



Data Center Sustainability

How to drive a greener agenda without sacrificing uptime

Soeren Juul Schroeder, Country Manager, Secure Power Denmark

Schneider Electric provides energy and automation digital solutions for efficiency and sustainability

Key figures for 2019

5% of revenues devoted to R&D

€27.2 billion

2019 revenues

41%

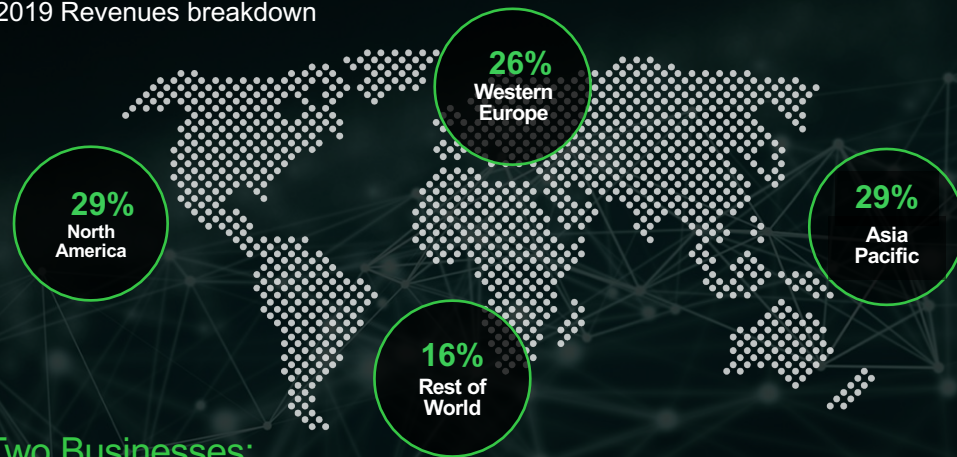
of revenues in new economies

135,000+

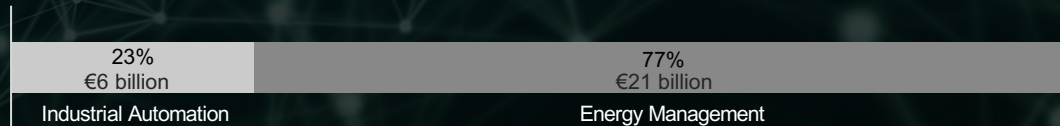
Employees in over 100 countries

A well-balanced global presence

2019 Revenues breakdown



Two Businesses:



Schneider approach with deep vertical segment expertise

Segment expertise



Integrated
Architecture



Global Network of
Account managers



Global Delivery and
Lifecycle Services



20 of the largest **Oil and Gas** companies in the world use Schneider Electric solutions



9 of the 10 largest **Mining, Metals and Minerals** companies in the world use products and solutions from Schneider Electric



11 of the top international brands within **Food & Beverage** partner with Schneider Electric



100 plus countries rely on Schneider Electric solutions to power, automate and help operators manage their **water and/or wastewater** plant and network processes



1 million **Buildings** around the world including 3 of 5 top international **hotel** chains ensure guest comfort & safety and an estimated 40% of the world's **hospitals** benefit from healthy and safe facilities with Schneider Electric



10 of the world's top electric **utilities** use Schneider Electric solutions to deliver safe and reliable power to homes & businesses



3 of the top 4 biggest hyper scale cloud providers use Schneider Electric Solutions for their datacenters



8 the top 10 packaging machine builders use Schneider Electric Solutions

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The 4 key markets Schneider Electric serves, consume 70% of the world's energy

Schneider Electric solutions portfolio is unique able to serve complete supply chains in industry, cities, buildings, technologies providers and homes **by supporting a sustainable infrastructure using less energy, water, fossil fuels and reducing emissions.**

97% of CEOs surveyed by [Accenture](#) in 100 countries **believe that sustainability is important** to the future success of their business.

69% of organizations surveyed by [GreenBiz](#) of the globe believe that **a longer-term, more comprehensive approach to energy and sustainability decision-making** is becoming business as usual.

