



# Power Solutions for Hotels

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# Main Hotel Value Propositions

1

## Deliver exceptional guest satisfaction

- Exceptional comfort and convenience
- Intuitive digital experience
- Improved loyalty
- Customized guest experience

2

## Improve Operational Efficiency

- Lower maintenance costs
- Gain visibility of operations
- Remotely manage the hotel
- Boost staff productivity
- Reduce guest complaints

3

## Improve Energy & Sustainability Performance

- Reduce energy expenses
- Improve financial performance
- Minimize carbon footprint
- Meet guest expectations for sustainability
- Meet environmental regulations

# SmartStruxure for Hotels

**Schneider Electric Solutions**

- Common Area Lighting Control
- Energy Management System
- Guest Room Management System
- Access Control
- Sound Management
- Emergency Lighting Control
- Power Monitoring System
- Power SCADA System
- HVAC Control
- Security

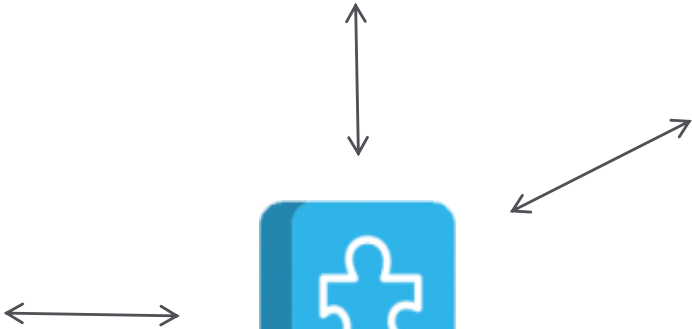
**Third Party Hospitality Solutions**

- Door Lock System**
  - Assa Ablox Vingcard
  - Kaba Saflok
  - Salto
  - UTC Onity:
- Property Management System**
  - Micros Fidelio Opera
  - OnQ
  - Galaxy
  - PAR Springer Miller
- Guest Services App**
  - Intelly
  - Iris
  - Digivalet
  - FCS
  - HoistLocatel (Swisscom)
- Hotel Operation System (Maintenance, Housekeeping, Guests Requests)**
  - HotSOS
  - FCS
  - Guestware
- Guestroom Entertainment System (TV, Game Console...)**
  - Enseo
  - GuestTek (iBahn)
  - HoistLocatel (Swisscom)
  - Sonifi (LodgeNet)
- Minibar System**
  - Bartech
  - Axxess Industries
- Loyalty Program Platform**
  - Guestware
- Safe System**
  - Assa Ablox EI Safe

**Third Party Building Solutions**

- Lift
- Fire
- Pool

**Struxureware iBMS**



# Electrical Power & Energy Solutions

Critical & Connected Power Distribution

# Pain Points

- “Detect **maintenance** issues on equipment”
- “I need to reduce consumption”
- “Mastering critical loads availability is mandatory”
- “**Protect** against grid disturbances, internal harmonics, Utility shortages”
- “Secure customers' **safety**”
- “Reach targeted certification level”
- “**Anticipate** power distribution issues”
- “Get only key alarms (vs. get drowned)”
- “For **guests comfort** I need to reduce downtime”





# Power Distribution Load Types

## Critical Loads

- Emergency Lighting
- Fire System (Smoke Extraction, Fire Detection...)
- Data Center
- Access Control
- CCTV
- Telephones
- Digital Signage/Warning Devices
- Lifts

## Standard Loads

- Guest Room: (with split between permanent and intermediary loads controlled by RCU or Key Card Switch)
- Common Area
- Car Park

## Other Loads

- Demand Response Loads
  - Guest Rooms (unoccupied)
  - Gen-Set
  - Energy Storage
- Green Generation (Solar, Wind, Energy Floors...)
- EV
- Sheddable Loads
- Cold Rooms/Fridges

# Electrical Components

## Part 1/4

### Utility Incomer & MV Substation

- MV Switchboard
- Transformers
- Set up on radial or loop distribution depending on criticality
- Multiple from different utility/feed depending on criticality



