

# Buildings of the **FUTURE**

Commercial Real Estate

Sustainable, Resilient, Hyper-efficient, People-centric

**Alex C.K. CHAN**

Regional Segment Director, Smart Real Estate – Software & Services

30<sup>th</sup> June, 2021

**COVID-19**  
has not  
changed  
**the real**  
**priorities**



Life Is On

**Schneider**  
Electric

Our purpose is to **empower all to make the most of our energy and resources** bridging progress and sustainability for all.

At Schneider, we call this **Life Is On**

**Our mission is to be  
your digital partner for  
Sustainability and Efficiency**

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

## Key figures for 2020

**5%** of revenues devoted to R&D

**€25.2 billion**

2020 revenues

**41%**

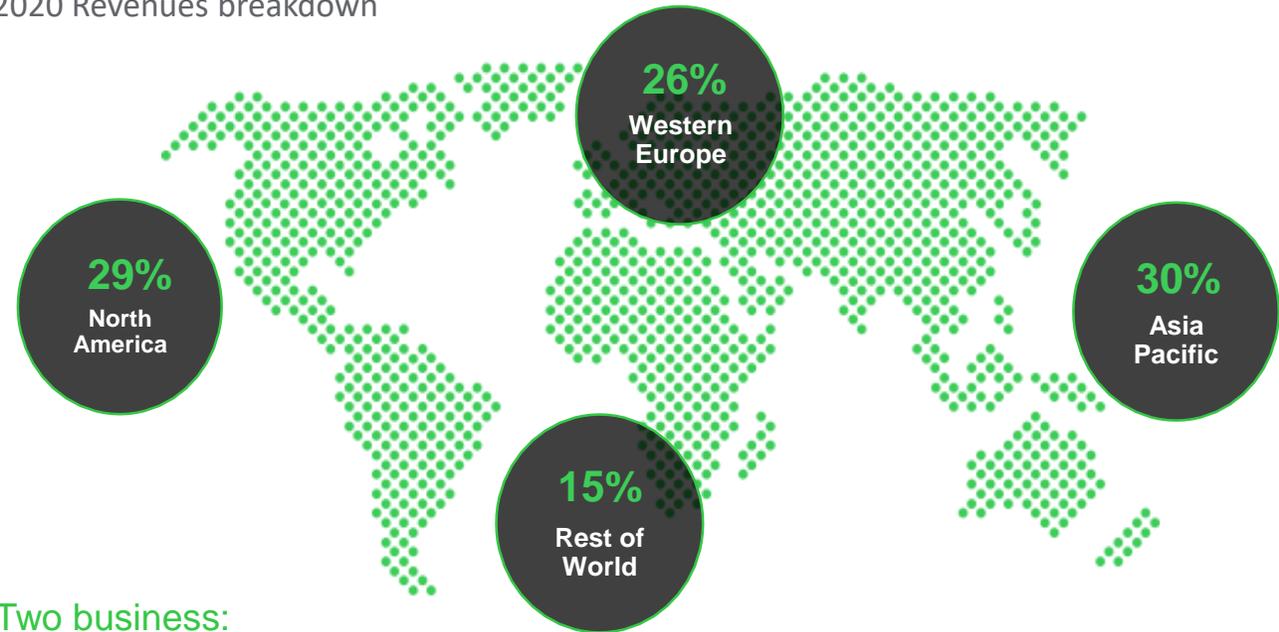
of revenues in new economies

**128,500+**

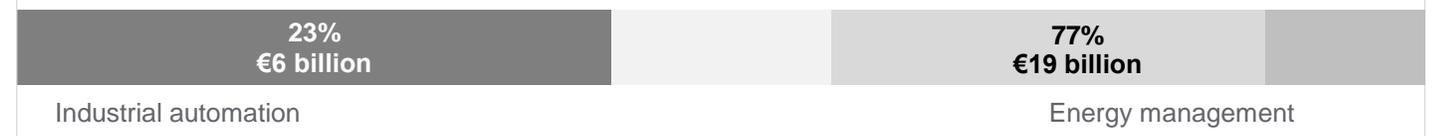
Employees in over 100 countries

## A well-balanced global presence

2020 Revenues breakdown



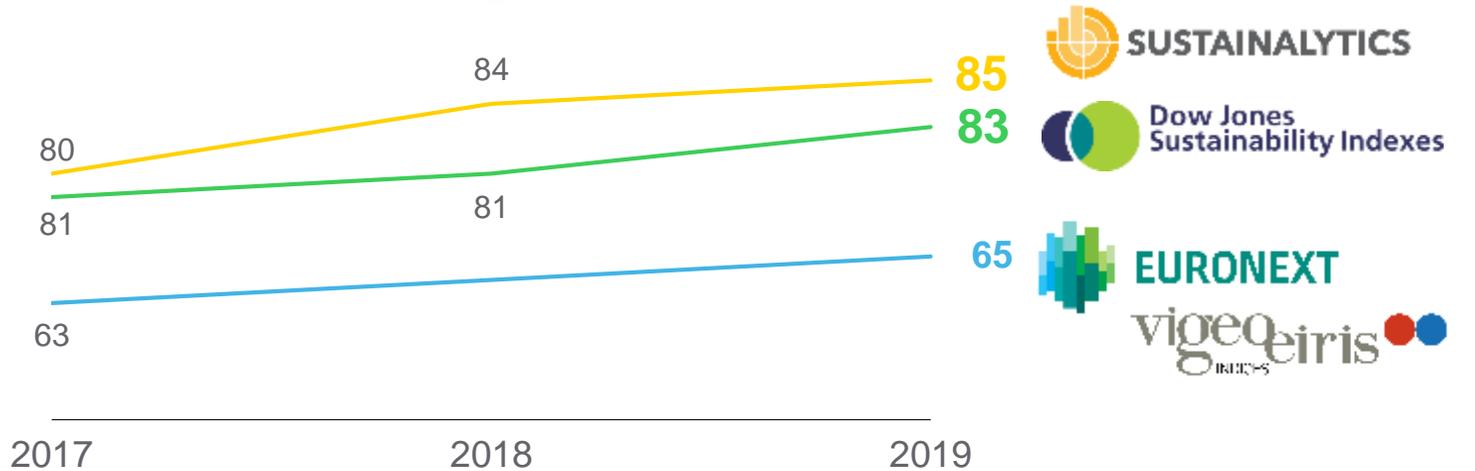
## Two business:



# Sustainability Recognition



2021's most sustainable corporation in the world



**A List**  
(Climate)  
9 years in a row

**MSCI**  
ESG RATINGS

