PRESENTER

Deepak Sharad

Marketing & Offer Development Manager

Electrical Distribution Revolution
Active Safety System

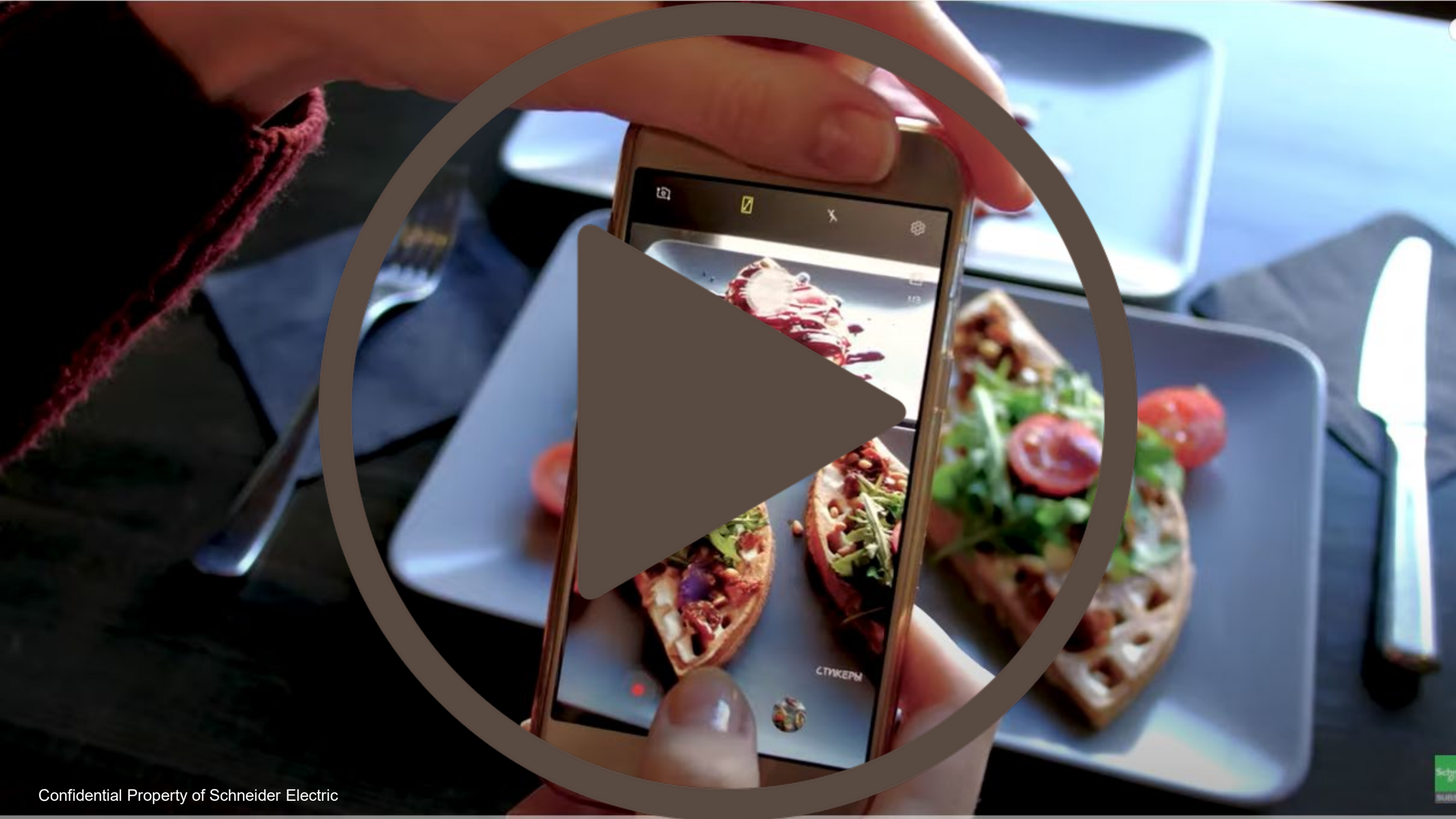
Confidential Property of Schneider Electric

Life Is On Schneider Electric

Make ACTIVE your new standard for electrical safety

Active Safety System

Confidential Property of Schneider Electric



Confidential Property of Schneider Electric

COVID-19 accelerator of Digital

Remote Everything

Resilience

Sustainability

Efficiency

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

25 Technology Trends That Will Define The Next Decade

Forbes
www.forbes.com
Apr 20, 2020

5. **Intelligent spaces and smart places.**
Closely linked to the IoT, this trend is seeing physical spaces – like homes, offices, and even whole cities – becoming increasingly connected and smart.

The **smart sector** is projected to generate

£9

TRILLION

a year by **2025***

**Converted from USD on 16 April 2020 at 1.25

*McKinsey Digital, Unlocking the potential of the Internet of Things.

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

25 Technology Trends That Will Define The Next Decade

Forbes
www.forbes.com
Apr 20, 2020

5. **Intelligent spaces and smart places.**
Closely linked to the IoT, this trend is seeing physical spaces – like homes, offices, and even whole cities – becoming increasingly connected and smart.

Confidential Property of Schneider Electric

The **smart sector** is projected to generate

£9 TRILLION

a year by **2025***

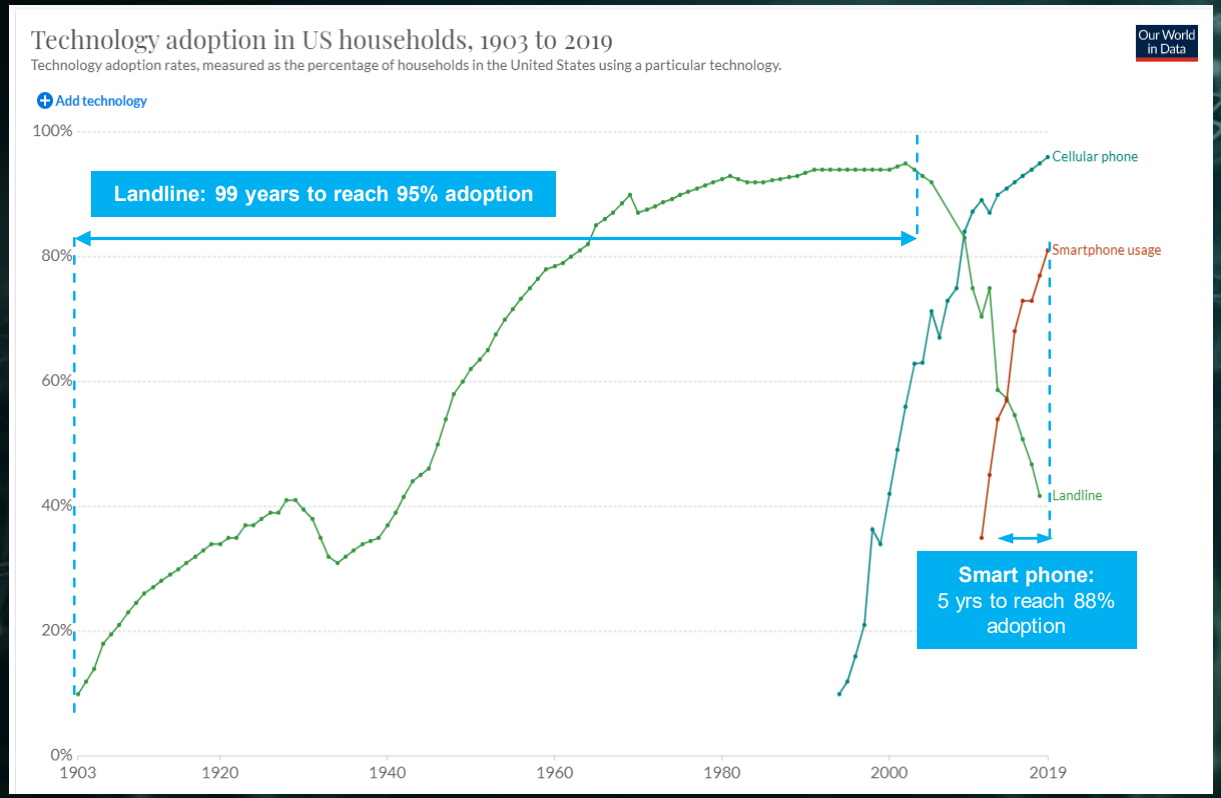
**Converted from USD on 16 April 2020 at 1.25

*McKinsey Digital, Unlocking the potential of the Internet of Things.