### Voltage Conditioning

- Reduce energy usage/cost
- Improve asset performance

### UPS

- Feeds highly critical loads such as data centre, fire system, access controls, CCTV, telephones...
- With bypass and switch for maintenance and faults

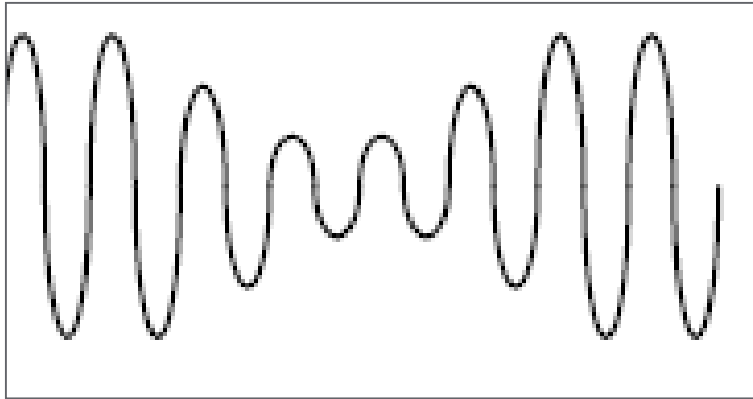


# Electrical Components

## Part 2/4

### Capacitor Banks & Other Power Quality Equipment

- Power quality can have a major effect on the lifetime and functions of your equipment
- Capacitor banks & contactors (power factor correction)
- Hybrid/Active filters (harmonics, sags, swells, transients, flickers)



### Metering

- Identify power quality issues
- Energy management
- Utility verification
- Sub-billing/Tenant metering

### Generator Set

- With the capacity to power the entire hotel minus possible sheddable loads
- Requires testing on a regular basis
- Automated switching in case of outage to reduce downtime in full service/luxury hotels
- Special consideration for noise, fumes and fuel space must be taken