**AAA**  
9 years in a row



Included since inception (2018)

# Digital disrupts Efficiency & Sustainability

**3x IoT**

IoT connections 2018-2025 (\*GSMA)

**>5x Big Data**

generated data from 33 ZBs today to 175 ZBs by 2025 (\*IDC, 2018)

**6x AI**

worldwide spending on cognitive and AI systems btw 2017 & 2022

(International data corporation)



# The world of real estate

Forecasts project a recovery  
in 2021, with the total building  
stock estimated to grow to

**124.7 billion m<sup>2</sup>**

in 2029 from 102.9 billion m<sup>2</sup>.

# The world of real estate

~40%

of the world's  
CO<sub>2</sub> emissions comes  
from buildings<sup>1</sup>

>350

natural + man-made  
disasters in the world  
in 2019<sup>2</sup>

>30%

of the energy is  
wasted in buildings<sup>3</sup>

~90%

of our time  
is spent indoors<sup>4</sup>

Source:

<sup>1</sup> Architecture 2030, 2020

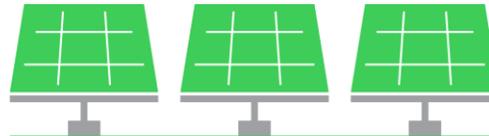
<sup>2</sup> Facts + Statistics: Global catastrophes, Insurance Information Institute, 2020

<sup>3</sup> U.S. Environmental Protection Agency, 2020

<sup>4</sup> Joseph G. Allen, Healthy Buildings Program, Harvard University, 2019

