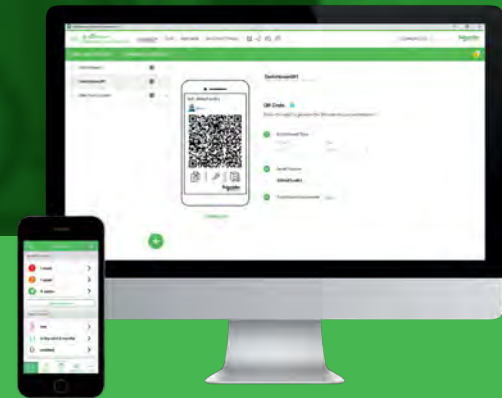# The Digital Logbook:
# Say goodbye to paperwork

EcoStruxure™ Facility Expert

Life Is On | Schneider Electric

# Contents

# Introducing the Digital Logbook

The digital logbook is an easy to use collaborative tool that keeps record of important documentation and maintenance schedules.

With EcoStruxure Power from Schneider Electric, you can offer your customers the cutting-edge, end-to-end digital solutions they are looking for to make their buildings more efficient and reliable. And now, with the addition of the Digital Logbook, EcoStruxure Power is an even stronger asset in all phases of a building's lifecycle – from design and installation to operation and maintenance.

The digital logbook can be initiated by a panel builder using EcoStruxure Power Commission during switchboard construction. Then during the project handover, this "digital twin" can be shared to the contractor or the Facility Manager on EcoStruxure Facility Expert. The "Digital Twin" allows people to keep record of important construction documentations, user guide and maintenance schedules, collaborating better and delivering with greater insights and cost savings. And once a building is operational, facility managers or service providers have easy access to key information and maintenance plan which is critical for electrical facility upkeep.
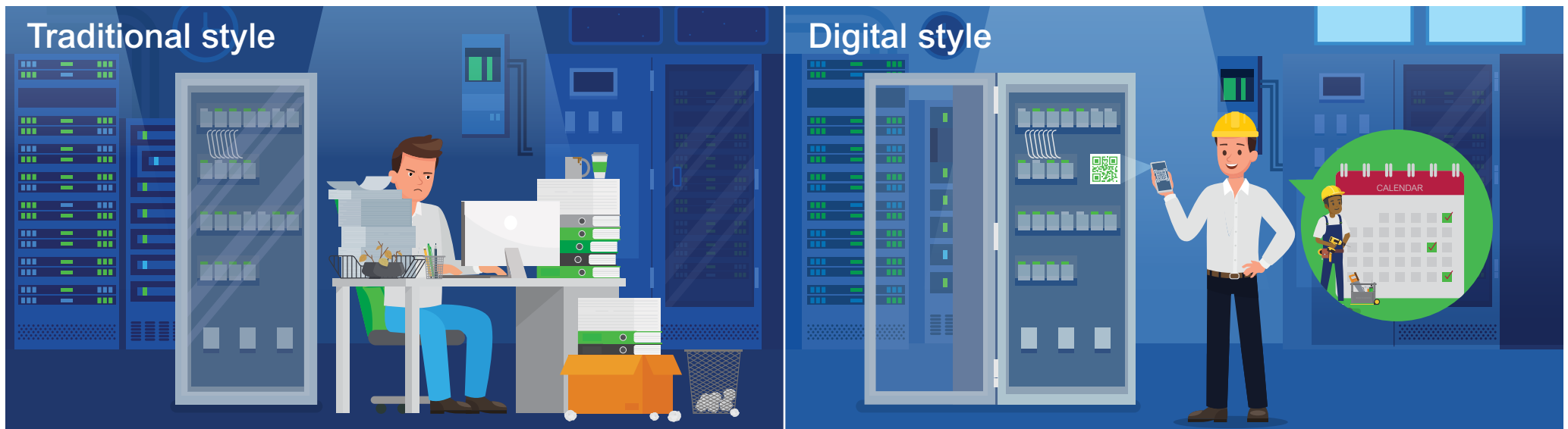
# Easily collaborate, share and find documents

Everyone on the project team – from electrical engineers and panel builders to contractors and service providers – has easy access to vital, up-to-date documentation. From construction to operation, all project partners can access and manage digital documents using a simple QR code at the switchboard.

## Switchboard Digital Twin

### Design docs
- Single line diagram
- Selectivity setting

### Switchboard docs
- CAD Drawings
- Switchboard photos
- User manual
- Wiring schema
- Bill of material
- Device serial number

### Construction docs
- Device password
- IT network configuration
- EcoStruxure Power Commission project report
- EcoStruxure Power Commission com test report
- Commercial docs

### Maintenance docs
- Maintenance plan
- Maintenance guide
- Spare part lists

### Access to all documents



Electrical Engineer

Panel builder

Contractor

Service provider

Facility Manager

# Toss the papers and deliver the switchboard digitally

The Digital Logbook allows you to eliminate paperwork, outdated files, conflicting data and unclear project roles; and there are no more hold-ups because you can't get your hands on the information you need when you need it.

A digital representation of the project switchboard is available to team members via a QR code on the outside of the switchboard panel. This paperless solution provides convenient reference at all times, including during the factory acceptance test (FAT) at the vendor's facility and the site acceptance test (SAT) at your client's location.