# Electrical Components

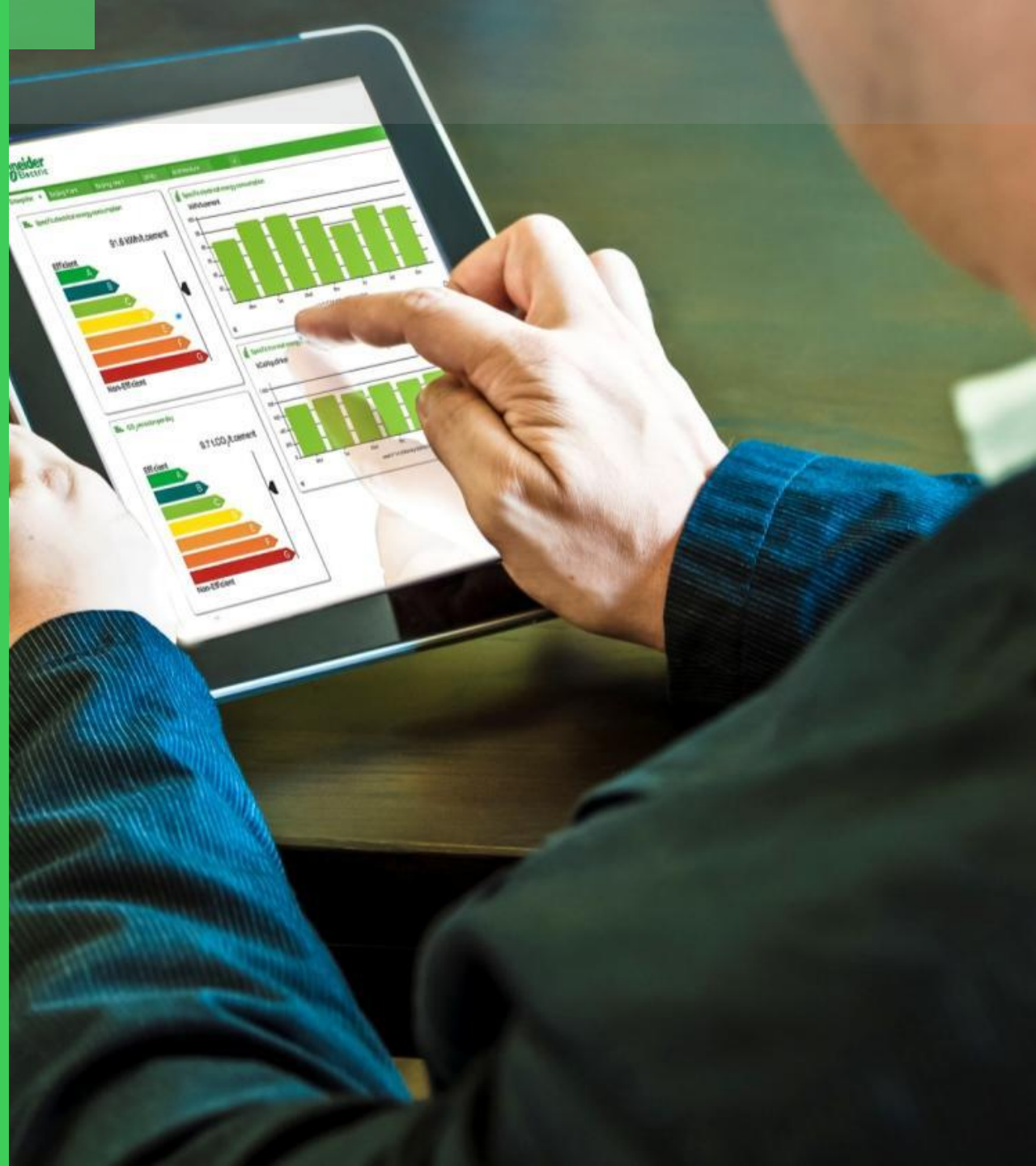
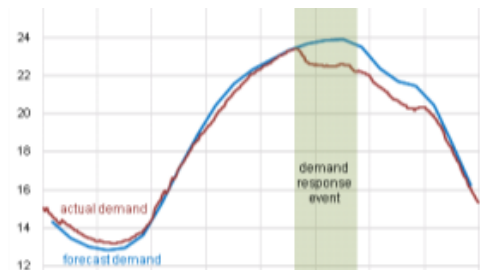
## Part 3/4

### LV Switchboard

- Made of two coupled switchboards from the same supply for maintenance or crisis purpose
- Can be made to support mobile generator
- Smart panels pre-configured and ready to be connected