Life Is On | Schneider Electric

The rate of adoption with new technology is much faster

- 4IR brings exponential changes to the way **we live and work**
- The **speed and scope** is unprecedented compared to previous industrial revolutions
- It is expected to **disrupt and impact all disciplines,** industries and economies
- It has the potential **to improve quality of life and work,** as our environments become 'smarter' and more connected
- Evolving customer needs and wants **require new installer skills and knowledge** to satisfy the increasing technology demands from consumers

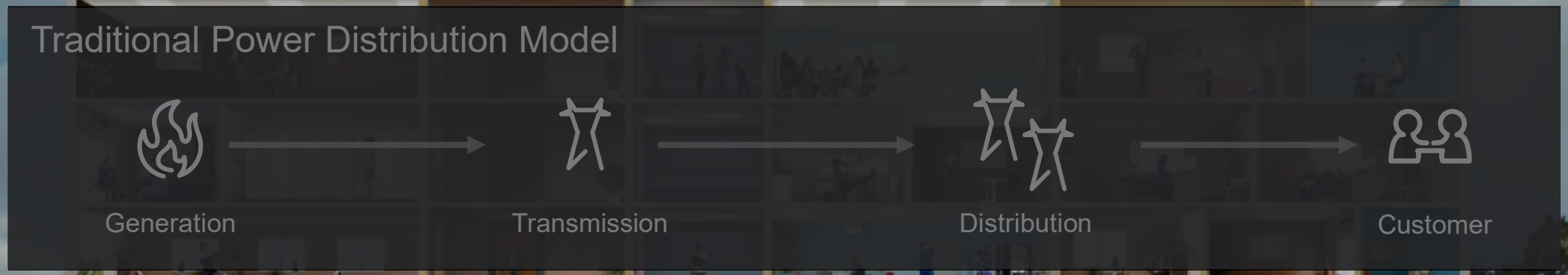


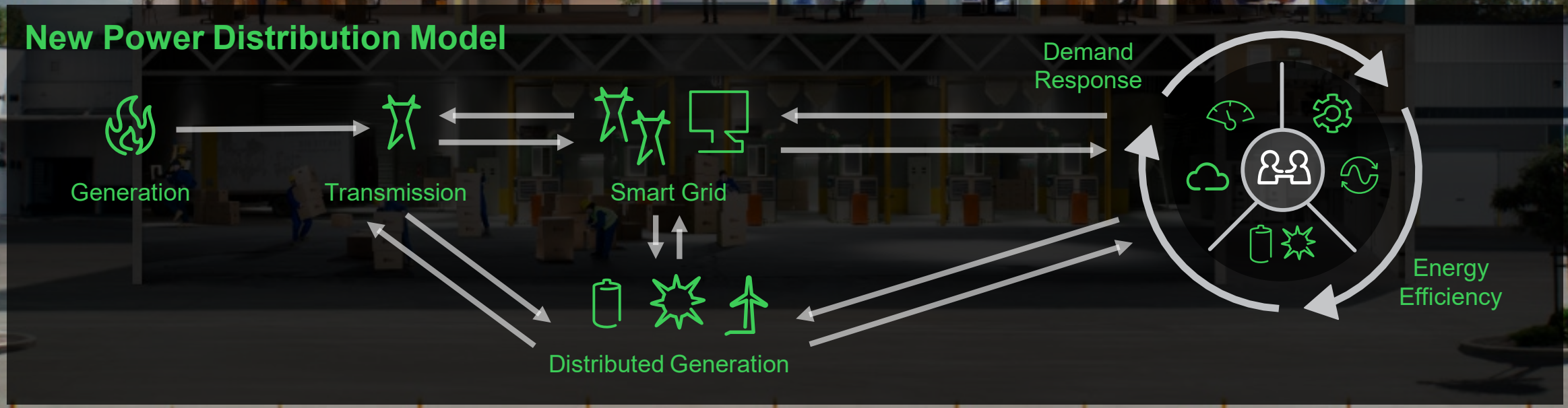
Source: www.visualcapitalist.com

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

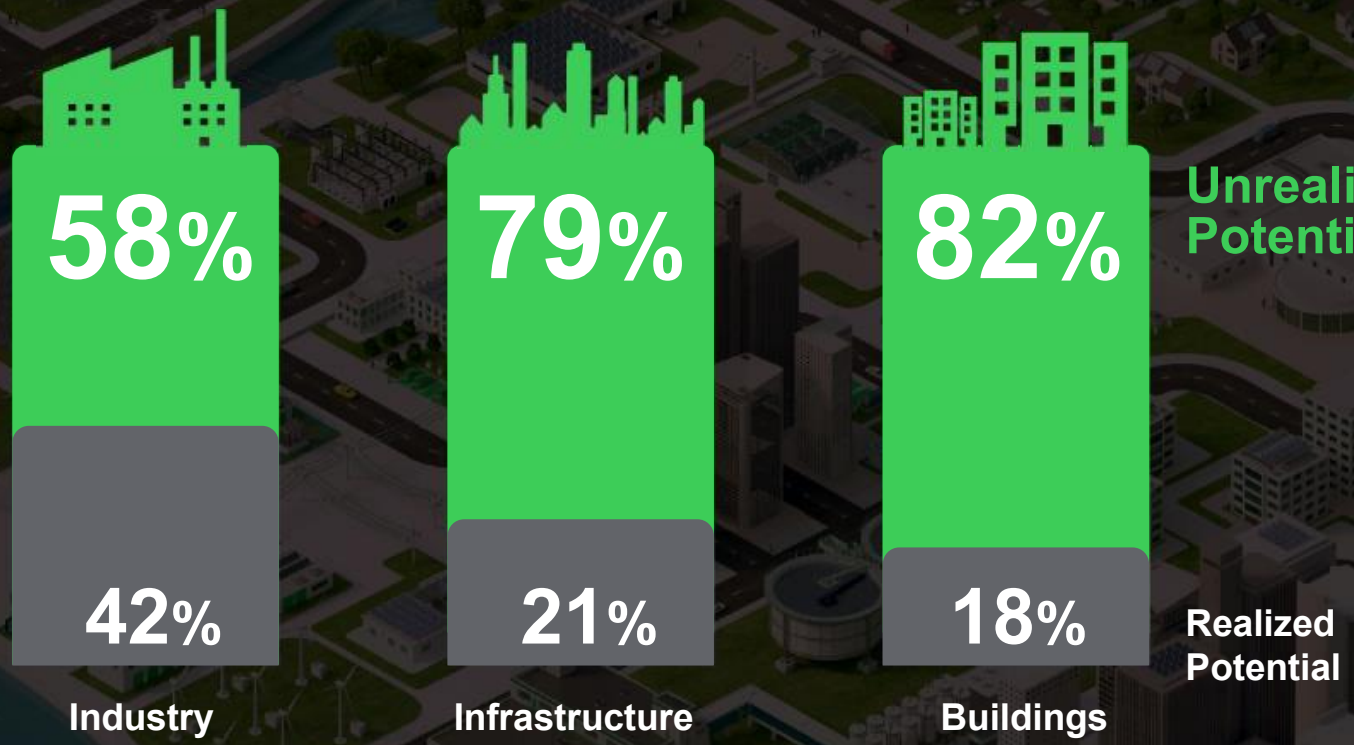
Power Distribution Changes





Life Is On Schneider Electric
Confidential Property of Schneider Electric

We have massive untapped efficiency potential



Source : World Energy Outlook 2012, OECD / IEA, Internal analysis

Confidential Property of Schneider Electric

Life Is On Schneider Electric

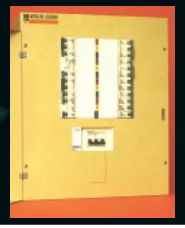
Electrical Distribution

Confidential Property of Schneider Electric

Growing together with innovation - Acti9 & Isobar

1990

Launch of
Multi 9 & Isobar
Distribution Board



2005