It saves time throughout the commissioning, operations, and maintenance stages of a project.
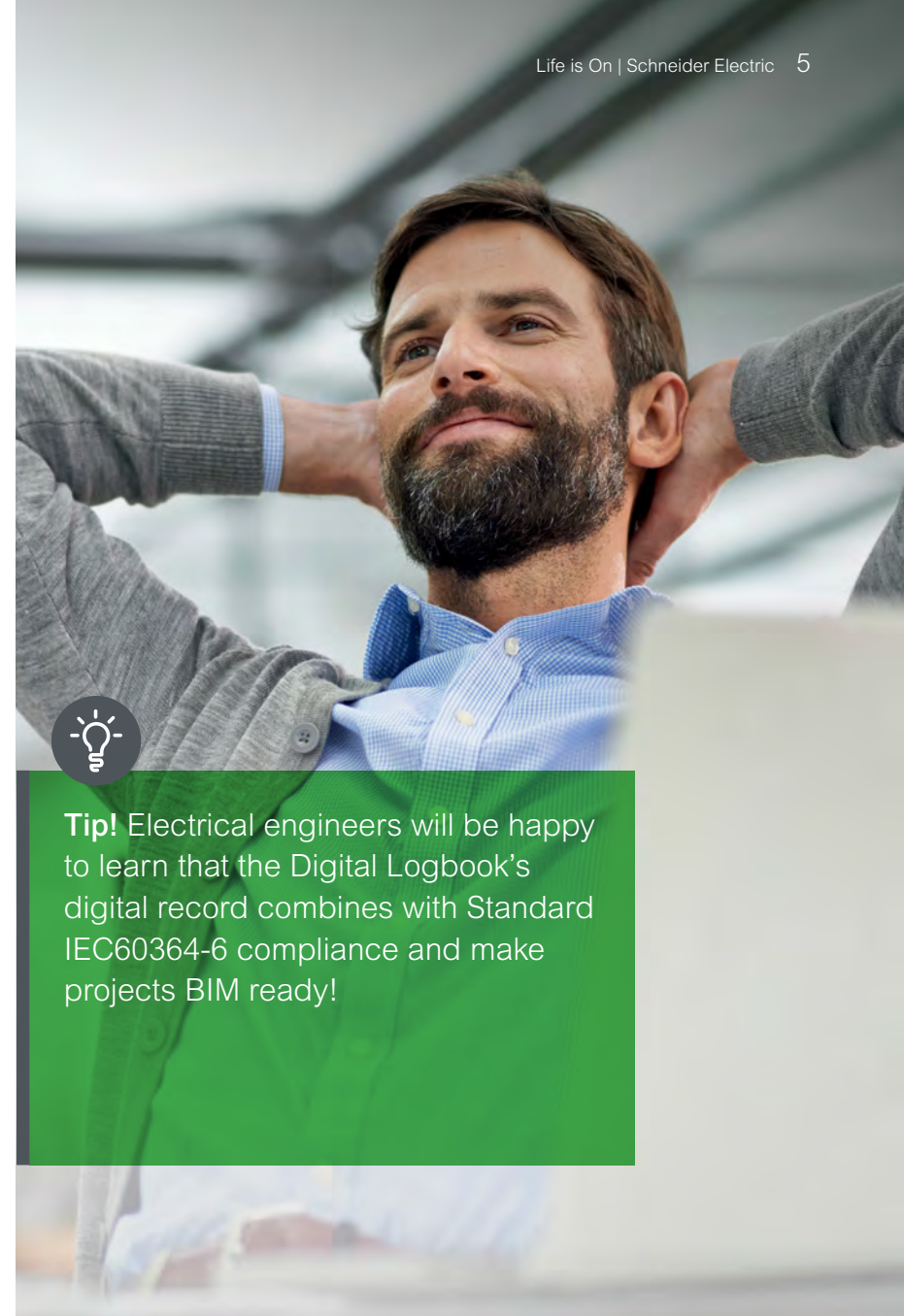
**Tip!** Electrical engineers will be happy to learn that the Digital Logbook's digital record combines with Standard IEC60364-6 compliance and make projects BIM ready!

**Enjoy convenient digital access** to user manuals, single-line drawings, photos, factory and site acceptance tests, spare parts lists, and more

**Share information** with your professional partners

**Get things organized** and achieve a common goal

**Create clear and consistent** documentation

**Identify key responsibilities** and points of contact at different project stages

**Eliminate conflicting** or missing information

# About IEC 60364-6:
## Low Voltage Electrical Installations



IEC 60634-6 defines the rules for the design, erection, and verification of electrical installations. Hence, a verification report must be produced upon installation of a new panel, or a report that lists alterations and additions to any existing panel.

