

The Future of Energy & Sustainability Management

Fabien CHENE

Director, Energy & Sustainability Services EMEA

Schneider Electric

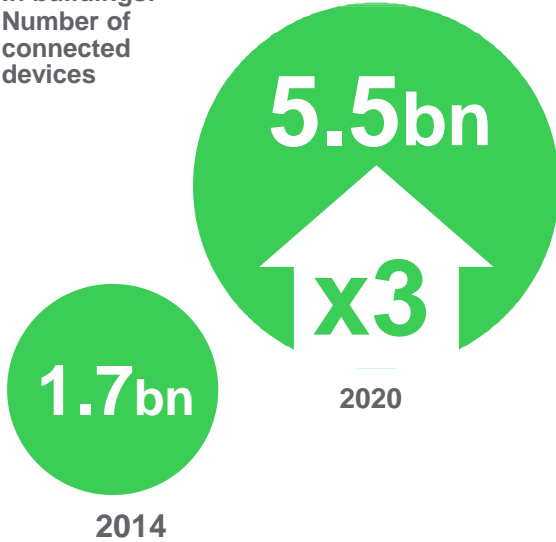


Disruptive technologies are accelerating the Energy transformation

Digitization

of data

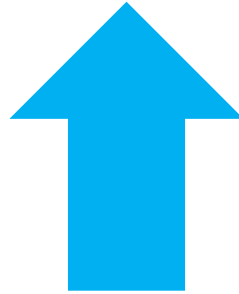
In buildings:
Number of
connected
devices



Decentralization

of assets

Corporate
Investment

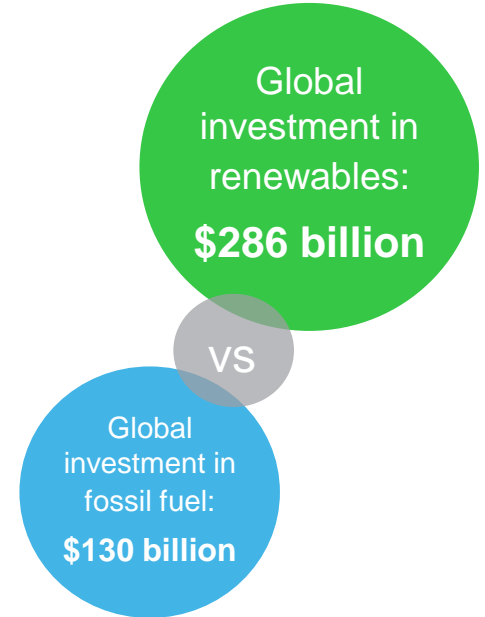


Over **55%** of
companies now have
onsite generation

Bloomberg New Energy Finance

Decarbonization

of grid



UNEP FS/BNEF Global Trends in Renewable Energy Investment 2016

These megatrends are generating headlines every day

Digitization

of data

The 'internet of things' is narrowing the gap between data and action

Why Digital Transformation is so Crucial for the Energy Industry

Blockchains, meet internet of things

Predictive analytics are about to transform the energy industry

The Edge of Computing: It's Not All About the Cloud

Decentralization

of assets

The EU's energy efficiency directive: How it affects you

How DERs are becoming the new demand response

Battery Storage to Power an Energy Revolution

Introducing the Energy Internet and the Grid Edge

Microgrid Growth Beats Estimates: 2020 Capacity Forecast Now Exceeds 3.7 Gigawatts

Decarbonization

of grid

Leading Companies Make Business Case to go 100% Renewable

RE 100

Facebook, Microsoft: We want more clean power!

COP21: Paris climate deal: nearly 200 nations sign in end of fossil fuel era

Walmart's plan to lift a gigaton of carbon from its supply chain

From a centralized, manual
carbon driven energy landscape

To a decentralized, digitized and
decarbonized future



To reach a decentralized, digitized and decarbonized future Companies need to break siloes, integrate goals