Launch of Isobar 4C
strengthening market
Leadership position

- Innovative Metering
- Enhanced Performance
- Extended warranty

2013

Launch of Acti9 & Acti9 Isobar
Distribution Boards

Setting new standards

- Safe
- Simple
- **Smart & connectivity**

2018

Acti9 Isobar P
Distribution Boards with simplified Connectivity

Confidential Property of Schneider Electric

Leading with innovation

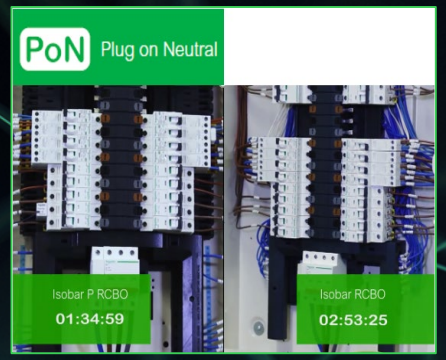
Safety

Reliability

Acti9 Isobar P

60 YEARS
OF INNOVATION

Ease of installation



Acti9 Isobar P

SMARTER
Increased efficiency,
reduced human error

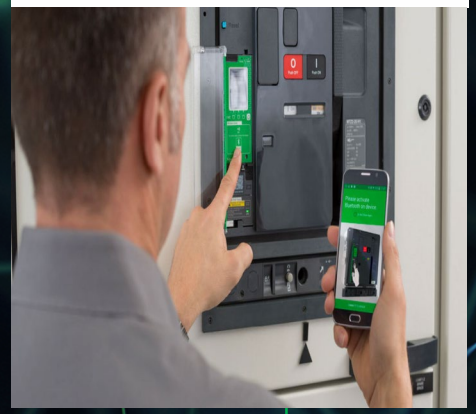
Connectivity

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

Connected architectures

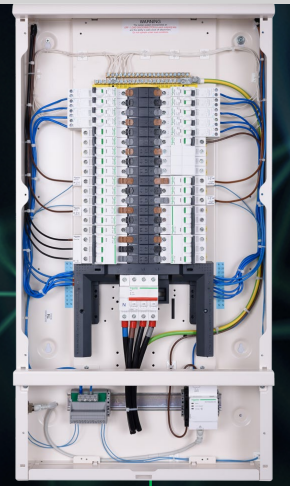
Masterpact MTZ
FUTURE READY



NFC
Class 1

INTRODUCING THE NEW
PowerPact 4

Acti9 Isobar P
& Powertag

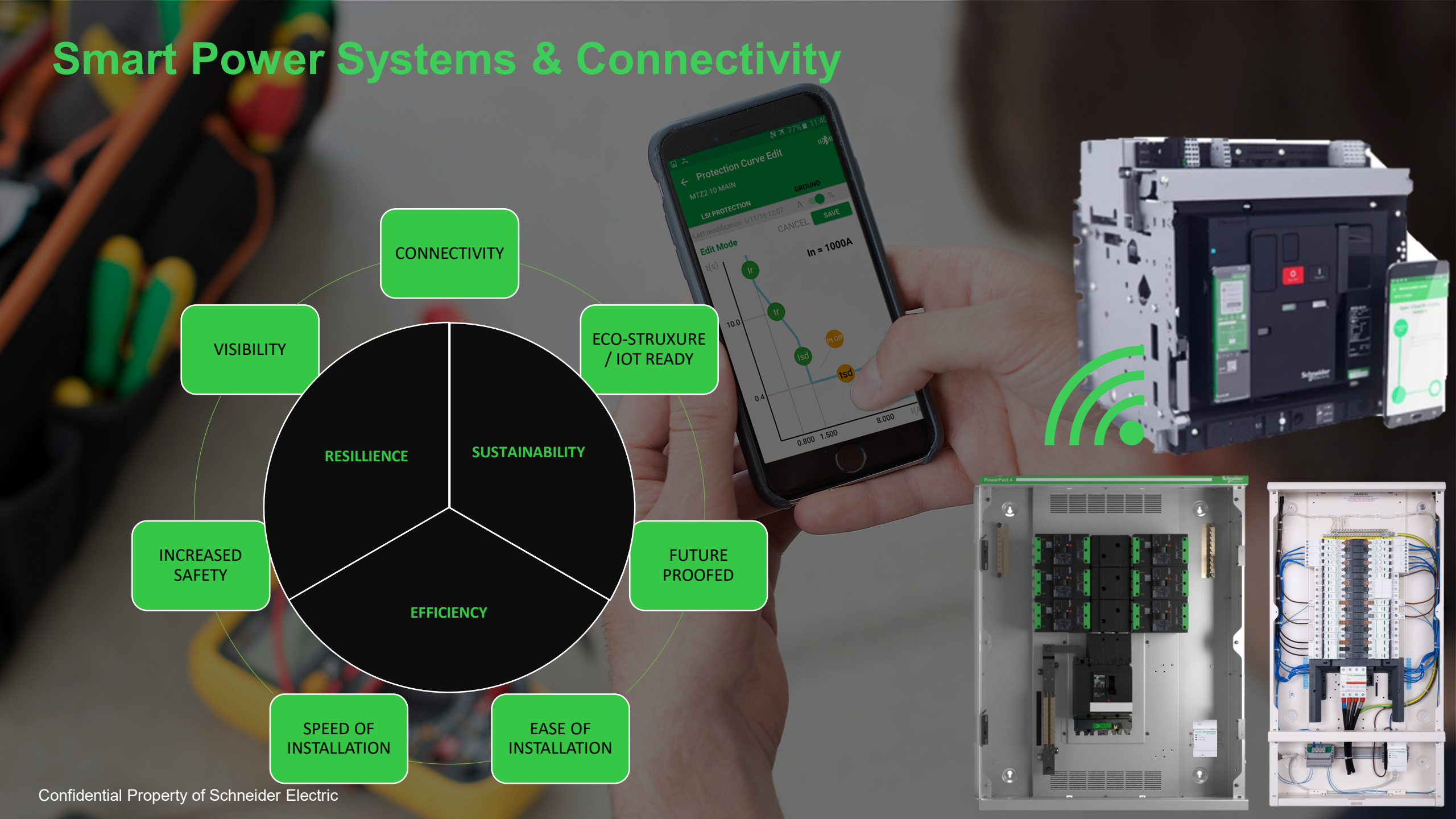


EcoStruxure™
Innovation At Every Level

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

Smart Power Systems & Connectivity



Confidential Property of Schneider Electric

The future - it’s already here

- Connectivity has changed the electrical landscape
- Connectivity is changing customer needs and technologies
- Connectivity raises the bar for the services you can offer to customers and provide added value

