

Energy Distribution for Data Center

How modular UPS and Remote Power Panels help to build scalable and redundant data centers



Presenters



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Agenda

01. Pay as you grow : building strategy

02. ABB modular UPS: best-in class

03. ABB Remote power panels : giving you more in less space

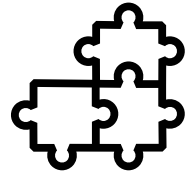


Pay as you grow : building strategy

Pay as you grow - building strategy

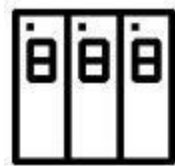
Scalability

- Low investment at the beginning
- Order in future what you need in future
- Grow when your clients come or grow



Redundancy

- Ensure full redundancy during expansion
- Hot pluggable solutions w/ turn-off the supply
- Easy maintenance during operation



Scalability and redundancy can help to develop your pay as you grow building strategy

Data Center Industry

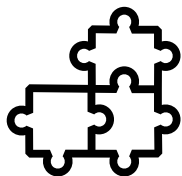
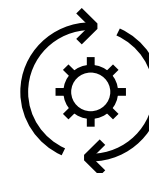
Market overview – after COVID-19

Data Center provisioning
times for medium sized data
centers:

8-10 months

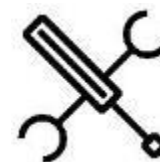


Colocations and cloud data
centers are trying **more
power and heat rejection
into smaller spaces** with
fewer qualified people



Prefabricated systems and modular solutions

enabling fast parallel
installations and reducing
construction cost



Data Center Sustainability

driven by reducing waste of
material, minizing carbon
footprint for the full life cycle
of the facility, recycling.



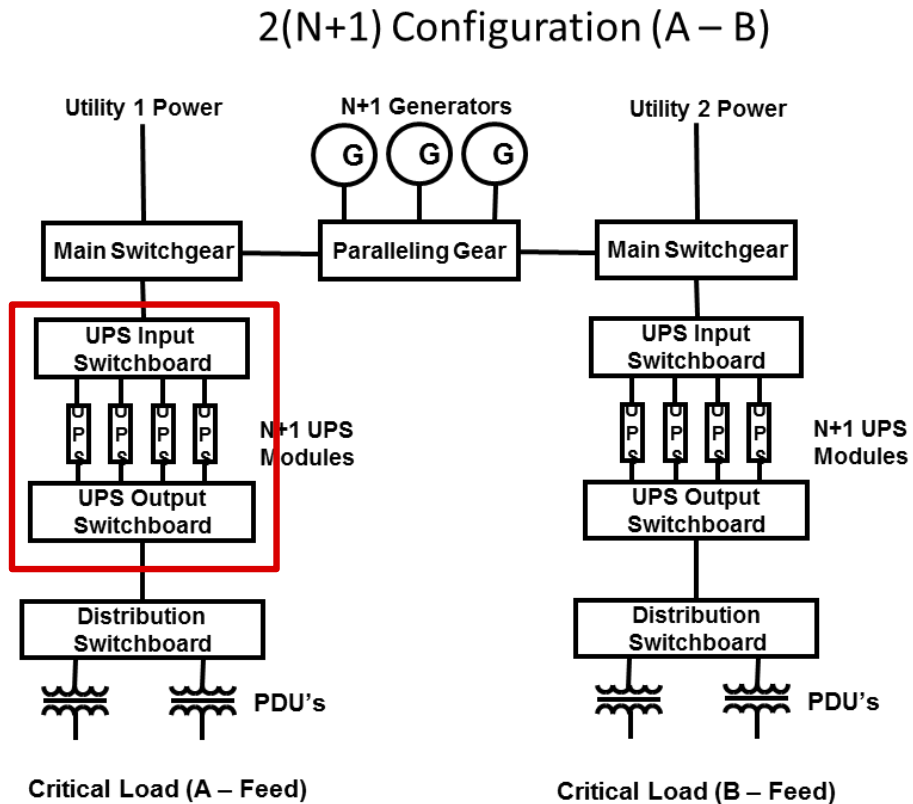
ABB modular UPS: best-in class

Easily scaled up or down



UPS plays a vital role in providing power continuity

For data centers



Demand of IT capacity continues to grow rapidly across the globe and the average time to provision a new data centre have fallen dramatically from 6 months to 18 months. Therefore large cloud and colocations are looking for modular solution with prefabricated and standardized components.