# Two major transitions already underway

All-digital, all-electric world



Buildings of the future

## Digitization

IoT **x10** more new connected devices than individuals  
Source: GSMA 2019

Big Data **x5** 81 bn GB in 2017, 403 bn GB in 2021  
Source: IDC, 2018

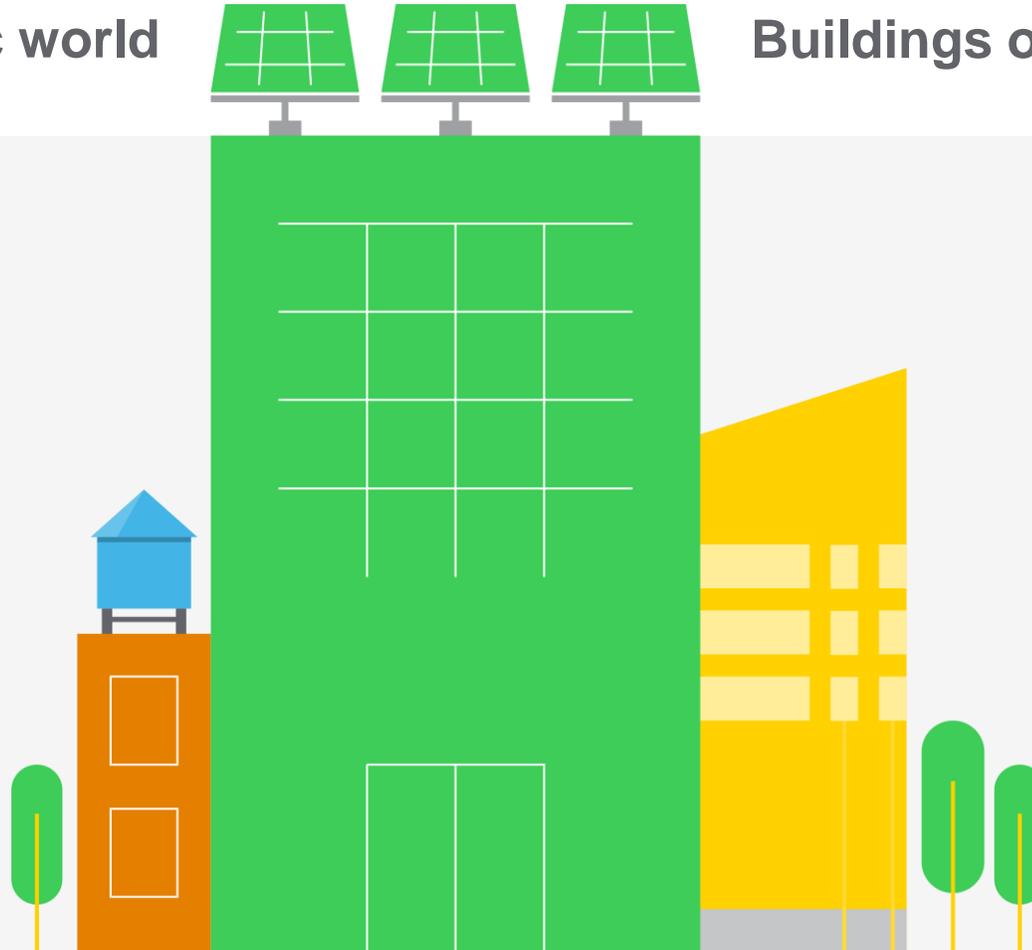
AI **x6** increase in AI expenditures between 2017 and 2022  
Source: International Data Corporation, 2020

## Electrification

**50%** of energy production will be solar or wind-driven by 2050  
Source: Bloomberg New Energy Finance, New Energy Outlook 2019