By adhering to this standard and carrying out regular checks, electrical facility problems are reduced and increase costs savings.
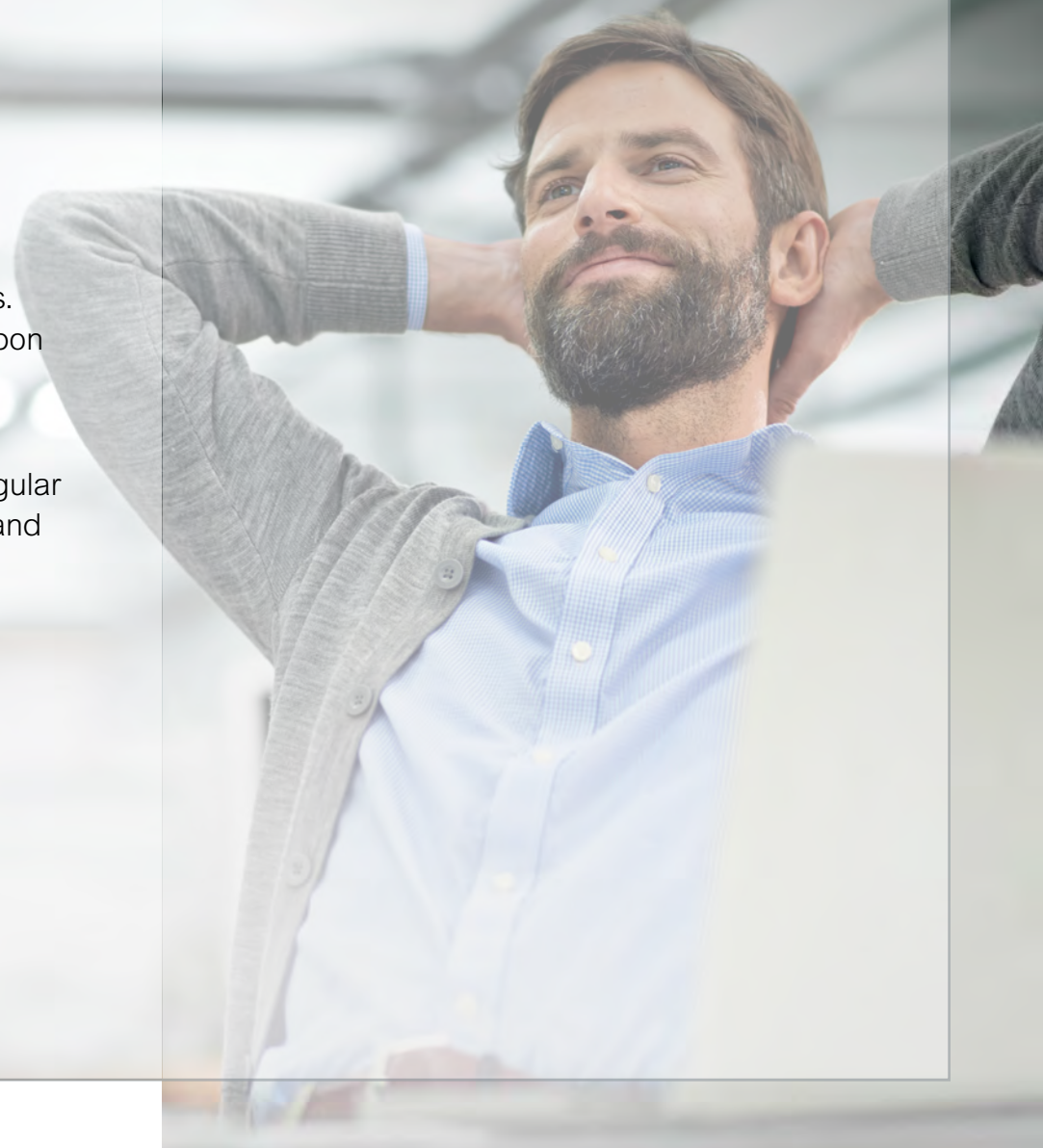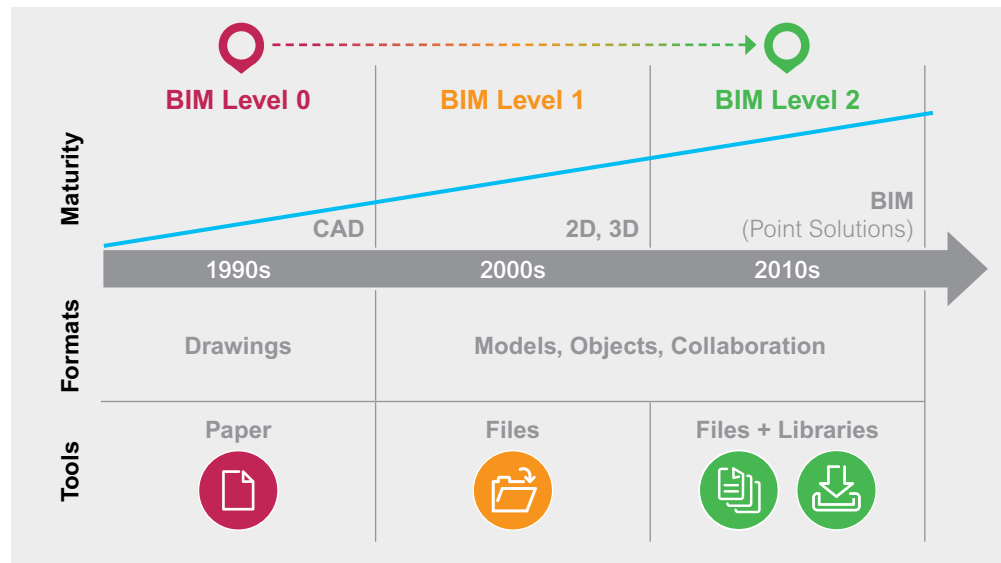
# About BIM
## (Building Information Modeling)

BIM is a powerful tool that can change the way our industry designs, constructs, operates and maintains facilities.