SUSTAINABILITY IMPACT		Objective 12/2020	Beginning 01/2018	Results Q4 2019	Results Q1 2020	
Our megatrends 2015 – 2020 and targets 2018 – 2020		Overall Score out of 10	9/10	3	7.77	7.15
CLIMATE	80% renewable electricity		--	50%	50%	
	10% CO ₂ efficiency in transportation		--	4.1%	4.1%	
	120 million metric tons CO ₂ saved on our customers' end thanks to our EcoStruxure offers		--	89	97	★
	25% increase in turnover for our <i>Energy & Sustainability Services</i>		--	23.8%	10.3%	
CIRCULAR ECONOMY	75% of sales under our new Green Premium™ program		30.5%	55.2%	32.2%	★
	200 sites labeled towards zero waste to landfill		140	193	193	
	100% cardboard and pallets for transport packing from recycled or certified sources		50%	96%	99%	
	120,000 metric tons of avoided primary resource consumption through ECOFIT™, recycling and take-back programs		--	97,439	104,436	★
HEALTH & EQUITY	70% scored in our <i>Employee Engagement Index</i>		65%	64%	64%	
	0.88 medical incident per million hours worked		1.15	0.79	0.48	★
	90% of employees have access to a comprehensive well-being at work program		13%	46.6%	46.6%	
	100% of employees are working in countries that have fully deployed our Family Leave policy		--	99%	99%	
	100% of workers received at least 15 hours of learning, and 30% of workers' learning hours are done digitally		--	62%	32%	★
	90% of white collars have individual development plans		32%	79%	76%	
	95% of employees are working in a country with commitment and process in place to achieve gender pay equity		89%	99%	99%	
ETHICS	5.5 pts /100 increase in average score of ISO26000 assessment for our strategic suppliers		--	+3.7	+4.9	★
	350 suppliers under Human Rights & Environment vigilance received specific on-site assessment		--	279	282	★
	100% of sales, procurement, and finance employees trained every year on anti-corruption		--	94%	7%	
DEVELOPMENT	x4 turnover of our Access to Energy program		--	x1.56	X1.00	
	400,000 underprivileged people trained in energy management		148,145	246,268	258,533	★
	15,000 volunteering days thanks to our VolunteerIn global platform		--	11,421	13,696	★

Indicators amplified in Q1 2019 to upgrade Schneider Electric's sustainability ambitions are marked with a ★

Accelerating on our climate commitments

2020

Reach the **21 objectives** of the **Schneider Sustainability Impact** on:

- Climate
- Circular Economy
- Ethics
- Health & Equity
- Development

SCHNEIDER
SUSTAINABILITY
IMPACT

2025

- Train **1 million** underprivileged people
- Phase out SF6
- Provide access to energy to **50 million** people
- Support **10,000** entrepreneurs
- Invest **10bn€** in green R&D (2015-2025)
- Achieve **carbon neutrality** in our ecosystem
former 2030 commitment, brought forward by 5 years

2030

RE 100 **EP 100**

EV30//30

SUSTAINABLE DEVELOPMENT GOALS



- **Net-zero operational emissions**, as part of validated SBT target



2050

- **Engage** actively with sustainable business initiatives such as the UN Global Compact



- Engage with suppliers on **net zero-CO₂ supply chain**

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Our sustainable impact on the planet

Committed people. Decisive action. Measurable progress.

LEARN MORE



sdreport.se.com

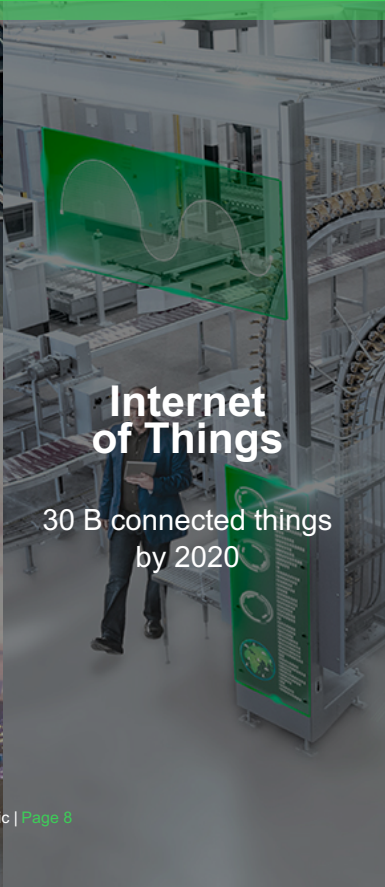
Market growth is driven by multiple long-term trends