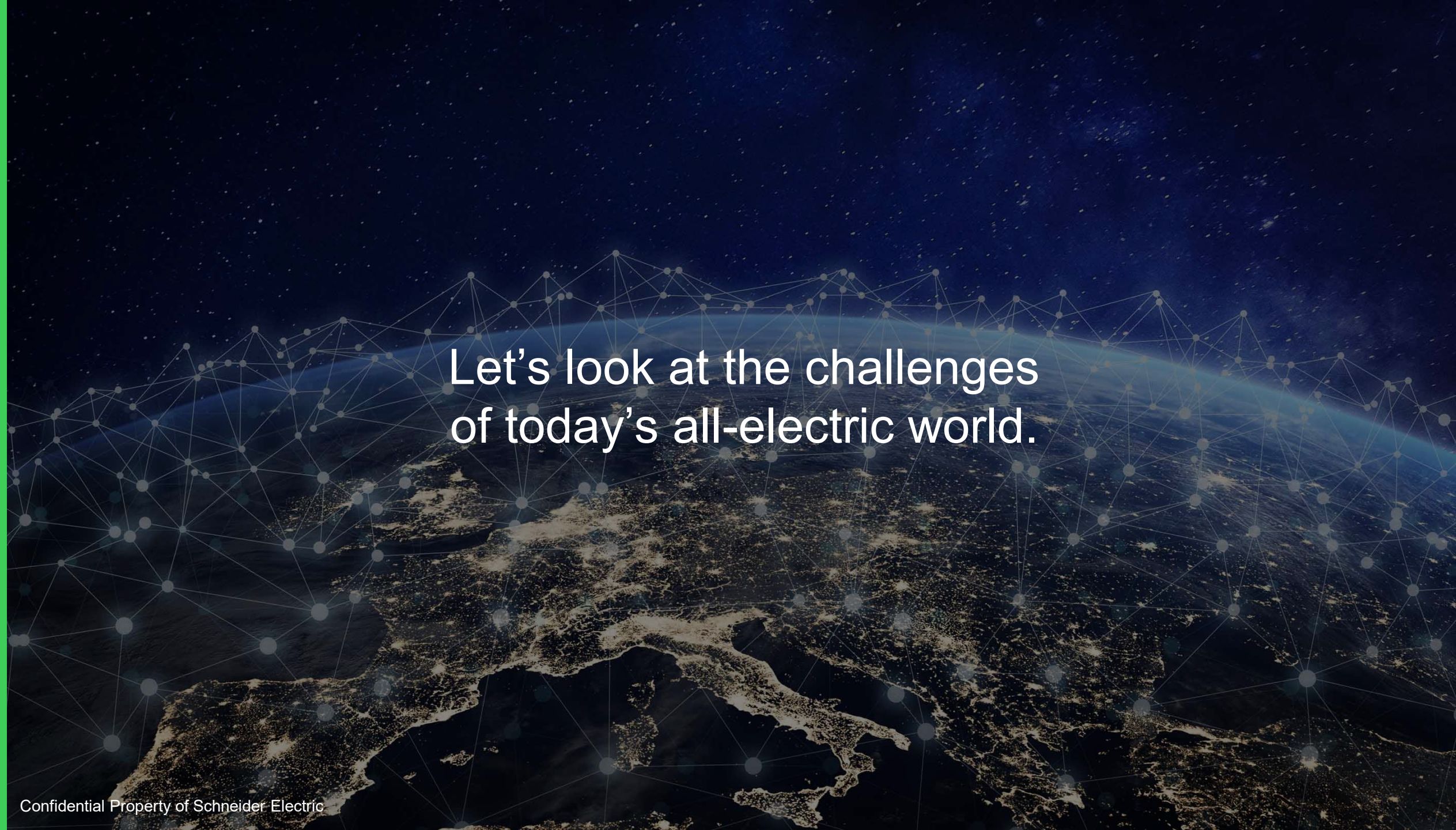
Life Is On | Schneider Electric

Confidential Property of Schneider Electric

Make ACTIVE your new standard for electrical safety

Active Safety System

Confidential Property of Schneider Electric



Confidential Property of Schneider Electric

1

Need for an advanced yet integrated electrical protection system which enhances safety, while keeping it easy to manage.

There are more and more electrical protection systems with specific function, and it's complicated to have a full view of health of each individual system. Doing so manually is even more tedious and prone to errors

2

Need for continuous visibility with connected systems.

With the need to be able to do job from anywhere, there is a need for connected systems. Current connected systems in the market are complicated with a need to add multiple accessories.

3

Need for assistance in order to avoid power disruption or safety issues.

With increasing electrical connections, one needs to be alerted with actionable insights about any potential problem instead of having to find it out once it has already occurred.

Confidential Property of Schneider Electric

Introducing

Active Safety System

ACTIVE

Make active safety your new standard

Confidential Property of Schneider Electric

Active Safety System **helps you be on top of electrical** health of your systems with all-in-one protection + visibility

Active Safety System **enables seamless connectivity** in extremely simplified and **compact** form

Active Safety System **warns** before electrical faults and **alerts** along with **actionable diagnostics** with an integrated device

Confidential Property of Schneider Electric

Confidential Property of Schneider Electric

It keeps you updated with health of electrical systems to point out potential issues

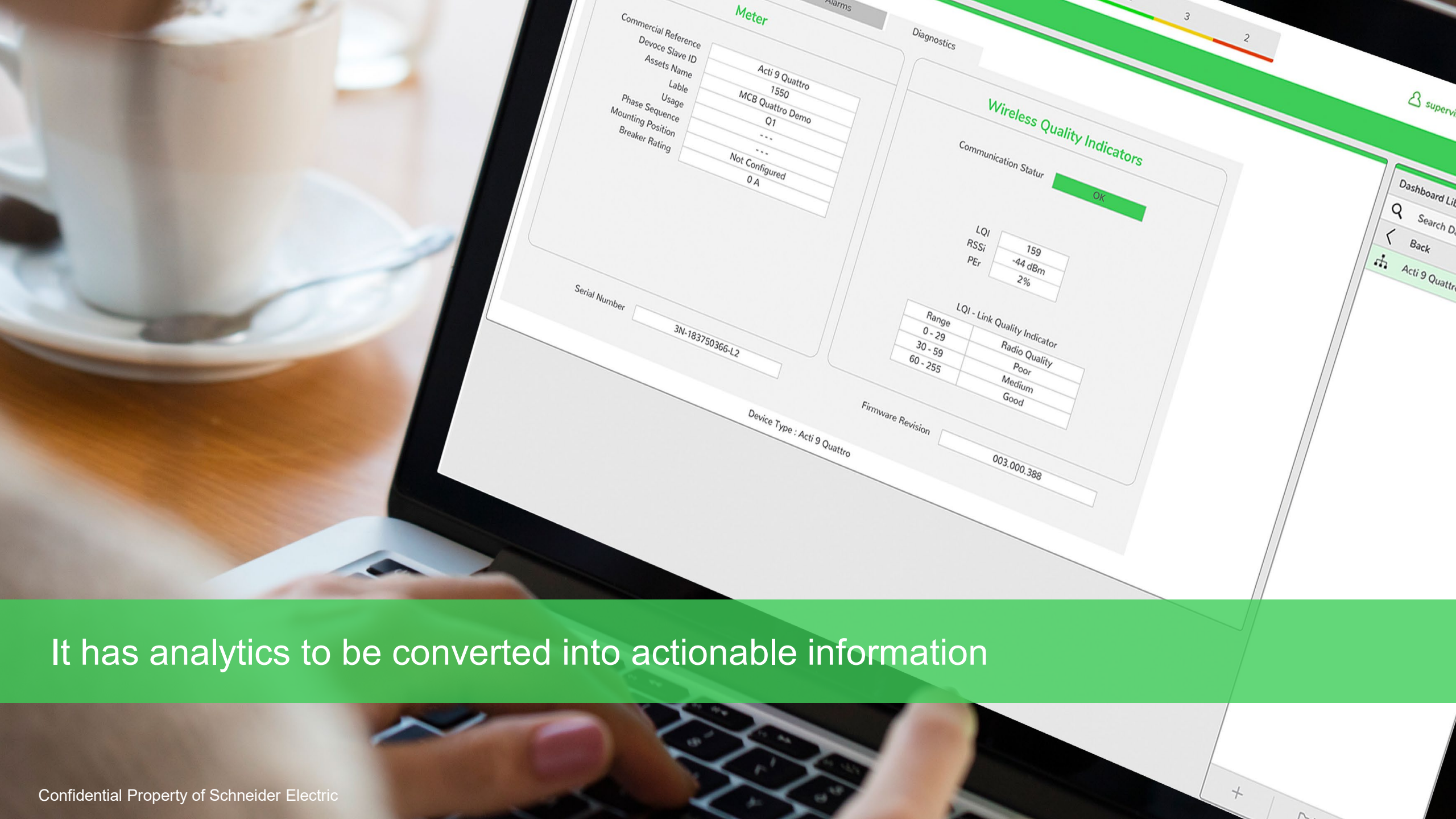
Confidential Property of Schneider Electric