**30%** of vehicle stocks will become electric by 2040  
Source: Bloomberg New Energy Finance, New Energy Outlook 2019

**x2** Electricity consumption by 2050  
Source: Global Energy Perspective 2019, McKinsey, 2019



# The **foundation** of real estate portfolios of the future



## **Sustainable**

Equipped with flexible energy assets and various electric sources



## **Resilient**

Recover quickly and bounce back



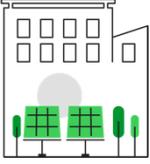
## **Hyper-efficient**

Seamlessly controlled by end-to-end digital platform



## **People-centric**

Designed to be responsive to occupants



# Sustainable

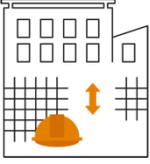
## Property today

- 30% of the **world's energy**  
(Source: IEA, 2020)
- 40% of global **greenhouse emissions**  
(Source: IEA, 2020)
- Rely on **non-renewable energy resources**

## Property tomorrow

- **60% reduction** of carbon emissions by 2040
- At least **40% green, renewable electricity**
- **Influential to decarbonization** of other industries





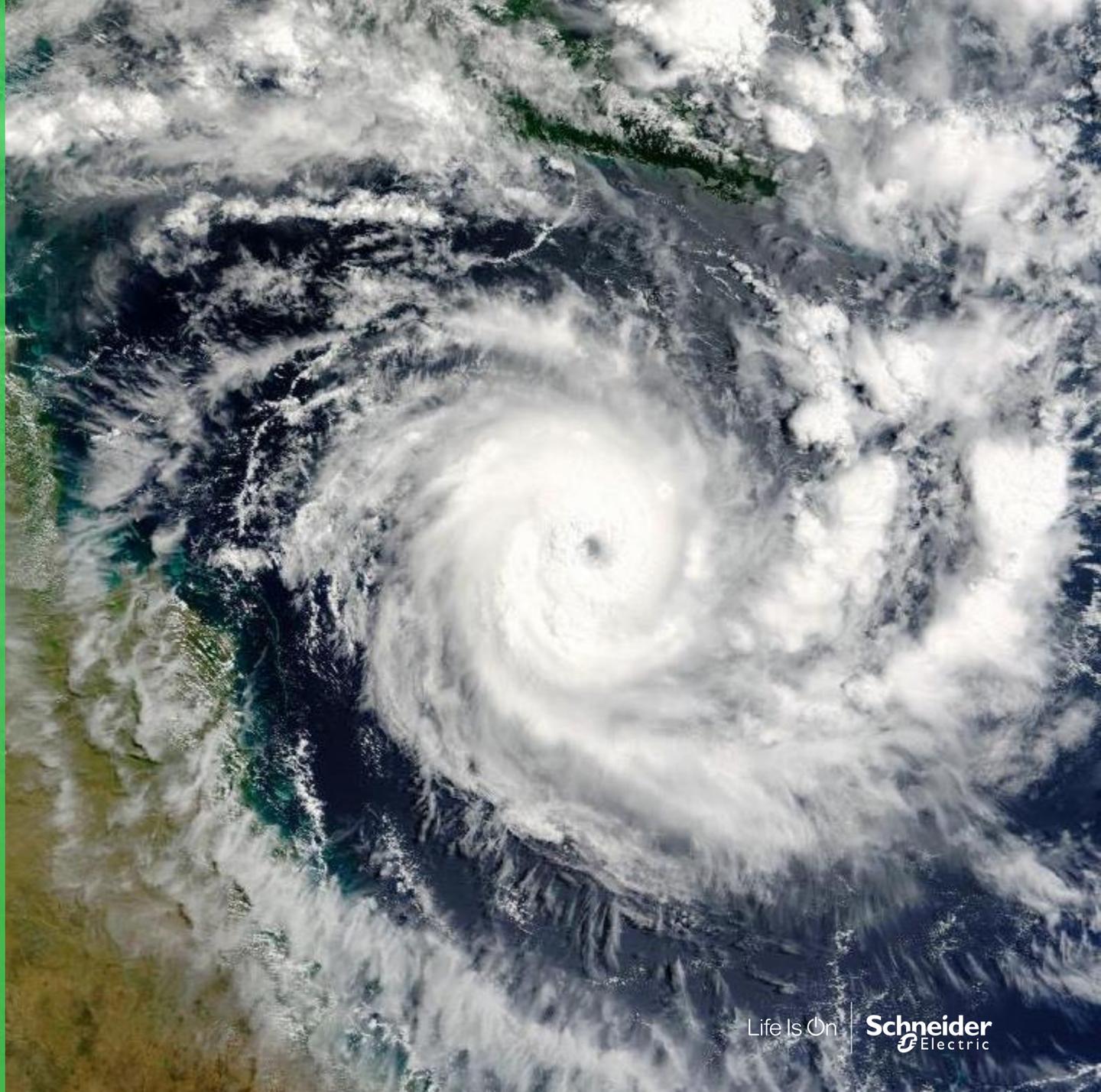
# Resilient

## Property today

- Only as good as their **weakest** link
- **Threatened** by weather, cybersecurity, health and outages
- Face peak **highs and lows** for utilization

## Property tomorrow

- More than 70% of operations **performed remotely**
- **Automation** and **predictive analytics** to minimize outages and failures
- **Cybersecurity protocols** to minimize risk level





# Hyper-efficient

## Property today

- ~30% of construction cost is **rework** (source: Procore, 2018)
- **Disconnected**, disparate systems
- **Under-utilized** assets and space
- **Reactive** maintenance

## Property tomorrow

- **Digital twin** leveraged from design to build, into the operation and maintenance phases
- **Energy and building automation integrated** by converging IT and OT systems
- Systems that are **connected to each other and to the cloud**