Digital LogBook helps Specifiers to make projects BIM ready at level2!

| | BIM Level 0 | BIM Level 1 | BIM Level 2 |
|---|---|---|---|
| Maturity | CAD | 2D, 3D | BIM (Point Solutions) |
| | 1990s | 2000s | 2010s |
| Formats | Drawings | Models, Objects, Collaboration | |
| Tools | Paper | Files | Files + Libraries |

**From Level 0 BIM:**

Information being shared by traditional paper drawings or in some instances, digitally via PDF, essentially separate sources of information covering basic asset information.

**To Level 2 BIM:**

Level 2 BIM is distinguished by collaborative working, and requires an information exchange process which is specific to that project and coordinated between various systems and project participants.

# The importance of maintenance

Performing maintenance before things break minimizes the cost of owning and operating a panel. According to IEEE 493, poorly maintained switchboards are 62% more likely to fail. And North America's NFPA 70B standard notes that the total cost of ownership is at a minimum if equipment upkeep is done at proper intervals. These are strong incentives to be proactive about maintaining your power installation.

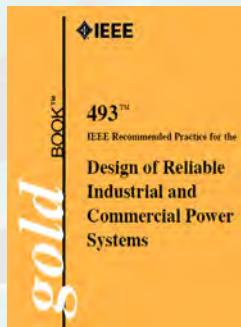**Tip!**

## The total cost of ownership

is minimized if equipment upkeep is done at proper intervals, which is yearly for critical equipment & for a typical installation every 2-3 years.

# NFPA 70B

## Minimize the asset total cost of ownership

**NFPA 70B**
Recommended Practice for Electrical Equipment Maintenance
2019

The lowest total annual expense is realized by maintaining an inspection frequency that keeps the sum of repair / replacement and Equipment Preventive Maintenance costs at a minimum. The total cost of ownership is optimized if preventive maintenance is performed each 2-3 years.

**Total Maintenance Cost**



Cost

Optimal maintenance zone

Insufficient preventive maintenance

Excessive preventive maintenance

**Amount of Preventive Maintenance**

—— Cost of preventive maintenance      —— Cost of corrective maintenance      —— Total maintenance cost

# IEEE 493

## Reduce risk of downtime & fire maximize asset lifetime

Experience indicates that equipment lasts longer and performs better when covered under a preventive maintenance program. An effective preventive maintenance program can reduce accidents and operator error, and minimize costly breakdowns and unscheduled outages by identifying and solving problems early, before they become major problems. The risk of failure is multiples when the system is poorly maintained.