It helps you stay on top of critical information, whether working on site or remotely

Confidential Property of Schneider Electric

It provides visibility with clear diagnostics for quick action……

Confidential Property of Schneider Electric



It has analytics to be converted into actionable information

Confidential Property of Schneider Electric

Active Safety System: Advanced visibility and protection simplified

An Active Safety System provides high level of protection and advanced visibility. It helps anticipate, predict, alert and protect against electrical faults. It is a system that changes how we work on SAFETY and makes it ACTIVE.

- The system works with 3 components – an active device (Acti**9** Active), a gateway and Power Monitoring Expert software
- Acti**9** Active – Is the first of a kind of device with integrated ALL-IN-ONE protection and connectivity
- Acti**9** Active sends notifications and alerts and shows detailed alerts, diagnostics and analytics on PME

Confidential Property of Schneider Electric

Layers of visibility built on top of advanced integrated protection..

Alarms and pre-alarms

- Customizable thresholds for Pre-alarms
- Pre-Alarm & Alarm on
  Overload
  Earth leakage
  Overvoltage

Measuring & remote monitoring

- U, I & P measuring
- Load monitoring

Diagnostics & analytics

- Indication for nature of electrical fault
- Historical data
- Protection logs

Advanced protection

- Protection for People, Circuits Appliances and against fire with integrated MCB* + RCD* + AFDD* + MSU
- MSU for protection from Transient Network overvoltage

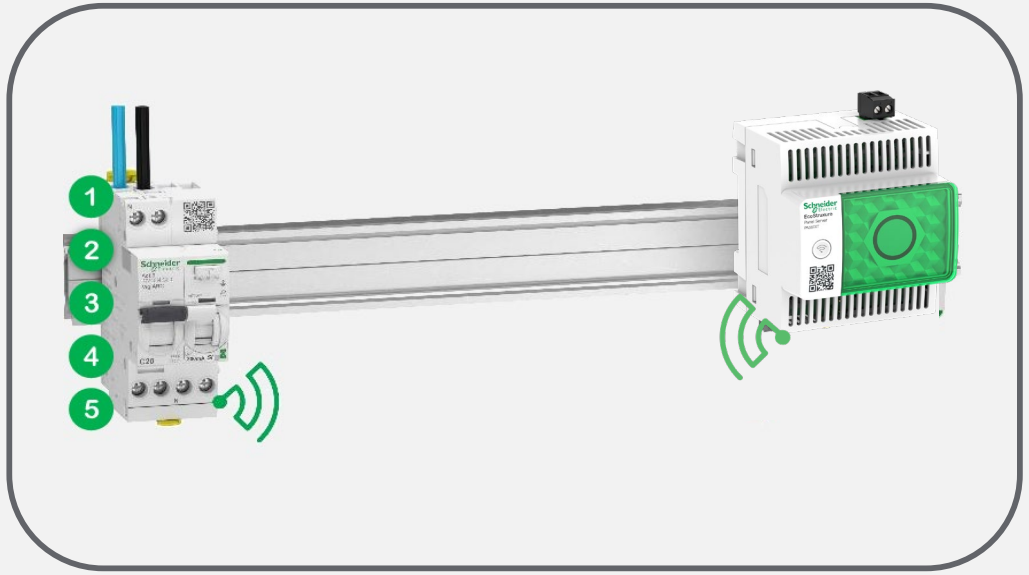
Life Is On Schneider Electric

Confidential Property of Schneider Electric

* MCB = Miniature Circuit Breaker, *RCD = Residual Current Devices, * AFDD = Arc Fault Detection Device, **MSU Module Sur Tension – overvoltage release**

Simple, integrated, wireless system with wide range of features

Complex connectivity > simplified!

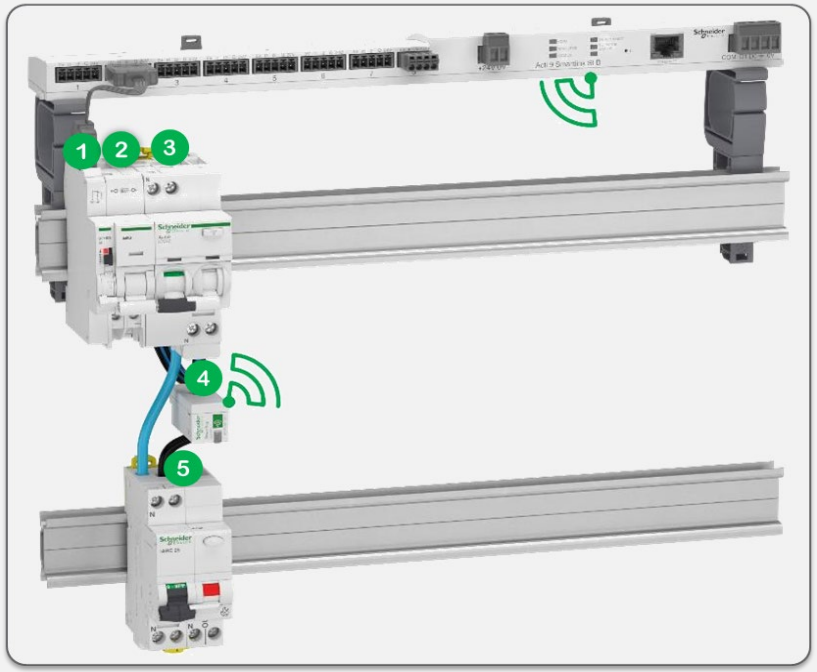


A Simple Wireless System.

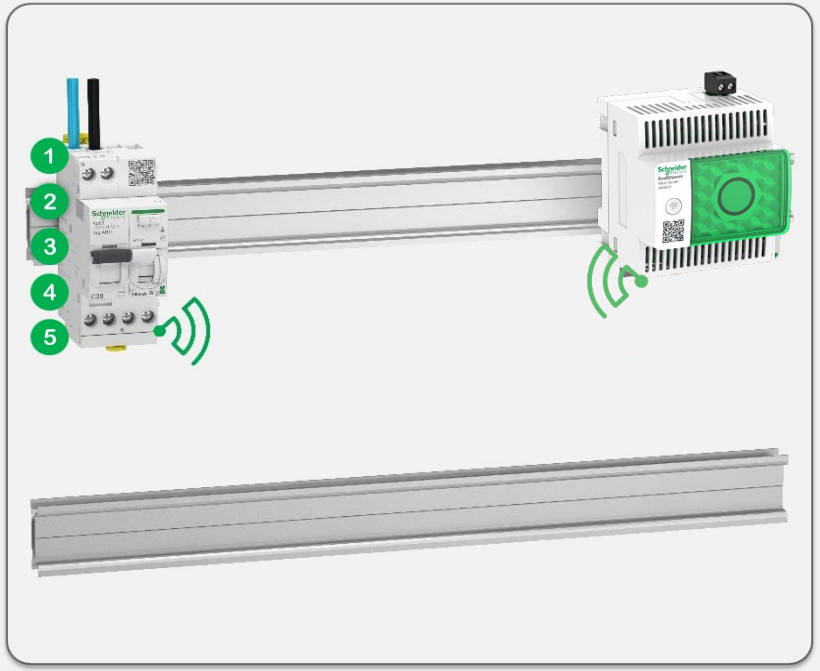
Confidential Property of Schneider Electric

Easy to install, simple system with wide range of features..