As the UPS plays a vital role in providing power continuity, ABB Uninterruptible power supply design supports 'pay as you grow' building strategy by using scalable technology

ABB Modular UPS

enables fast Installation

Based on ABB's decentralized parallel architecture (DPA™)

DPA provides full redundancy and fault tolerance. Each UPS module is provided with all essential functional units for independent operation.



ABB modular UPS

50kW to 1500kW



DPA 250 S4

50 - 300 kW



DPA 500

100 - 500 kW

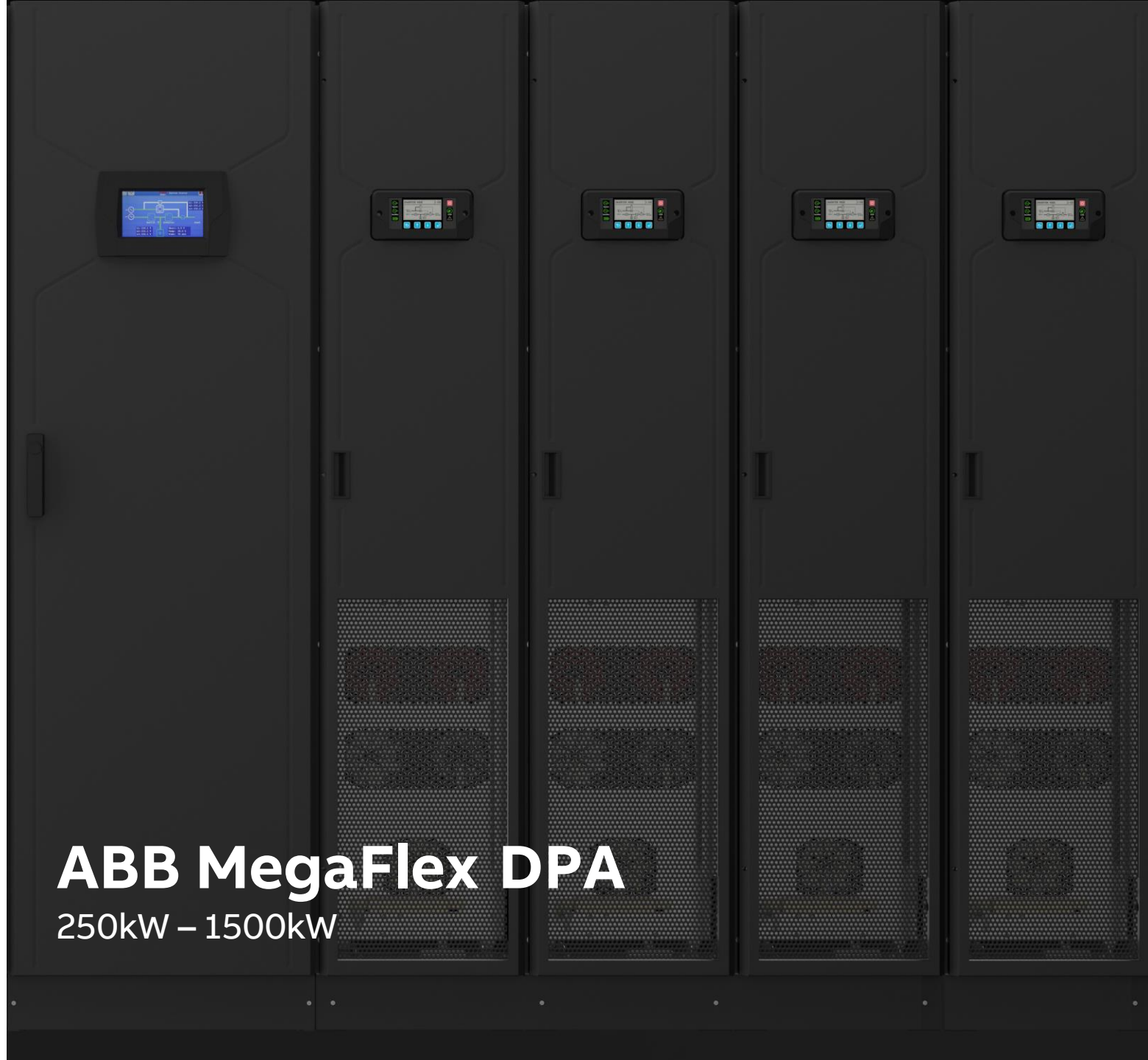


ABB MegaFlex DPA

250kW – 1500kW

Uninterruptible power easily scaled up or down



ABB DPA S4 modular
UPS is built up from
50kW UPS modules.

