 Ransomeware-Gruppen zielen speziell auf Industrieunternehmen (vgl. zu 80 in 2023)
- 11 APT-Gruppen ausschließlich auf OT-Schwachstellen fokussiert

Zahlen aus: Dragos 2026 OT/ICS Cybersecurity Report

Stelle ich mir die richtigen Fragen?

- Erfasse ich alle Daten, die ich brauche?
- Wo sind die Daten, die ich brauche?
- Welche Daten brauche ich eigentlich?
- Welche Fragen habe ich an meine Daten?
- Sammele ich die Daten nur, oder analysiere ich sie auch?

Datenzentrisch denken!

... aber dabei den Anwendungsfall nicht vergessen

- Die Daten halten unsere Antworten, aber ohne einen konkreten Anwendungsfall sind diese Daten wertlos!

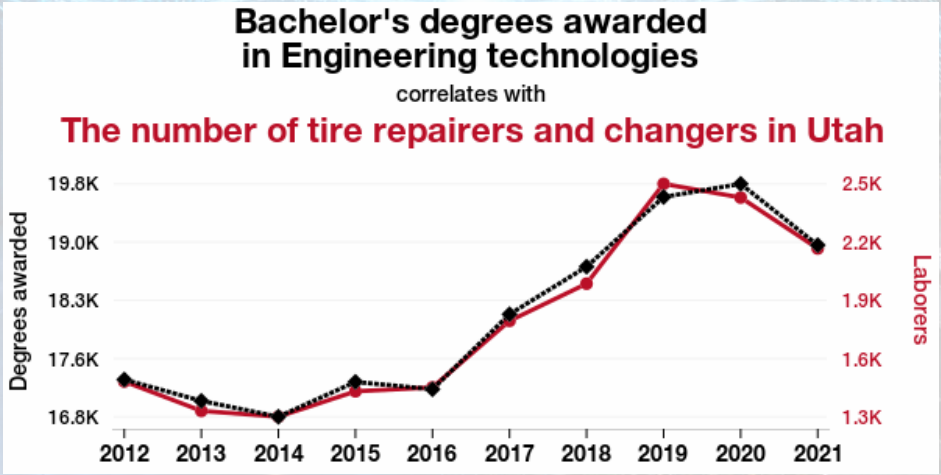


Bild: Spurious correlations | tylervigen.com

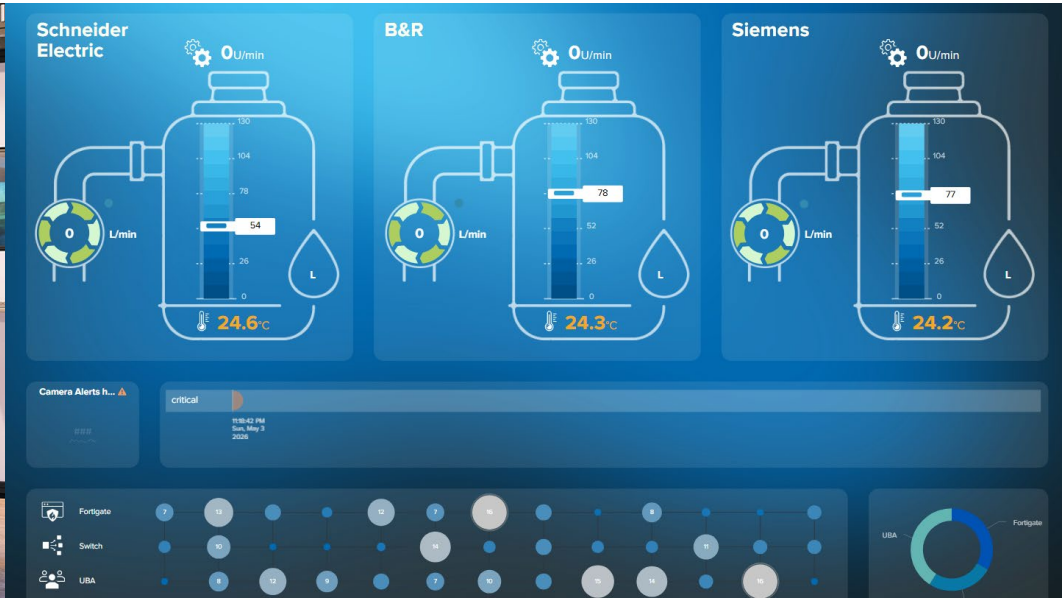
Von der Frage zur Antwort

- Definition von Anwendungsfall und Ziel
- Erfassen der Datenquellen
- Datenqualität absichern
- Standards und Interoperabilität beachten
- IT und OT gemeinsam betrachten – sowohl Daten als auch Personen
- PDCA-Zyklus beachten