Which one would you choose?

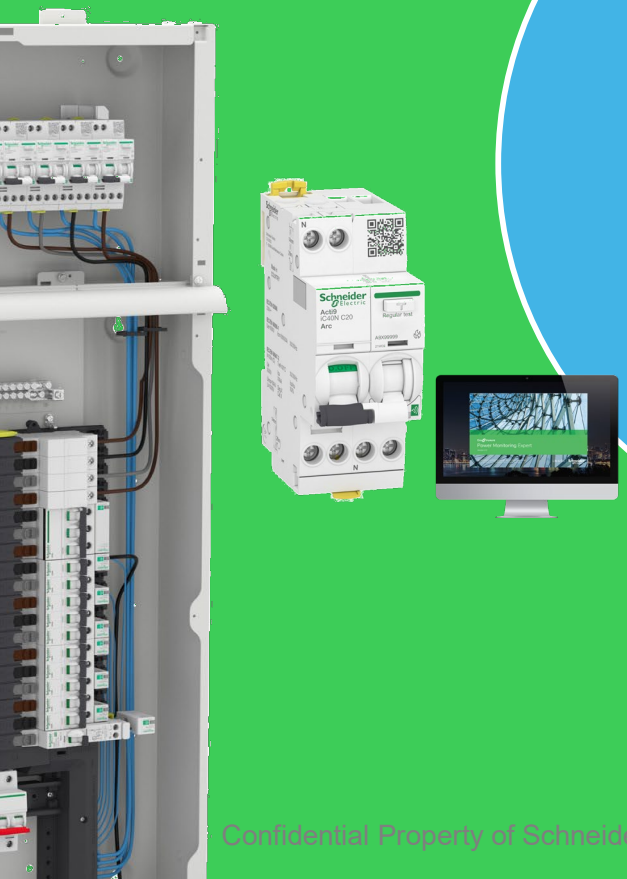


1. OF/SD (Open/Closed status)
2. MSU (Overvoltage protection)
3. RCBO (MCB + RCD)
4. PowerTag (Power measurement)
5. iARC (Arc fault protection)



A Simple Wireless System..

Active Safety System



Understanding wide range of features achieved by the integrated system..

1. OF/SD (Open/Closed status)
- Open
- Close
- Trip / Fault

2. Diagnostics: Reason for tripping
- Short Circuit
- Overload
- Earth leakage fault
- Serial Arc
- Parallel Arc
- Over voltage

3. Customizable Pre-alarming
- Overload
- Earth leakage fault
- Over voltage

4. Power Measure (U, I & P) 5% accuracy

U	2% accuracy
I	2% accuracy
P	5% accuracy

5. Protection log
- Date of 1st operation ON
- Date of last push on test button
- Number & reasons for tripping

Confidential Property of Schneider Electric

Advantages enabled by advanced capabilities and simplified form

Wireless connection with the gateway

No add-ons required, in-built connectivity

Compact size of breaker (all-in-36 mm)

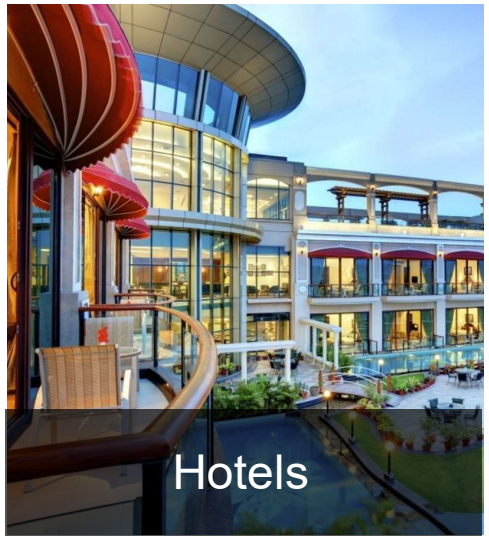
Fast Installation

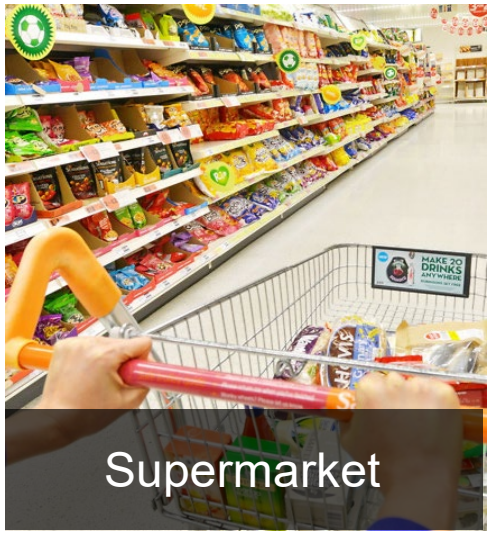
(1 device, wireless connection)

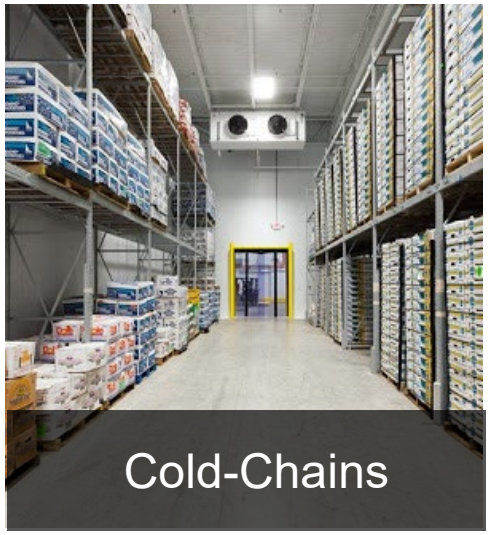
Easy integration with EcoStruxure™ Power Monitoring Expert

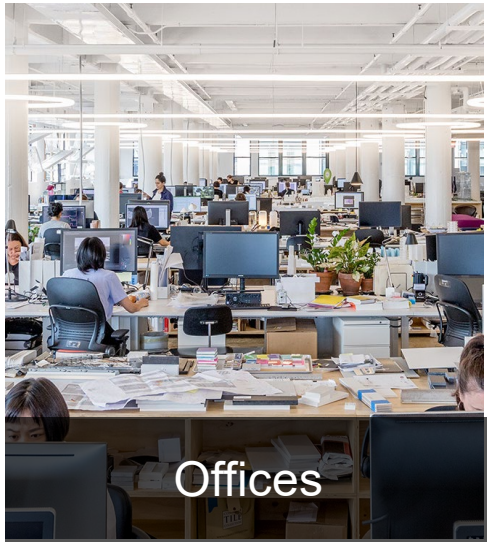
Confidential Property of Schneider Electric

Need for protection and visibility is higher in important buildings..









Confidential Property of Schneider Electric

Summarising the benefits of Active Safety System: Greater Resilience!