Cloud computing

+16.5% annual growth

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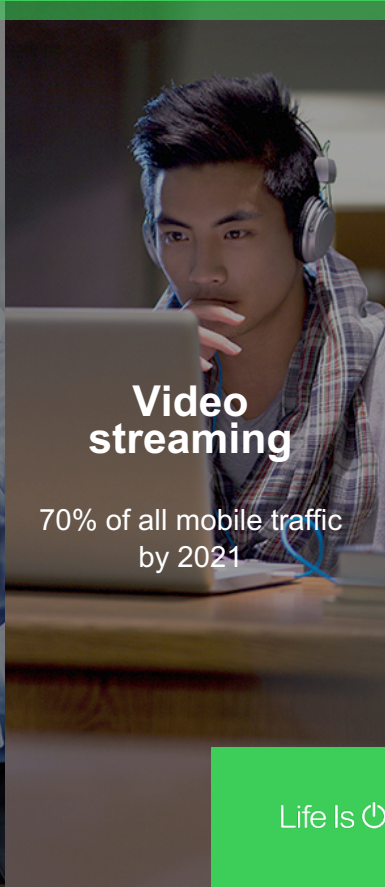
Internet of Things

30 B connected things
by 2020



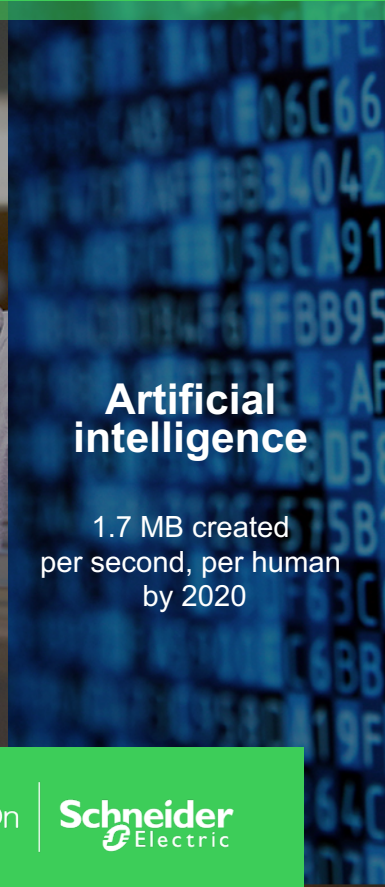
Mobility

5.5 B mobile active users
by 2020



Video streaming

70% of all mobile traffic
by 2021



Artificial intelligence

1.7 MB created
per second, per human
by 2020

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Our large portfolio of data center components spans from rack to row to room to building and complimented by our portfolio of software solutions