**Table 5-3 – Percentage of failure caused from inadequate maintenance vs. month since maintained**

| Failure (months since maintained) | All electrical equipment classes combined (%) | Circuit breakers (%) | Motor (%) | Open wire (%) | Transformers (%) |
|---|---|---|---|---|---|
| Less than 12 month ago | 7.4 | 12.5[a] | 8.8 | 0[a] | 2.9[a] |
| 12 to 24 months ago | 11.2 | 19.2 | 8.8 | 22.2[a] | 2.6[a] |
| More than 24 months ago | 36.7 | 77.8 | 44.4 | 38.2 | 36.4 |
| Total | 16.4 | 20.8 | 15.8 | 30.6 | 11.1 |
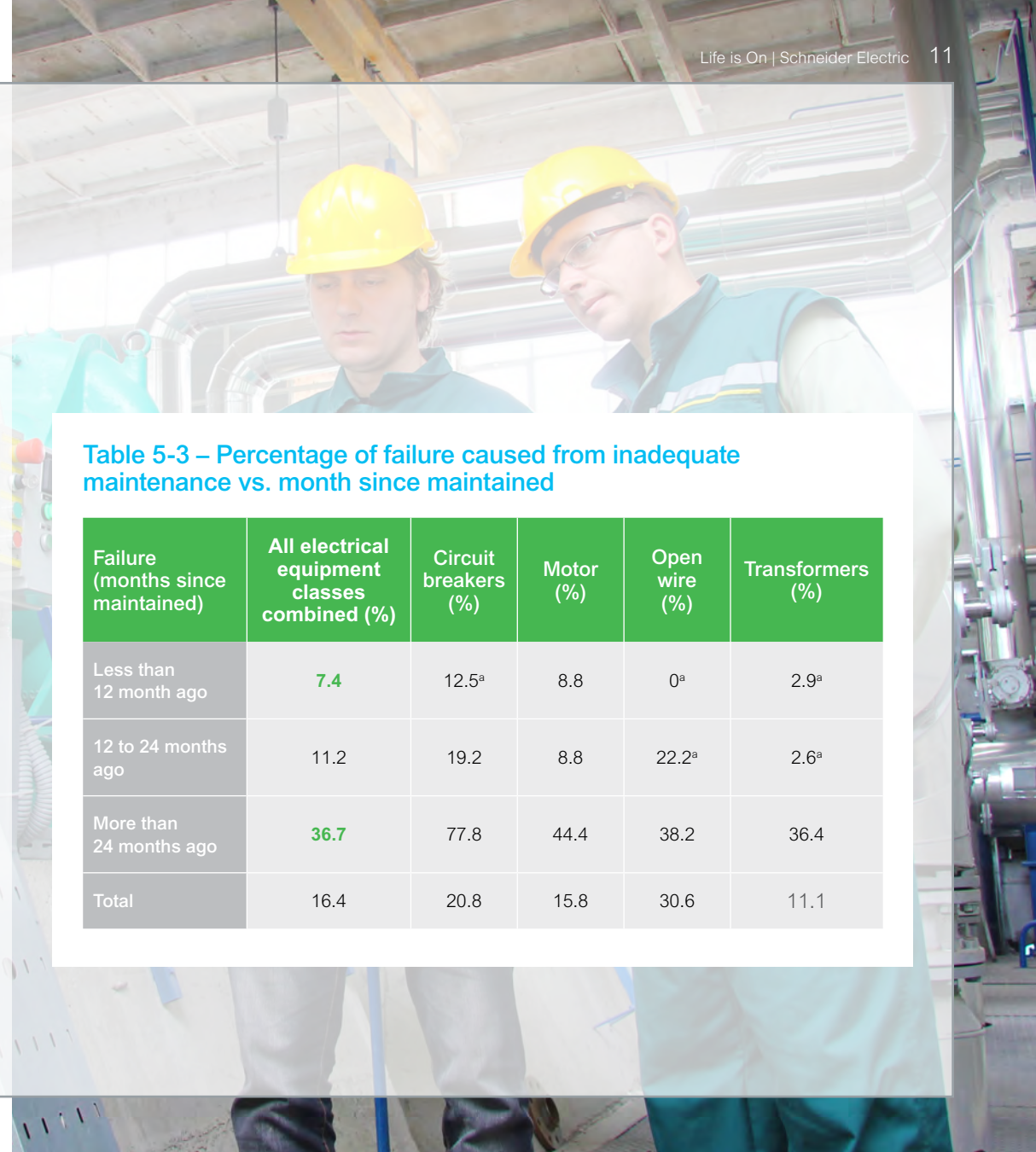
# Simplify and improve maintenance

The Digital Logbook helps project teams by facilitating the planning, record-keeping, scheduling, and inspection that must be followed regardless of whether a machine is functioning at an optimal level or not. Users are able to track how many days or other units of time have passed since the last maintenance tasks were performed and then arrange for work to satisfy the schedule, keeping in mind holidays, shutdowns, and critical times when a panel or equipment cannot be taken offline.

# 62%

Poorly maintained switchboards are 62% more likely to fail.

# Digital Logbook maintenance benefits

## With the Digital Logbook in place, you are able to:

**Ease the setup** of preventative maintenance plans, thanks to auto-generated maintenance templates

**Streamline maintenance and operation** by assigning tasks and centralizing maintenance schedules, logs, and reports

**Gain clearer visibility** on all the accomplished projects to relay to customers

**Leverage your digital community** to solve issues quickly

**Keep your electrical installation healthy** and maximize its life

# How the digital logbook works

**Step**

**1**

## Commission the switchboard and create a unique QR code

Set up and test all the connected devices in your electrical panel with EcoStruxure Power Commission. The intuitive software also provides the ability to create the QR code, the unique identifier of the switchboard, for immediate collaboration and access to upload historical information of the equipment.
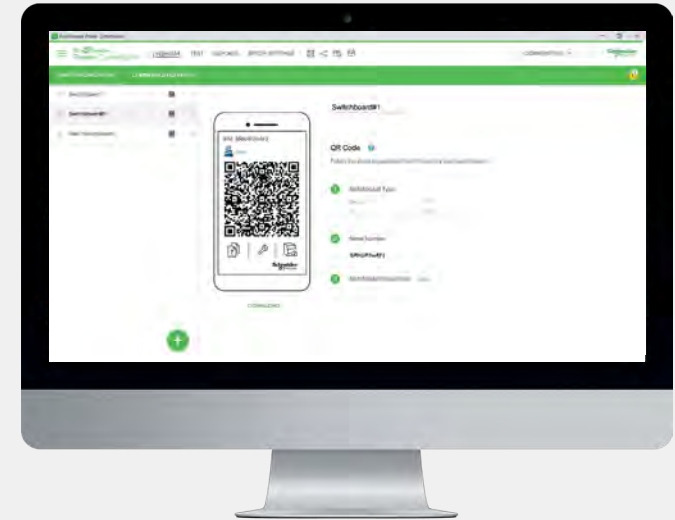


**EcoStruxure Power Commission**
(Free)

**EcoStruxure Facility Expert**
(Free)

# How the digital logbook works

**Step**
**1**

### Take the complexity out of commissioning

EcoStruxure Power Commission is an all-in-one software tool that allows easy setup, reliable testing, and integrated reporting for all electrical devices inside the panel as well as Digital Logbook creation. You can even use the Digital Logbook to track older, non-connected devices.