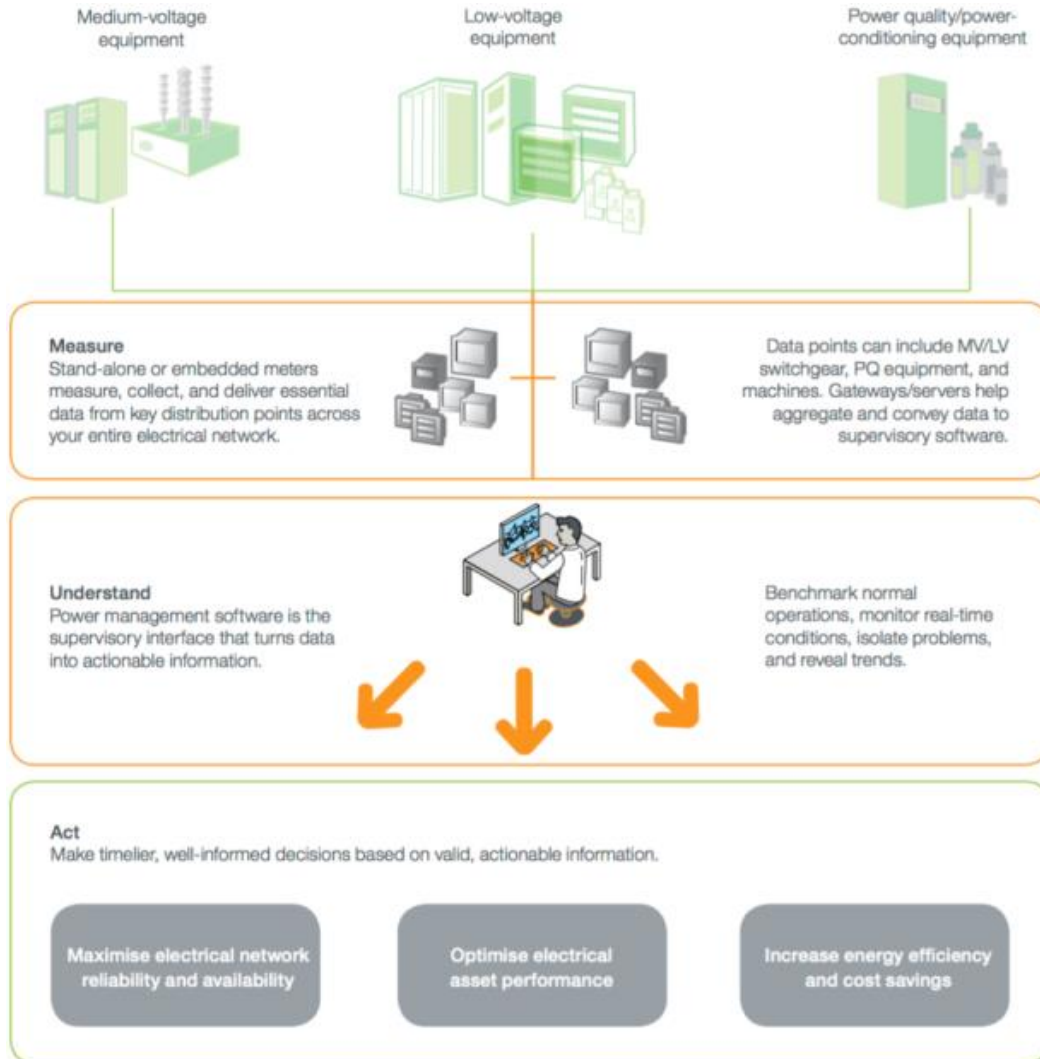
### Automated Demand Response

- Allow your hotel to participate in your ISO DR program
- Save cost by participating in an RTP program



# Electrical Components

## Part 4/4



## Power Monitoring & Control Software

- MV loop monitoring and reconfiguration
- Status of devices and equipment
- Status of the reconfiguration electrical distribution process
- Alarms monitoring, including alarms sent to maintenance staff through short message service (SMS)
- Generator set test information, including run-times and follow-up
- Crisis management tools and assistance to recover
- Energy consumption data
- Maintenance information
- Traceability of events and alarms