The DPA 250 S4
300kW cabinet can
host up to six 50
kW modules. The
modules are easy
to slide in and
slide out.



Scalable up to 1.5MW

Secure power

 1500 kW

Up to five 300kW frames and up to 30 modules can be paralleled for amazing 1500kW

Secure ring communication ensured there is not single point of failure in the system.



It's all about YOU

What was the largest UPS you have designed into your data center so far?

- 750kW
- 1000kW
- 1500kW
- Above



ABB MegaFlex DPA IEC UPS

Scalable power
from 250 kW to
1,500 kW or 1,250
kW N+1 in a single
system

In a modular UPS, capacity can be easily scaled up or down to match power demand changes. This makes things simple for operations personnel and equipment maintenance.



250 kW to **750 kW**

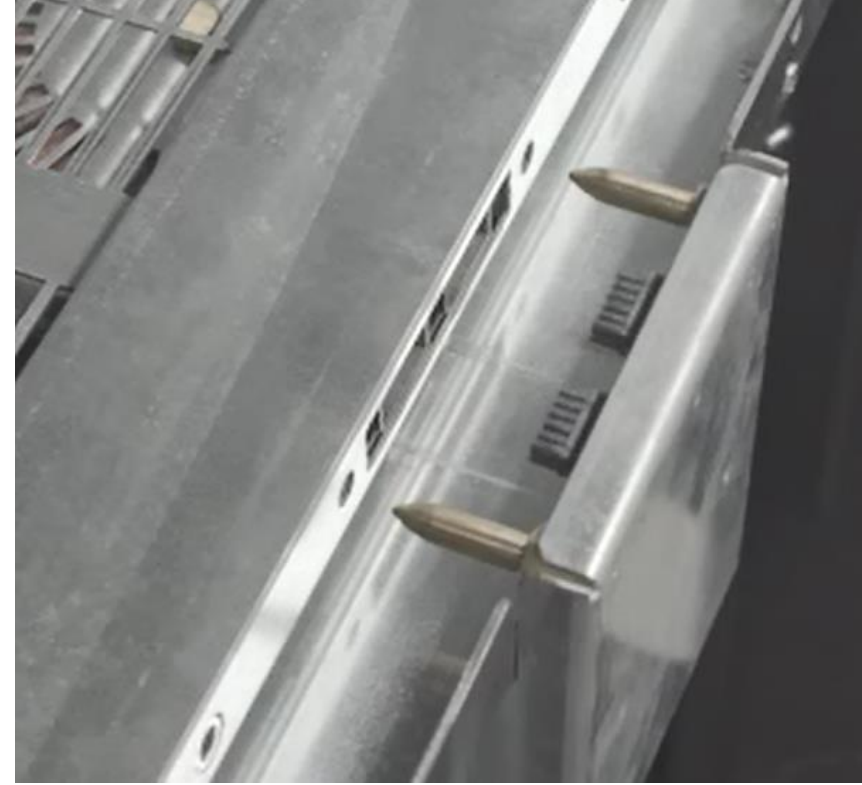
500 kW N+1 to **1,000 kW**

1,000 kW N+1 to **1,500 kW**

UPS Power Module

250kW

Safe and easy power
and communication
plug-in connections



On-line swappability



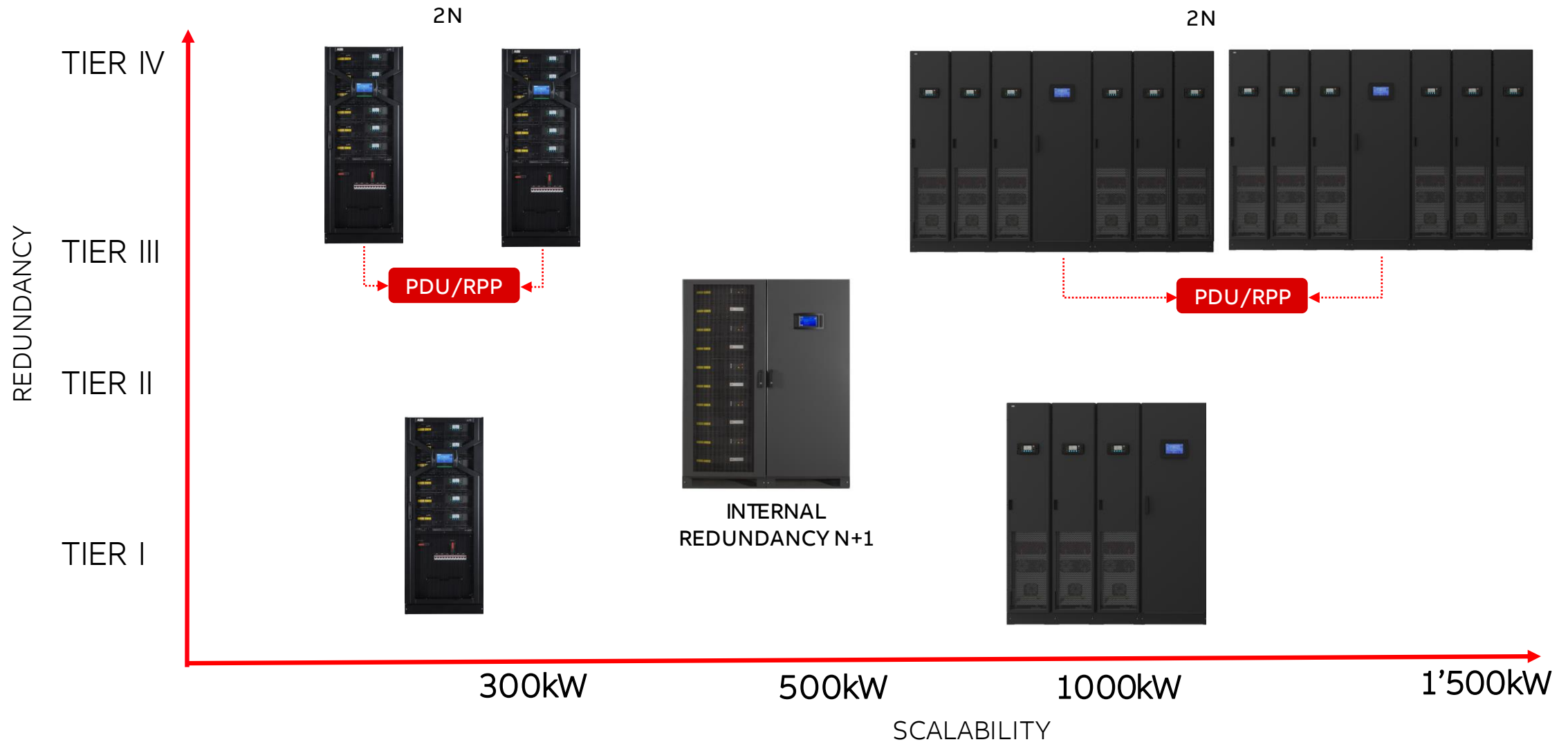
It's all about YOU

What was redundancy level you selected in the last data center?