Enhanced protection, power availability and reliability

Increased service continuity: fewer breakdowns with pre-alarms and alarms.

Advanced safety: all-in-one solutions covering a wide-range of faults, with in-built MCB, MSU, RCD and AFDD.

Enhanced efficiency: easy remote monitoring, diagnostics, and analytics means fewer disruptions and more efficiency gains

Simplified installation with wireless connectivity

Simple installation and upgrade: integrated devices and wireless connectivity with gateway makes the system relatively easier to install compared to the need for installing multiple add-ons

Compact, requiring no extra space: an integrated device in 36 mm makes it suitable for even small spaces <as now instead of 4-5 devices and add-ons one device can be installed>

Easy maintenance: with diagnostics, analytics, and reminders for health checking, it's simple to stay on top of the panel's condition and maintain it

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

Deep-Dive into the range of All-in-one protection devices…

Confidential Property of Schneider Electric

Acti9 Active

Meet Acti9 Active

The Active All-in-One breaker

All-in-one protection + Visibility

for Active protection in a single 36 mm device

MCB and MSU for greater appliance and circuit protection.

RCD for greater protection of people.

AFDD for greater protection from arc-fault related fires.

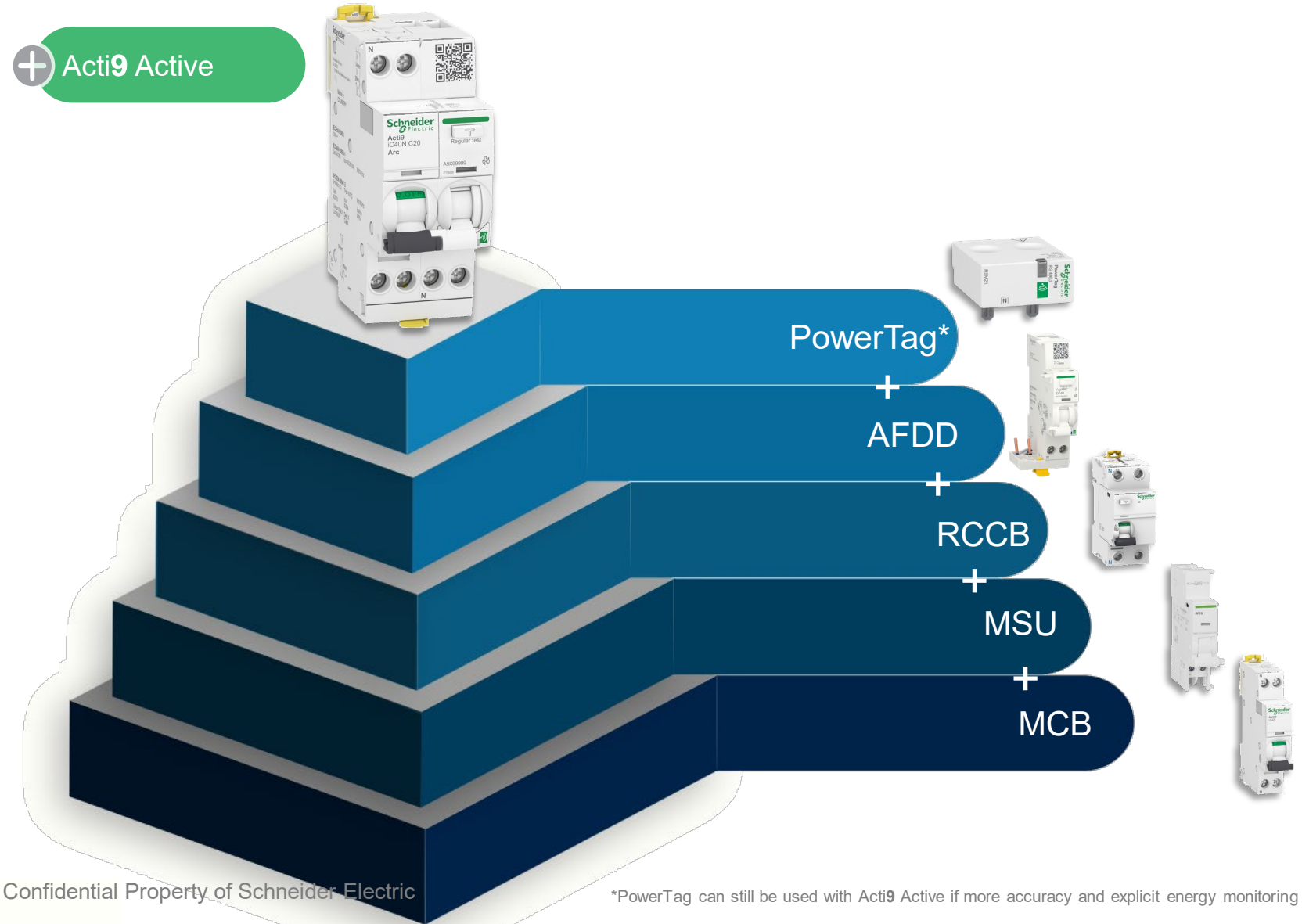
Visibility to keep you on top of electrical health.

Life Is On Schneider Electric

Confidential Property of Schneider Electric

The new age integrated breaker that has come a long way…

Acti9 Active



- Acti**9** Active is an **innovation marvel** which comes in option of **all-in-one protection along with connectivity**. This is possible due to **integrated RCCB, MCB and AFDD along with inbuilt connectivity**.
- All in a size of **36 mm width** – a 2 module breaker
- While Acti**9** Active is the connected all-in-one breaker, **the range also has an option of a** non-connected switched device.

Confidential Property of Schneider Electric

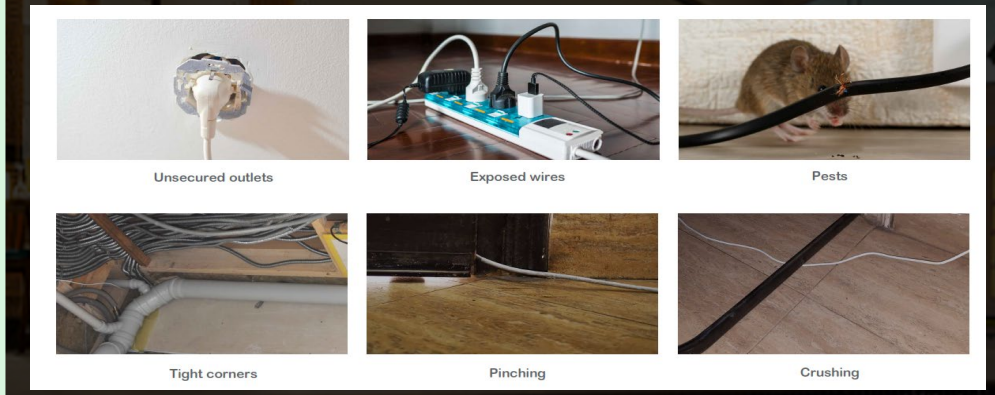
*PowerTag can still be used with Acti**9** Active if more accuracy and explicit energy monitoring is required

Life Is On Schneider Electric

Integrated Arc Fault Protection to mitigate fire risk and comply to latest regulations…

- Electrical Arc Faults occur when there is a damage in the insulation of a wire due to gradual wear and tear or other factors. Arcs get formed and spread through these damaged surfaces gradually damaging the insulation even further, resulting in fire.
- Only specialized devices like Arc Fault Detection Device can detect the low intensity arc and break the circuit open before fire spreads.

Circumstances that can lead to damaged wires leading to generation of arcs and eventually fire..