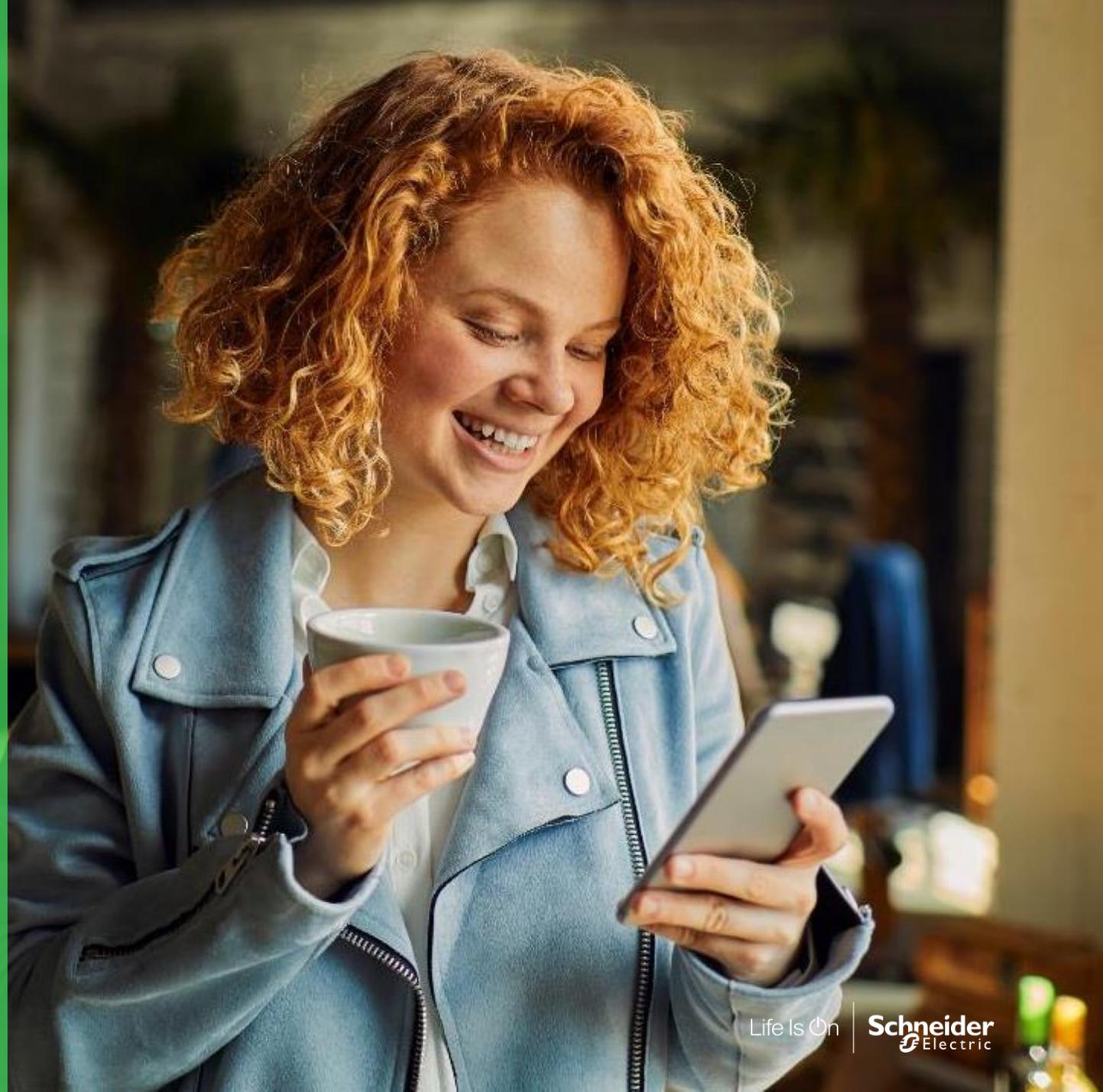
# People-centric

## Property today

- **Required to implement** new health and safety guidelines
- **Challenged to improve** occupant experience
- **React to demands** for safe and productive environment

## Property tomorrow

- **Monitoring** of occupant levels and health indicators
- Significantly improved **occupant experiences**
- **Semi-autonomously identify** issues and take actions



# Enabling real estate portfolios of the future



## Sustainable

Equipped with flexible energy assets and various electric sources

- Maximizing electrification
- Active energy management
- Positive energy buildings
- Resource-efficient design leveraging software
- Sustainable retrofits

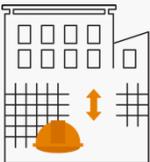


## Hyper-efficient

Seamlessly controlled by end-to-end digital platform

Better decision making, impacting:

- People needs
- Space resources
- Asset efficiency
- Energy cost



## Resilient

Recover quickly and bounce back

- Remote operations
- Power reliability
- Cybersecurity
- Critical infrastructure and asset protection
- Flexible buildings



## People-centric

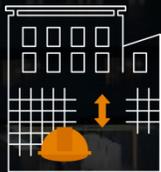
Designed to be responsive to occupants

- Safer buildings
- Healthy buildings
- Comforts and experience

# Implementing buildings of the future for profitable real estate portfolios



**Building for  
Sustainability**



**Building for  
Resiliency**

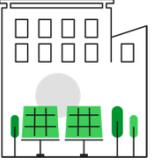


**Building for  
Hyper-  
efficiency**



**Building for  
People-  
centricity**

# Building for Sustainability



**+20% energy savings**

and achieve green building standards and compliance with data-driven decision-making



EcoStruxure  
Resource  
Advisor



Green Premium  
Products



Energy & Sustainability  
Services