• Locate all smart devices, test communications, and confirm proper wiring with just a few clicks

• Get a clear picture of your entire smart panel through integrated testing and comprehensive reporting, reducing your overall processing time

• Configure all your switchboard smart devices at once, driving efficiency every step of the way

• Identify electrical system setting inconsistencies and take fast corrective action

• Initialize the Digital Logbook and dedicated QR code quickly and easily
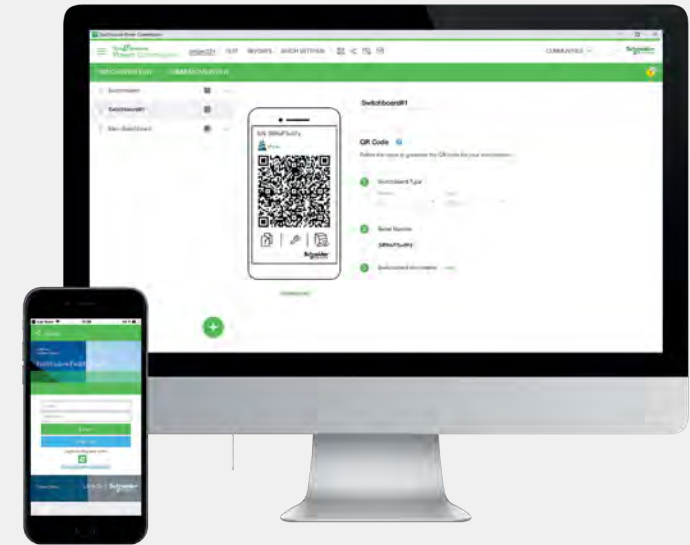
EcoStruxure Power Commission
(Free)
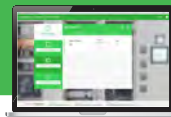
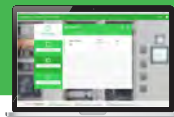EcoStruxure Facility Expert
(Free)

# How the digital logbook works

**Link the project to EcoStruxure Facility Expert**

With EcoStruxure Power Commission, share the project and seamlessly export the data to EcoStruxure Facility Expert.



EcoStruxure Power Commission
(Free)

EcoStruxure Facility Expert
(Free)

# How the digital logbook works

**Upload the documents of the switchboard configuration**

With EcoStruxure Facility Expert, the online community can now upload useful document and information for the complete life cycle of the equipment, including construction, installation and maintenance history.



EcoStruxure Power Commission
(Free)

EcoStruxure Facility Expert
(Free)

# How the digital logbook works

**Deliver the switchboard and provide customer access**

With EcoStruxure Facility Expert, give your clients and/or facility managers' quick access to the convenient and up-to-date information of the tagged equipment via the QR code.

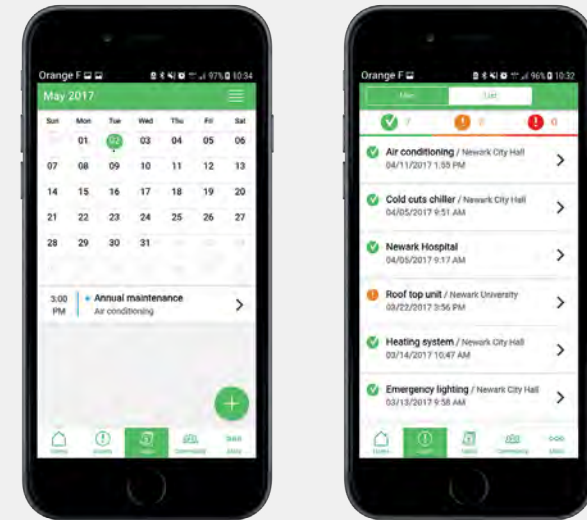EcoStruxure Power Commission
(Free)

EcoStruxure Facility Expert
(Free)

# How the digital logbook works

### Set up preventative maintenance plan

With EcoStruxure Facility Expert automatically access the primary maintenance plan, schedule operations, log your activities and share reports with your digital community.



EcoStruxure Power Commission
(Free)

EcoStruxure Facility Expert
(Free)

# Power up maintenance, expand your offerings

EcoStruxure Facility Expert let you stay ahead of the competition by offering service level agreement contracts on all types equipment, electrical assets, and HVAC devices. Fulfill your contracts, reduce equipment failure, and monitor your customers' equipment and trending data remotely so you can anticipate and plan maintenance tasks from your smart devices.

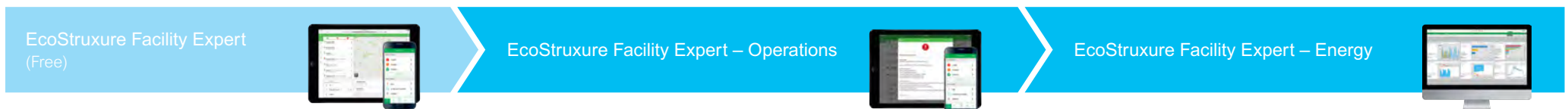# EcoStruxure Facility Expert

## Faster access to your asset information

The creation of the Digital Logbook ensures the availability of project lifecycle documentation, including the single-line diagram, maintenance plan, and more.