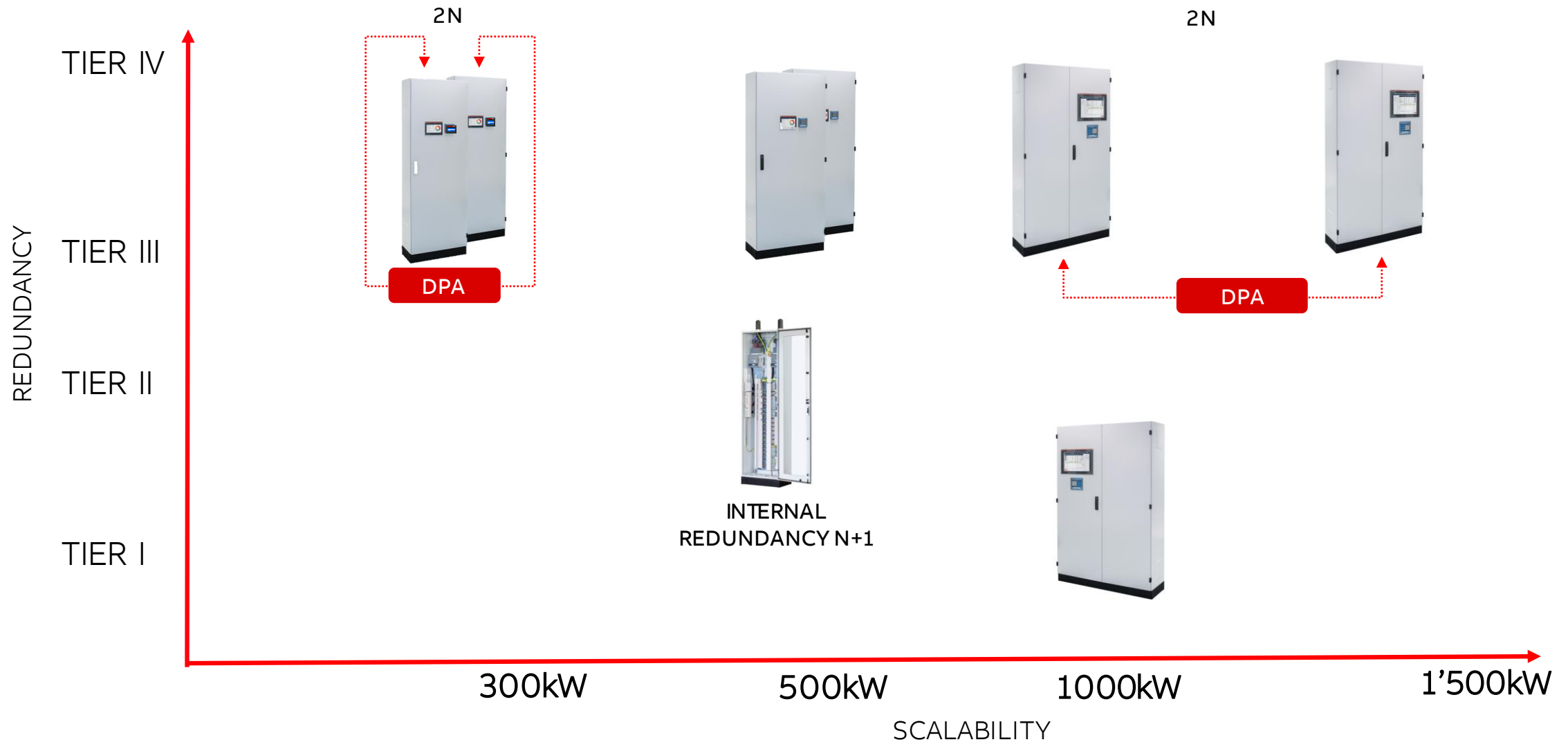
- Tier I
- Tier II
- Tier III
- Tier IV
- Other