Source: Schneider Electric customer references Sodexo and Sun Hung Kai

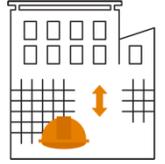
Achieve **compliance**, **meet circularity requirements** and exceed your **sustainability goals** across the lifecycle of your assets through active energy management and reporting.

# Building for Resiliency

## Up to 70%

of building preventative checks can be performed remotely with digital tools

Source: Schneider Electric Digital Buildings Research



EcoStruxure  
Building Advisor &  
EcoStruxure Building  
Operation



EcoStruxure  
Microgrid  
Advisor



Cybersecurity  
Services, Training &  
Patch Management



Adapt quickly to changing business priorities with remote monitoring, asset management, demand-side management and cybersecurity of **building systems** with **integrated, IoT-enabled** analytics for a resilient infrastructure. In short, remote everything.

Life Is On



# Building for **Hyper-efficiency**



**Up to 83%**  
fewer operational complaints



EcoStruxure  
Building Advisor and  
EcoStruxure Building  
Operation



EcoStruxure Power  
Advisor and  
EcoStruxure Power  
Monitoring Expert



Connected  
Room  
Solution  
**NEW**



**Better use of Energy** and **Space** along with informed decision-making for facilities teams and building occupants.

Source: IDC Business Value of EcoStruxure for Commercial Buildings, 2020

# Building for **People-Centricity**



**64%**

of employees are excited about accessing office-based tools and resources



EcoStruxure  
Building  
Advisor



EcoStruxure  
Workplace  
Advisor



EcoStruxure Building  
Engage – Enterprise  
Mobile App



Future-proof IoT backbone allows for better **occupant experience health, wellness** and more personalized digital experience for improved occupant productivity and satisfaction.