- Track your assets for long-term maintenance schedules and task reminders
- Log and access asset history, documentation, and collaborative information with one simple scan
- Generate inspection and activity reports on the spot
- Identify maintenance status at a glance

## Improve efficiency, increase profitability

The digital logbook is offered for operations in free and subscription-based versions, and it lets you manage facilities to and teams via your smartphone or tablet. Routine matinenace is easier, and troubleshooting is faster, making operations more reliable, efficient, and cost-effective. By improving the efficiency of operations and team – you can reduce your costs and improve business continuity.

EcoStruxure Facility Expert
(Free)

EcoStruxure Facility Expert – Operations

EcoStruxure Facility Expert – Energy

# EcoStruxure Facility Expert

IoT cloud software allows you to deliver operational and energy efficiency while ensuring business continuity.

## Building Manager or Business owner

- Improve uptime
- Reduce energy costs
- Communicate on sustainability

## Service Provider

- Reduce operation costs
- Ease collaboration
- Increase customer loyalty

# EcoStruxure Facility Expert

In addition to the free features, IoT cloud software allows you to deliver greater operational and energy efficiency while ensuring business continuity.

## Building Manager or Business owner

- Improve uptime
- Reduce energy costs
- Communicate on sustainability

## EcoStruxure Facility Expert – Operations

Data trends on assets

Smart alerts with actionable data

Equipment status

Maintenance status and localization at a glance*

Collaboration features*

Edition and automatic storage of intervention reports*

Asset details available from the field*

Actionable task manager with long term maintenance schedules & reminders*

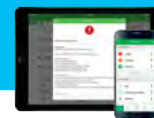★ *This feature is available without subscription*

## Service Provider

- Reduce operation costs
- Ease collaboration
- Increase customer loyalty

EcoStruxure Facility Expert (Free)

EcoStruxure Facility Expert – Operations

EcoStruxure Facility Expert – Energy

# EcoStruxure Facility Expert

In addition to the free features, IoT cloud software allows you to deliver greater operational and energy efficiency while ensuring business continuity.

**Building Manager or Business owner**

- Improve uptime
- Reduce energy costs
- Communicate on sustainability

## EcoStruxure Facility Expert – Energy

Energy consumption monitoring

Overconsumption alerts & easy identification of overload contributors

Monthly scorecards and KPIs

Manual readings collection and storage

Energy consumption benchmark by aggregated or multisite comparison view
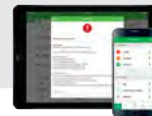
Costs allocation for budget optimization

**Service Provider**

- Reduce operation costs
- Ease collaboration
- Increase customer loyalty

EcoStruxure Facility Expert (Free)

EcoStruxure Facility Expert – Operations

EcoStruxure Facility Expert – Energy

# Take a closer look at each solution per phase

Our variety of digital solutions from construction to operation phases.

| EcoStruxure Power Commission | EcoStruxure Facility Expert | EcoStruxure Facility Expert – Operations | EcoStruxure Facility Expert – Energy |

**Free software** — **Software subscriptions**

**Construction phase**

**Operation phase – moving from preventative to predictive maintenance**

## Digital tools for your day to day activities

| Features | EcoStruxure Power Commission | EcoStruxure™ Facility Expert | | |
| --- | --- | --- | --- | --- |
| | | Freemium | Operations | Energy |
| Automatic device discovery | ✓ | | | |
| Communication Test & Report | ✓ | | | |
| Device Check up & Control | ✓ | | | |
| Setting consistency check | ✓ | | | |
| QR code creation | ✓ | ✓ | ✓ | |
| Load the as build documents | | ✓ | ✓ | |
| Asset status and map localization | | ✓ | ✓ | |
| Asset log history and reference document library | | ✓ | ✓ | |
| Maintenance plan and task reminders | | ✓ | ✓ | |
| Task manager features (ex. task assignment, notifications) | | ✓ | ✓ | |
| One-click intervention reports | | ✓ | ✓ | |
| Collaborative features (ex. chat, information sharing) | | ✓ | ✓ | |
| Alarms for threshold and status changes | | | ✓ | |
| Preconfigured alarms for Schneider Electric assets (LV/MV) | | | ✓ | |
| Custom alarms for 3rd party assets | | | ✓ | |
| Data trending on assets: T°C, running hours, voltage, current… | | | ✓ | |
| Energy consumption and cost monitoring: main, usage, zone, meter | | | | ✓ |
| Power demand and power factor monitoring | | | | ✓ |
| Alerts for over-target energy consumption | | | | ✓ |
| Multi-site comparisons, consumption aggregation | | | | ✓ |
| Energy site performance vs. standards | | | | ✓ |
| Monthly scorecards | | | | ✓ |

# Take a closer look at each solution per phase

Our variety of digital solutions from construction to operation phases.