Scalable and redundant power with the best efficiency for your infrastructure

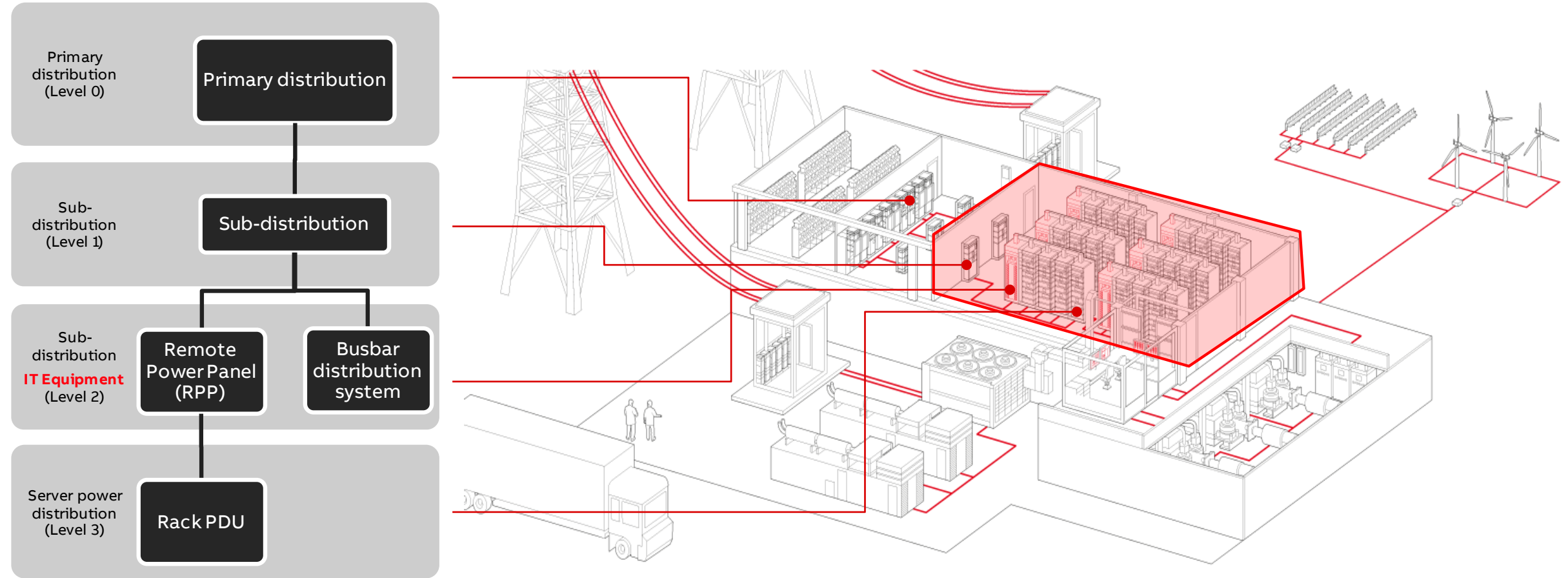


Scalable and redundant power with the best efficiency for your infrastructure



Scalable and redundant power with the best efficiency for your infrastructure