Software and Services



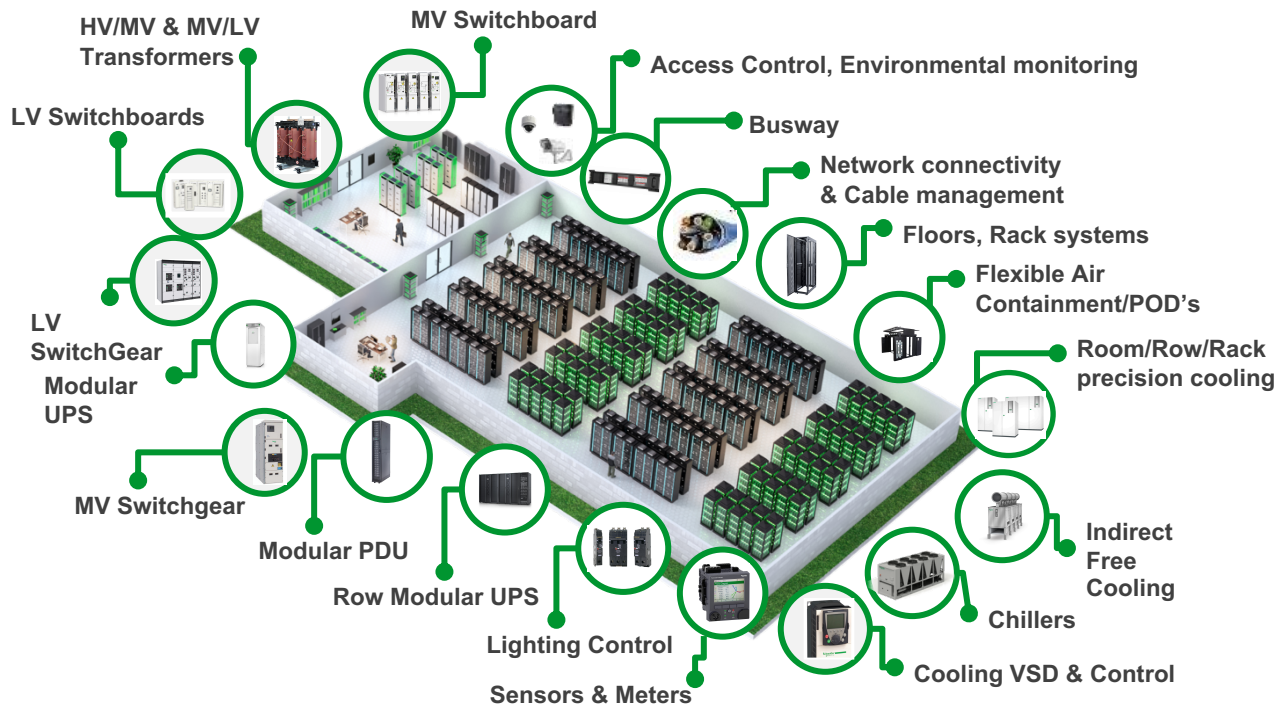
Asset Advisor



Resource Advisor
Building Advisor
Power Advisor
IT Advisor



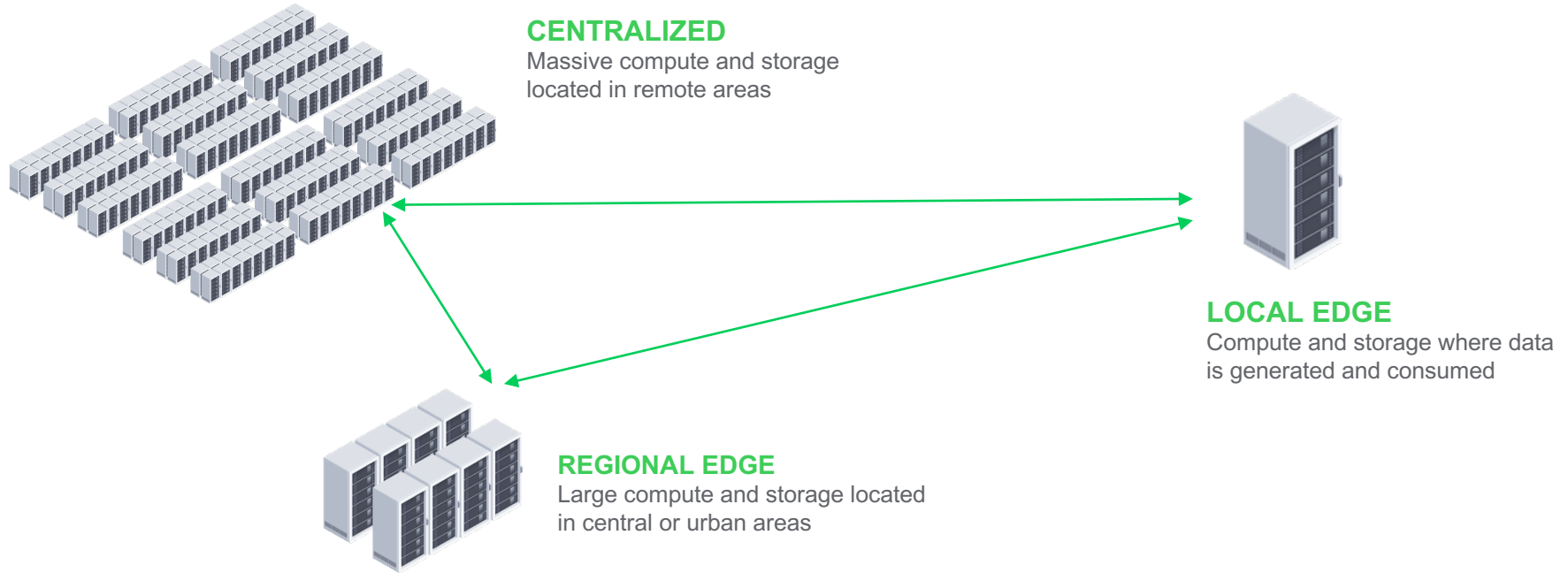
IT Expert
Power Monitoring Expert
Security Expert
Building Operations
Power SCADA Operations