Bild: Spurious correlations | tylervigen.com

Vom Showcase zum „Digital Twin“

VINCI Energies Automation Area



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Energieeffizienz-Monitoring

ENVIRONMENT & SUSTAINABILITY

ENERGY DASHBOARD

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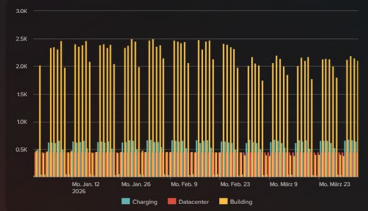
BU CYBER ANALYTICS & DEFENSE

ELECTRICITY USAGE



Total usage this year
239,756 kWh

PV SYSTEM

Produced today
164 kWh

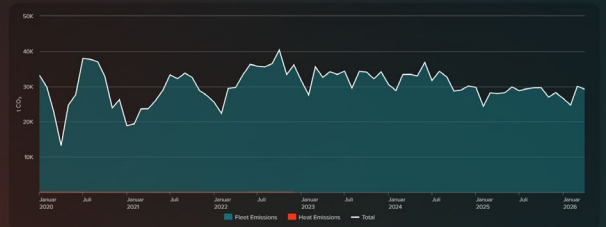
Produced this year
45,687 kWh

CO_2 EMISSIONS

TOTAL
1,902 t CO_2e

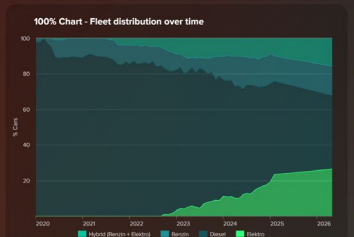
FUEL
1,902 t CO_2e

HEAT
0 t CO_2e



CO^2 FOOTPRINT

92 ↓-3
t CO_2 / Employees



FLEET OVERVIEW

Total Fuel Consumption Year to Date
158,194 L

Year over year comparison fuel consumption
↑16.45%

Monthly fleet emission per vehicle in g CO_2 / km
86.7 ↓-0.1%

Annual emission reduction per electric vehicle
~ 4.60 t CO_2

Electrification Progress

SUSTAINABILITY FACTS

Our heat pump produces no direct CO_2 emissions, as it does not use fossil fuels and is powered by green electricity.

Thanks to the LED lighting, we save about 75% on electricity each year, and thus also on energy costs.

Our energy-efficient air conditioner saves XX% on electricity compared to a conventional one.

With **14 charging points** available, we are promoting electric mobility and accessibility while reducing our CO_2 emissions.

Green indoor spaces, acoustic optimization, and ergonomic workstations contribute to the well-being of our employees.

OUR IMPACT

Our generated solar power to date could power up to
42.7
Households for a year

By using green energy we saved
87.0
t CO_2 this year

This equals an amount of
10,879.0
Trees this year

Date	Sustainable Initiative	Ambition
2026-05-05	Launching new Environment Dashboard	Promote environmental and sustainability awareness
2026-04-30	Opening new sustainable location in Cologne	Reduction in energy and water consumption
2025-12-31	Environment Day 2025	Promote environmental and sustainability awareness
2025-09-30	Axians Sustainability Campaign 2025	Promote environmental and sustainability awareness
2025-01-31	Sustainability Learning Fridays	Promote environmental and sustainability awareness
2024-12-31	Donations to Charities in 2024	Promote environmental and sustainability awareness
2024-12-31	Outsourcing of data centers	Reduction in energy and water consumption
2024-10-31	Sustainability podcasts	Promote environmental and sustainability awareness
2024-09-30	Donations through tour de magellan 2023	Promote environmental and sustainability awareness
2024-04-01	Minimizing air conditioning in the server room	Reduction in energy and water consumption
2024-04-01	Implementation of Building Management Systems	Reduction in energy and water consumption
2024-03-31	Expansion of charging infrastructure	Reduction in fuel consumption
2024-02-09	Updating the Waste Inventory	Correct Disposal Procedures
2023-12-31	Digital Payroll	Conservation of Resources
2023-12-31	Donations to Charities in 2023	Promote environmental and sustainability awareness

PÔLE ROADMAP

Tip of the day: Choose train travel over flights for short distances.

2027-01-31	Transition to 100% Renewable Electricity
2028-06-01	Improving Energy Efficiency of Office Buildings
2028-31-12	Optimization of Cloud Infrastructure & Data Centers
2029-01-01	Sustainable Procurement & Supplier Management
2030-01-01	It is our goal to reduce carbon emissions by 60% until 2030 compared to 2018

Pôle NW&S Carbon emission reduction

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Data-driven circular economy