**Set up and test all the connected devices in your electrical panel**

# Take a closer look at each solution per phase

Our variety of digital solutions from construction to operation phases.
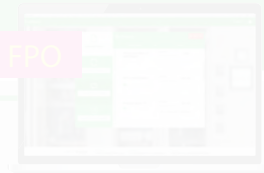
**Share the digital logbook with your community**
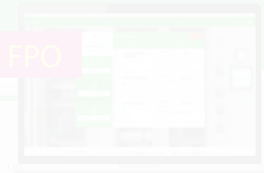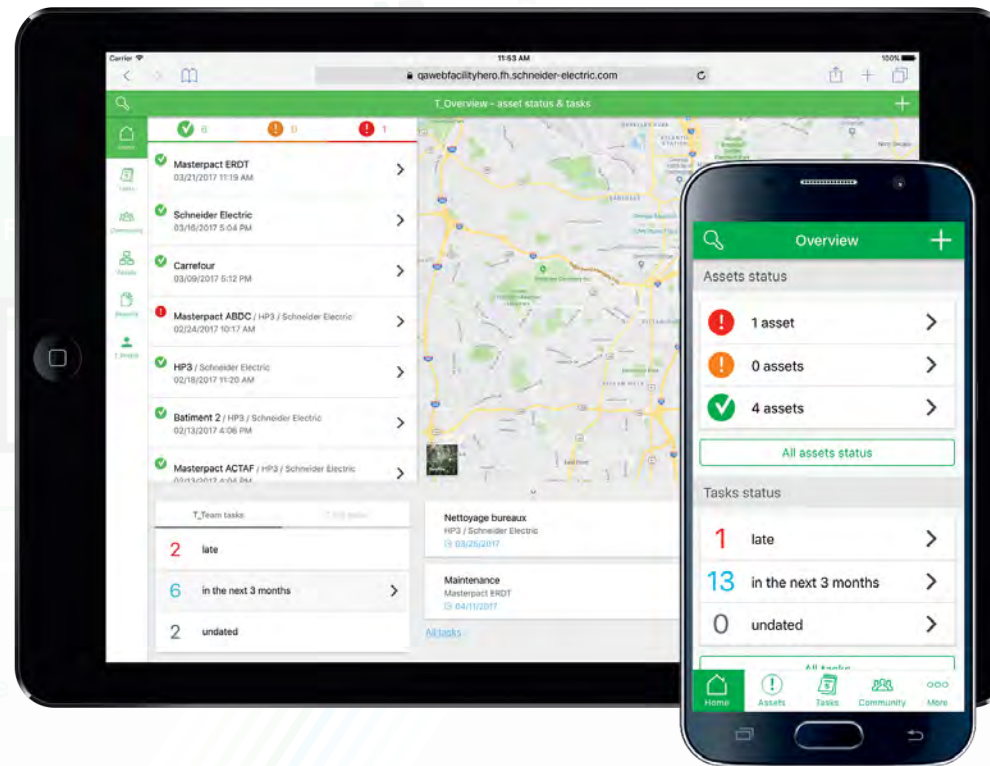
# Take a closer look at each solution per phase

Our variety of digital solutions from construction to operation phases.



**Remotely monitor equipment and trending data**

# Take a closer look at each solution per phase

Our variety of digital solutions from construction to operation phases.

**Go beyond operations with enhanced energy recommendations**

# EcoStruxure Power Commission & Facility Expert

## Digital tools for your day to day activities

| Features | EcoStruxure Power Commission | EcoStruxure™ Facility Expert | | |
|---|:---:|:---:|:---:|:---:|
| | | Freemium | Operations | Energy |
| Automatic device discovery | ✓ | | | |
| Communication Test & Report | ✓ | | | |
| Device Check up & Control | ✓ | | | |
| Setting consistency check | ✓ | | | |
| QR code creation | ✓ | ✓ | ✓ | |
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| Asset status and map localization | | ✓ | ✓ | |
| Asset log history and reference document library | | ✓ | ✓ | |
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| Task manager features (ex. task assignment, notifications) | | ✓ | ✓ | |
| One-click intervention reports | | ✓ | ✓ | |

# EcoStruxure Power Commission & Facility Expert

## Digital tools for your day to day activities

| Feature details | EcoStruxure Power Commission | EcoStruxure™ Facility Expert | | |
|---|---|---|---|---|
| | | Freemium | Operations | Energy |
| Collaborative features (ex. chat, information sharing) | | ✓ | ✓ | |
| Alarms for threshold and status changes | | | ✓ | |
| Preconfigured alarms for Schneider Electric assets (LV/MV) <br> Custom alarms for 3rd party assets | | | ✓ | |
| Data trending on assets: T°C, running hours, voltage, current… | | | ✓ | |
| Energy consumption and cost monitoring: main, usage, zone, meter | | | | ✓ |
| Power demand and power factor monitoring | | | | ✓ |
| Alerts for over-target energy consumption | | | | ✓ |
| Multi-site comparisons, consumption aggregation | | | | ✓ |
| Energy site performance vs. standards | | | | ✓ |
| Monthly scorecards | | | | ✓ |
| Energy kiosk | | | | Optional |

Back to previous page

# How to get started

Try our digital logbook solution for free:

**EcoStruxure Power Commission** ▶

**EcoStruxure Facility Expert – Free Version**

ANDROID APP ON
Google play

Available on the
App Store

# Explore EcoStruxure offers and solutions

Take your business to the next level with EcoStruxure Facility Expert – discover more.

There's a lot more to EcoStruxure Power – learn the latest.

Offer energy services with EcoStruxure Facility Advisor – get started today.

Give your electrical system a voice with Smart Panels – learn more today.

schneider-electric.com/ecostruxure-facility-expert

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