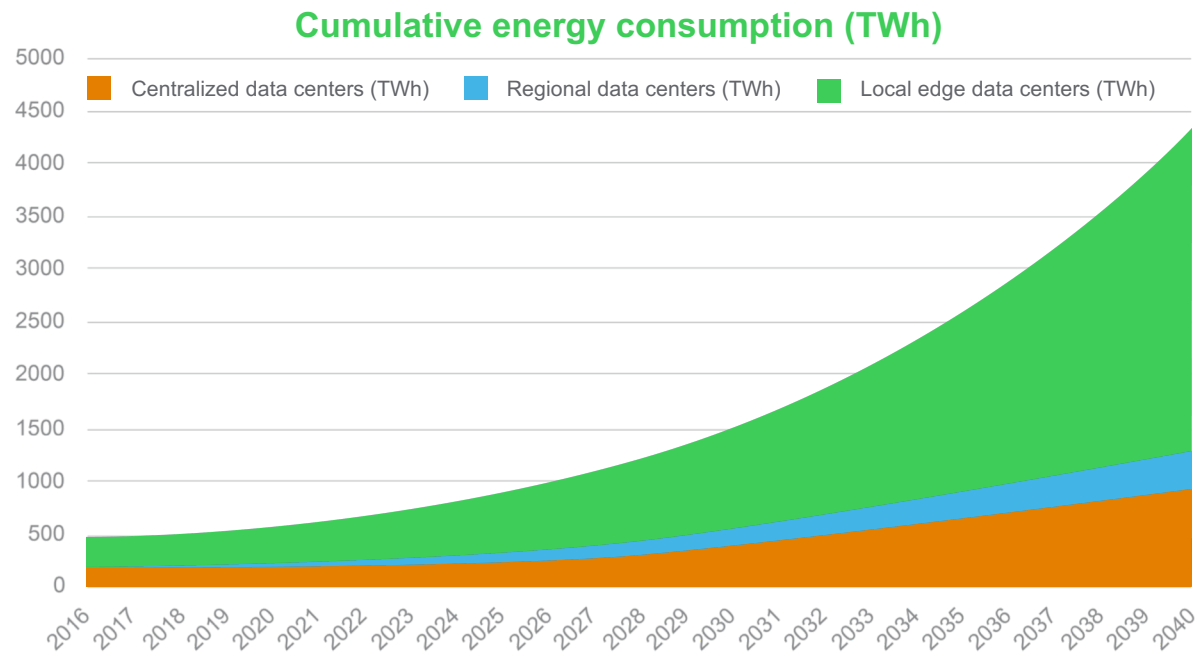
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Data Centers enable the **all digital world** through a centralized, regional edge and local edge hybrid architecture



Our goal in this era of digitalization is to make data centers as sustainable and carbon friendly as possible