The IEC 60364 standard for electrical installations in buildings already recommends installing arc-fault detection devices in the following environments

Sleeping accommodation, e.g. bedrooms (in residential), hotels, nursing homes

Locations with combustible constructional materials, e.g. wooden buildings

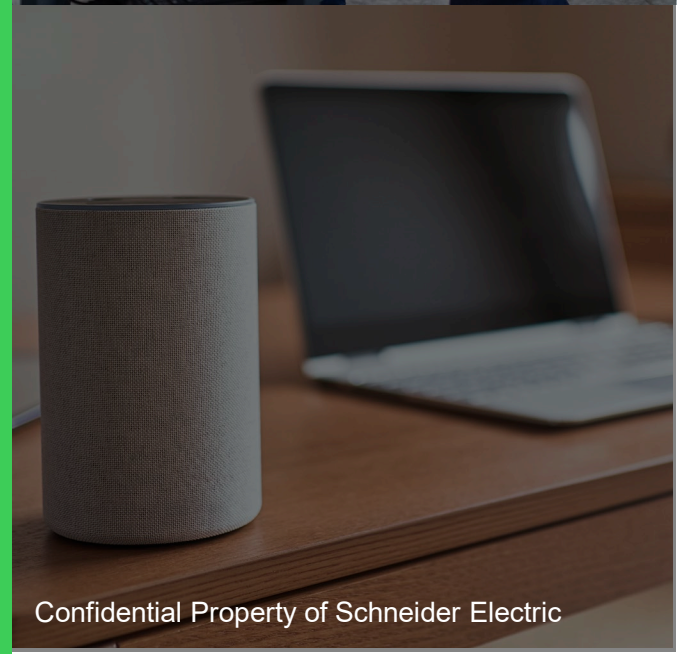
Fire propagating structures, e.g. high-rise buildings

Locations with risks of fire due to the nature of processed or stored materials, e.g. barns, woodworking shops, stores of combustible materials

Locations with the potential of endangering irreplaceable goods, e.g. museums

Confidential Property of Schneider Electric

Confidential Property of Schneider Electric



A Breaker for the new connected world for advanced protection

Acti9 Active

An all-in-one device with integrated
connectivity
MCB,
RCB,
MSU,
And AFDD

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

Acti9 Active

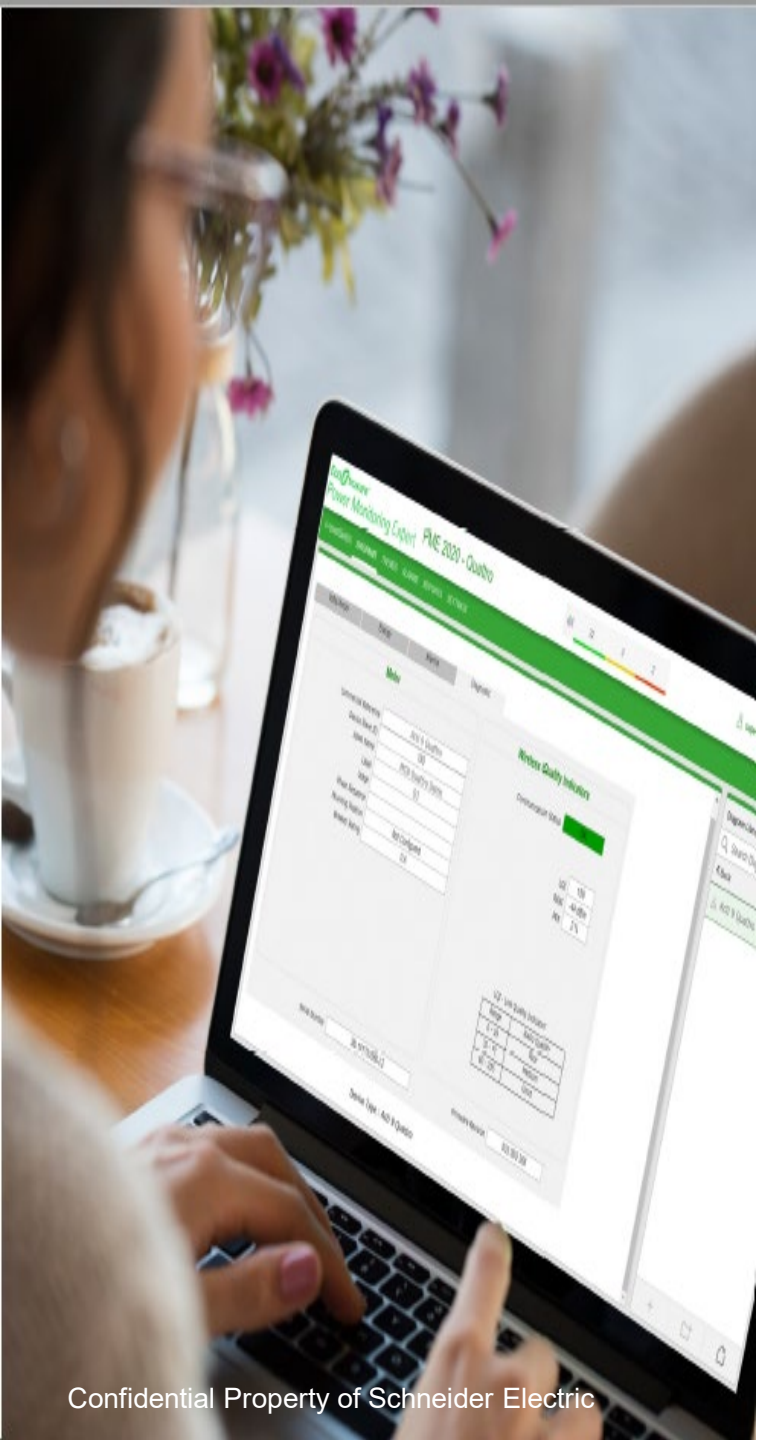
Active Safety System

Not just an AFDD device!

Confidential Property of Schneider Electric

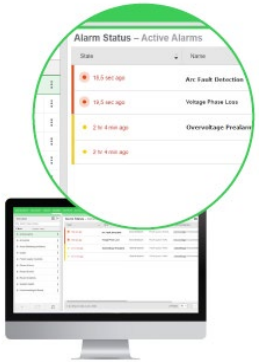
Advanced visibility with easy integration to Power Monitoring Expert Software.

Confidential Property of Schneider Electric



Advanced visibility that lets you be Active and Resilient

Be aware always!



Identification of fault type, enabling quick and effective fix

- Clear and instant alarm for electrical faults
- Pre-Alarms on wide range of faults along with “customizable” thresh-hold
- SMS or e-Mail notification sent for immediate action as well

Fix quickly & precisely!

Alarms and pre-alarms, displayed on a smartphone and desktop

- Clear Diagnostics of what exactly has gone wrong
- Wide range of options to cover all faults
- Easy indication of Circuit Closed/Open condition

Analyze and Predict!

Trends and historical data, helping to identify performance patterns and track inefficiencies

- Historical Trend available to understand issues
- Device lifetime/ lifecycle predictions
- Protection log and reminders for “Tests”
- Can validate if contractors have performed routine tests due to on/off cycles.

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

Acti9 Active named CES 2021 Innovation Award Honoree

Acti9 Active, the innovative breaker with integrated all-in-one protection and inbuilt connectivity, launching at CES, has been named a CES® 2021 Innovation Awards Honoree

CES® 2021 Innovation Awards Honoree.

Acti9 Active

Make **active safety** your new standard.

Confidential Property of Schneider Electric

The future - it’s already here

- Connectivity has changed the electrical landscape
- Connectivity is changing customer needs and technologies
- Connectivity raises the bar for the services that can be offered to customers and provides added value

Life Is On | Schneider Electric

Confidential Property of Schneider Electric

Confidential Property of Schneider Electric

Life Is On Schneider Electric

Confidential Property of Schneider Electric