Source: Margulies Perruzzi, "Covid-19 and the Future of the Workplace- Where do we go from here?" April 20, 2020

# Buildings of the future for profitable **real estate portfolios**

**Up to 7%**

more asset value

**Up to 8%**

premium in rents

Source:  
USGB Council: 2018  
IDC Business Value of EcoStruxure for Commercial Buildings, 2020



EcoStruxure  
Resource Advisor



EcoStruxure Building  
Advisor



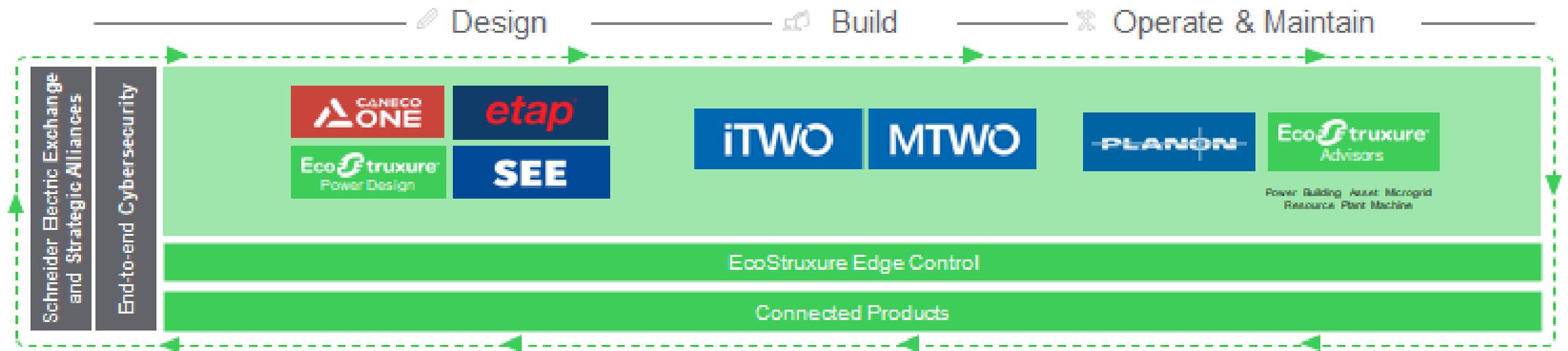
EcoStruxure Workplace  
Advisor &  
Engage Mobile App



**Procure energy at the best rates**, control **HVAC**, and maximize space with **data-driven** decision-making.

# We drive efficiency & sustainability through lifecycle

with our strong agnostic software portfolio and world-leading independent software partners



Life Is On

Schneider  
Electric

IN ASSOCIATION WITH



SWIRE PROPERTIES

# The **future** is now

We're building it together



The Island, France



Gwanghwamun D-Tower,  
South Korea



JLL APAC Headquarters,  
Singapore



Lidl Logistics Center,  
Finland



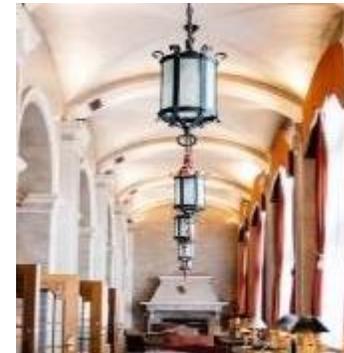
Perdana Putra, Malaysia



390 Madison Ave,  
USA



150 Holborn,  
London



Fort Garry Hotel,  
Canada



T-Mobile® Arena,  
USA



Hilton, Worldwide



# Buildings of the **FUTURE**

Sustainable, Resilient, Hyper-efficient, People-centric

Commercial Real Estate

Life Is On | **Schneider**  
Electric