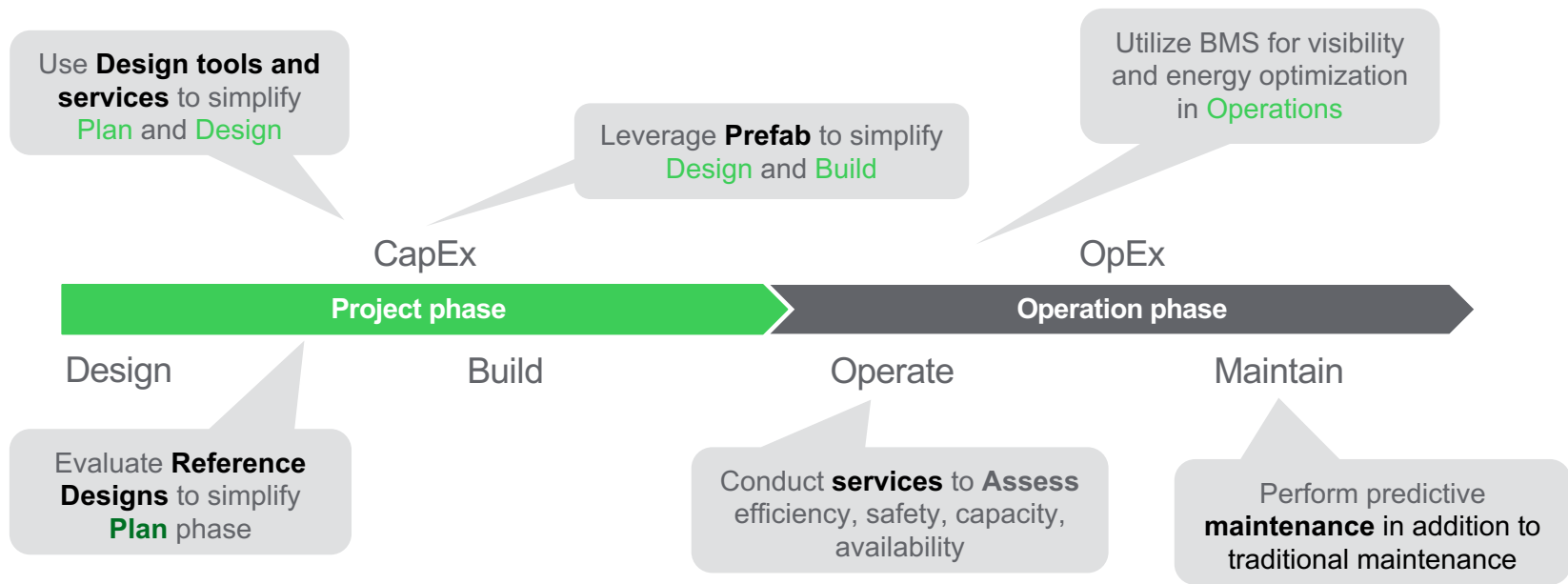


The Data Center Dilemma

Striking the right balance



We are one of the few companies that take a life cycle approach leveraging digital design and service tools



EcoStruxure™ for Data Centers

Innovation At Every Level

EcoStruxure™ Architecture



Benefits of an IoT enabled cloud based EcoStruxure include

Connects to products and integrated hardware and software solutions that are fast to deploy

Predictive analytics, Device Assessment and Collaboration with our service experts



Aggregates and accesses data in the cloud from Buildings, IT, and Power domains

Monitor and Benchmark performance, Evaluate patterns and optimization recommendations

iSeek

An Australian-owned cloud & service provider, specializing in enterprise cloud, robust data centers and managed connectivity 24/7



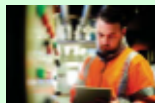
EcoStruxure™
Innovation At Every Level

for Data Centers

Apps, Analytics,
and Services



EcoStruxure IT Advisor



Ongoing Maintenance

Edge Control



DCIM

Connected
Products



Switchboards



Galaxy UPS
with
Lithium-Ion



Uniflair
Cooling
Units



BMS and
Security

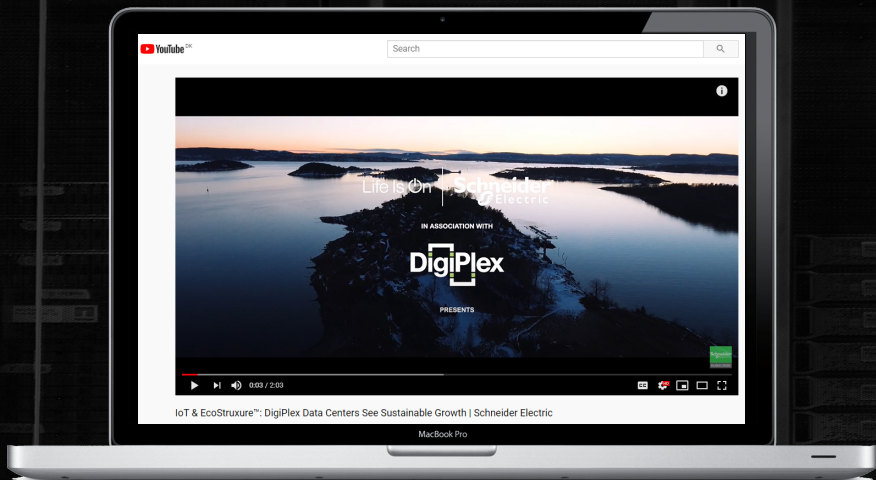
Reliable 1MW cyclone proof data center
24/7 visibility over the entire IT infrastructure.

"To ensure we deliver essential services in the most severe weather events, our partnership with Schneider Electric was absolutely essential to ensure power and cooling under all conditions. We selected Schneider Electric's EcoStruxure to help us deliver that outcome."

- Jason Gomersall, Founder and Chief Executive – iSeek

DigiPlex

A Norwegian-owned cloud & service provider, recognized for it's innovation and operational excellence



<https://www.youtube.com/watch?v=mxCYFyeyjmE>

SUSTAINABLE operation

24/7 visibility over the entire infrastructure

"10 years from now, if you don't operate and completely renewable and sustainable data center you'll not be here. Connected products are the only way to become very efficient. Digitization is the key to going into the future in a sustainable way"

- Pål Rune Viken, Site Manager – DigiPlex

In Summary...

1

Consider the **full life cycle costs** for any product considered
→ It can be very expensive to save on the initial purchase!

2

Deploy a methodology of Connect → Collect
→ Analyze → Action
for everything you do!

3

Plan and expect for the same resilience at the Edge as in the Data Center!

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