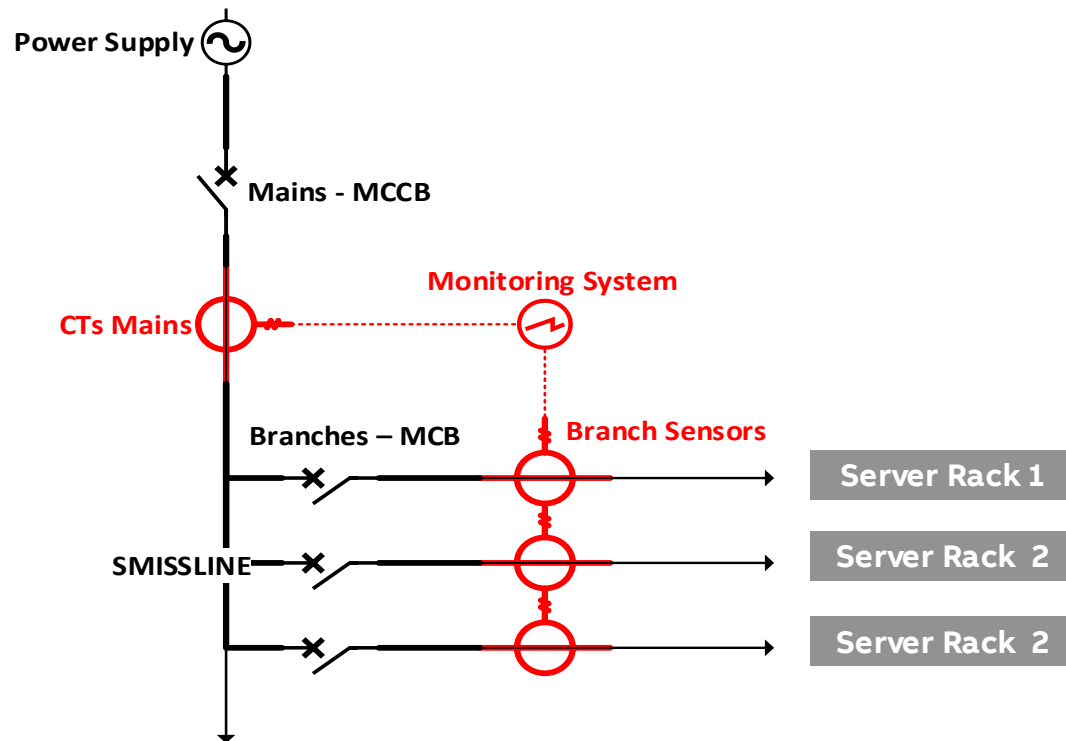
Power Distribution Levels



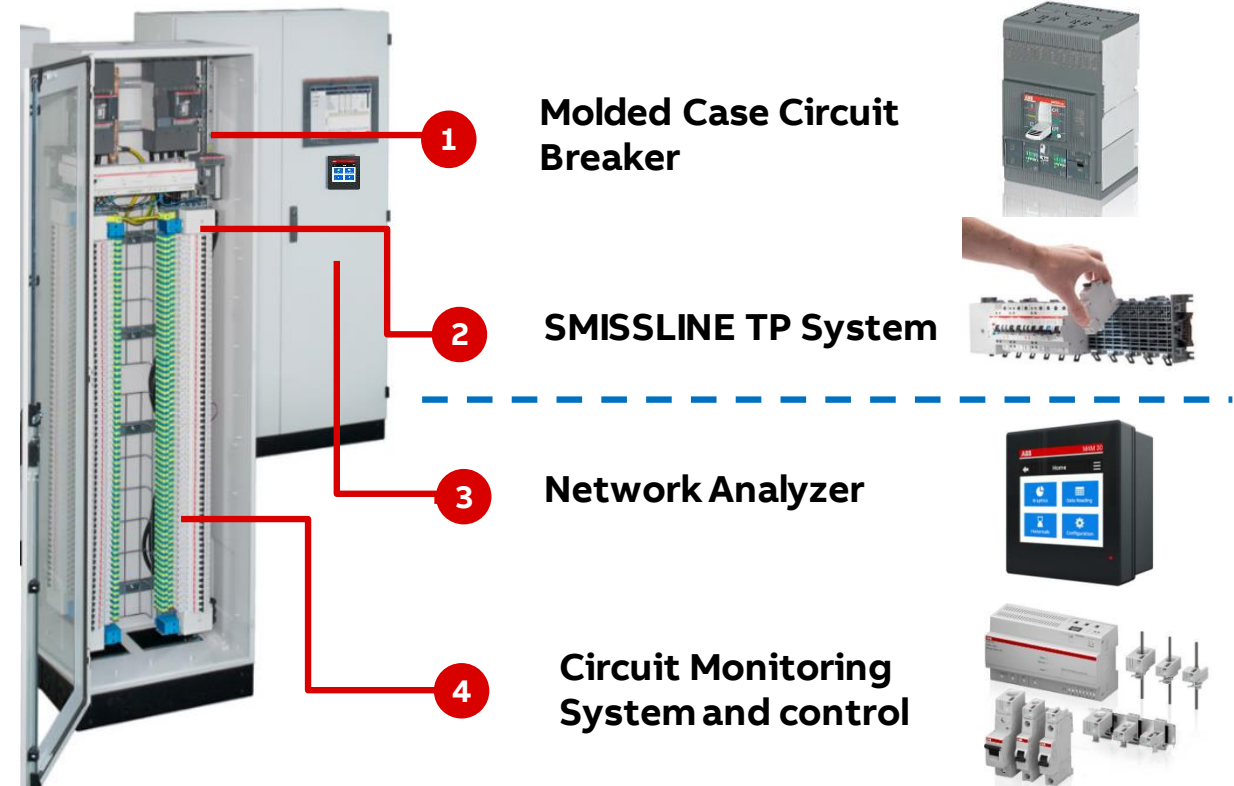
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What are the components of Remote Power Panels?