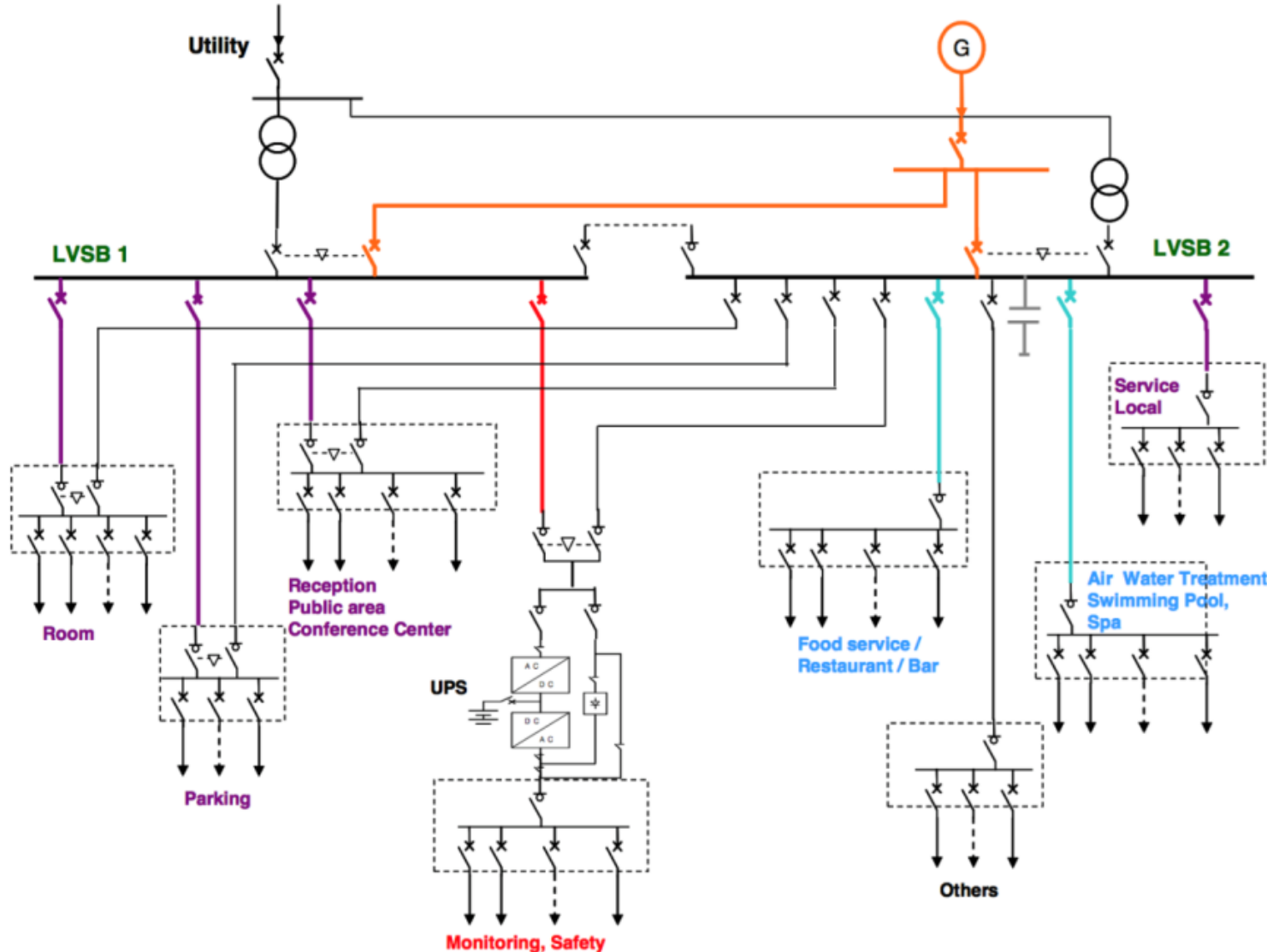
# Electrical Solutions

- **Power Availability**  
*Always on!* (like our guests)
- **Safety & Reliability**
- **Operational Efficiency**
- **Reduce Opex Cost**
- **Sustainability Solutions** (connected power)
- **Easy Install & Connect** with Smart Panels
- **Facilitate Maintenance & System Testing**





# Example: Full Service Hotel <2000 Rooms



## Requirements

- Power required < 20 MVA
- Supply Type:
  - 100% total power from public grid
  - 30-50% local generation
- Type of Building:
  - > 20000 m<sup>2</sup>
  - < 2000 rooms
- Load Availability Requirements:
  - Load level 1: no interruption when network utility breakdown or MV/LV breakdown
  - Load level 2: interruption < 5mins when network utility breakdown
  - Load level 3: be able to be shed if necessary
- Annual Maintenance:
  - no interruption when maintenance of Medium Voltage equipment (transformer substation, breakers ...)
  - No interruption when maintenance of Low Voltage equipment

# Special Case: Casino

- Often have special regulatory requirements in the gaming area
- Power availability to security, lighting, CCTV is critical
- Recommended active power quality equipment & power monitoring solution





# Key Components: Field Devices



Life Is On

**Schneider**  
Electric