How companies buy energy

Turn energy into
controllable spend



How they use energy and increase reliability

Reduce energy use and
costs, reduce risk

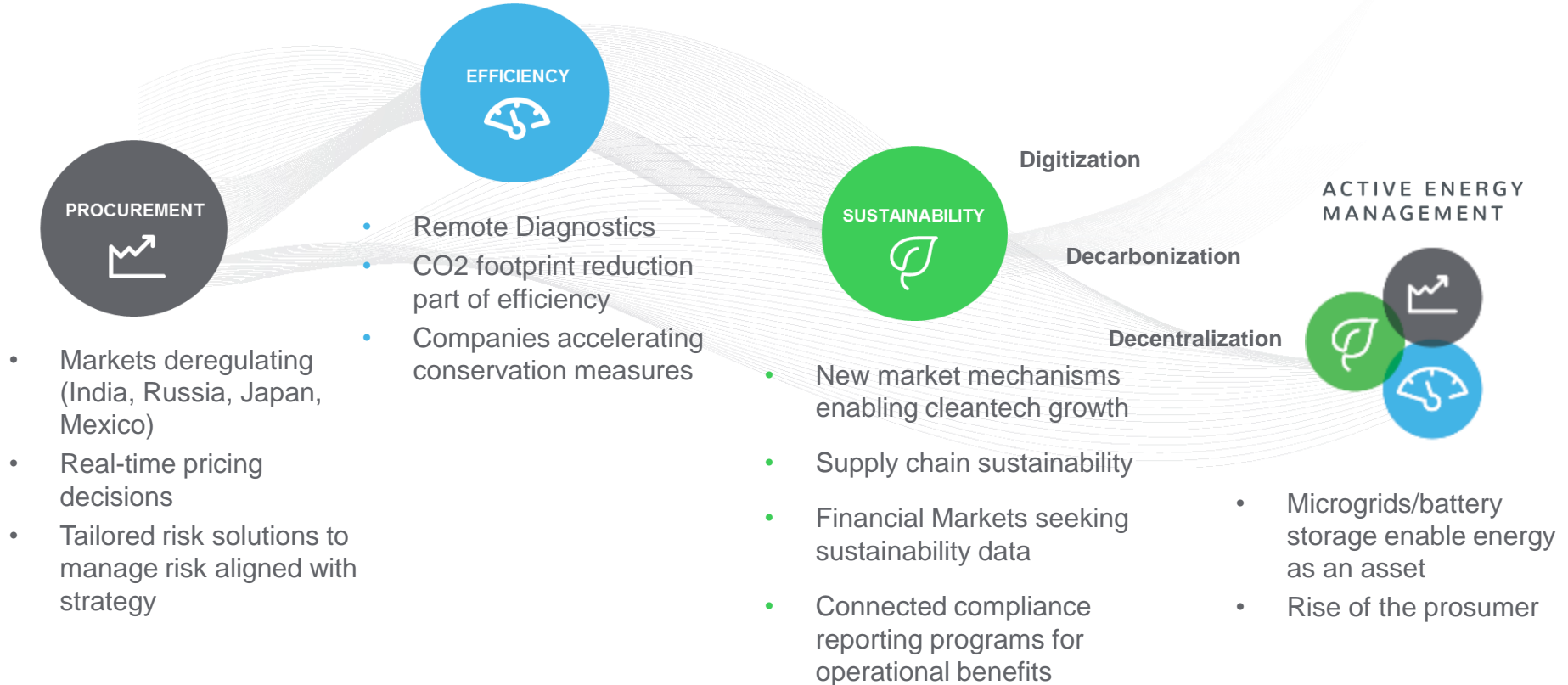


How they grow sustainably

Meet corporate
sustainability goals,
reduce resource use



The Transformation is Underway



Established Supply-Sustainability-Demand Relationship

cause & effect

Technology

improving while
cost declining

Prosumer

rise of producing-
consumers

Value Exchange

transactionally
efficient; no central
authority

Blurred

line between
supply &
demand

Grid-Enabled

assets monetized &
optimized in real time

Control

unprecedented
& automated

Merging

of physical &
virtual worlds

“ *The new energy economy will be marked by **countless** interconnected, intelligent, and grid-enabled resources optimized in response to real-time grid conditions.*

This will forever alter the producer-consumer dynamic. ”

The Business Model

Except for deregulation, the business model of the power industry has remained largely unchanged for the past 100+ years



Centralized
Generation

Transmission &
Distribution

End Use
Consumption

The Business Model Today

Rise of renewables and other distributed energy resources are testing long-standing assumptions and creating new opportunities

“The current market model, pre-dating the renewables era, does not create the incentives needed to stimulate prosumers to share their flexibility.” - *Engerati*



Centralized
Generation

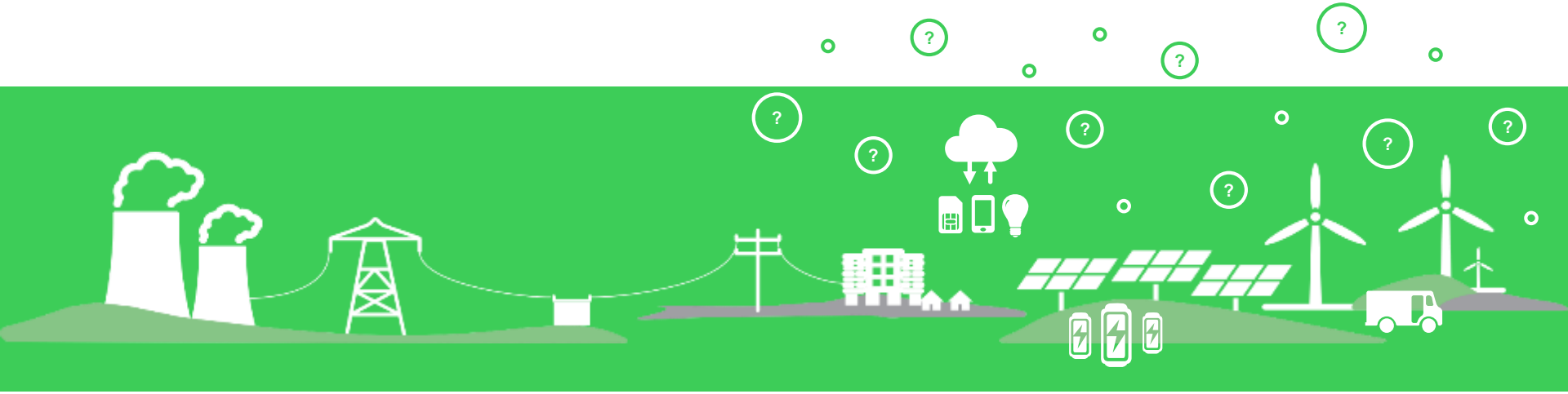
Transmission &
Distribution

End Use
Consumption

Distributed Energy
Resources

Energy-as-an-Asset: Energy and Assets *Mesh*

In the future, a *countless* number grid-enabled, responsive assets, aided by advancing tech, will be *monetized* and *optimized* in real-time



Centralized
Generation

Transmission &
Distribution

End Use
Consumption

Distributed Energy
Resources

(grid enabled, responsive)

Continue the Conversation...



@SchneiderESS



Schneider Electric
Energy & Sustainability Services

#ESPerspectives



Schneider Electric
Energy & Sustainability Services



resourceadvisor.com/blog

ENERGY & SUSTAINABILITY
PERSPECTIVES
Summit