Schematic Diagram



Main Components



It's all about YOU

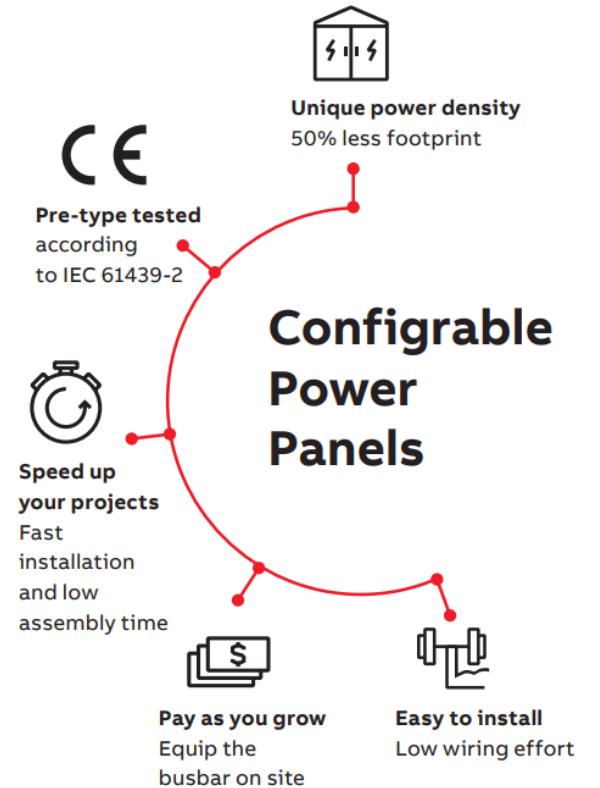
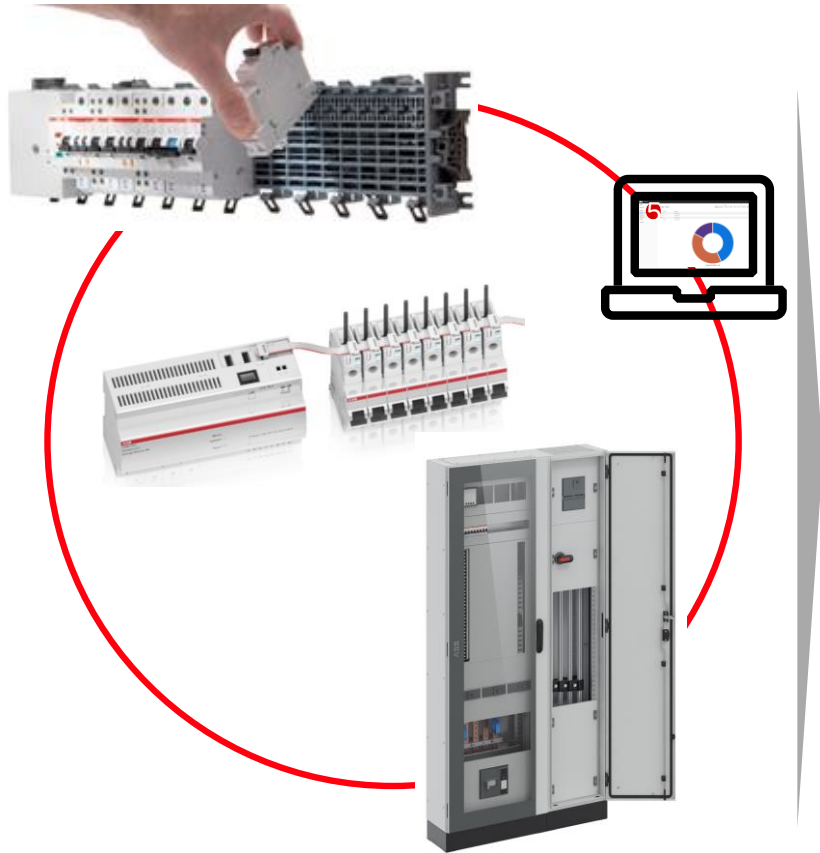
Which is the deepest granularity level where you monitor the energy?

- Level 0 (Primary-Distribution)
- Level 1 (Sub-Distribution with UPS)
- Level 2 (Sub-Distribution to Servers)
- Level 3 (rack PDUs in the Server racks)
- We don't measure Energy at all



Energy Distribution for Data Center

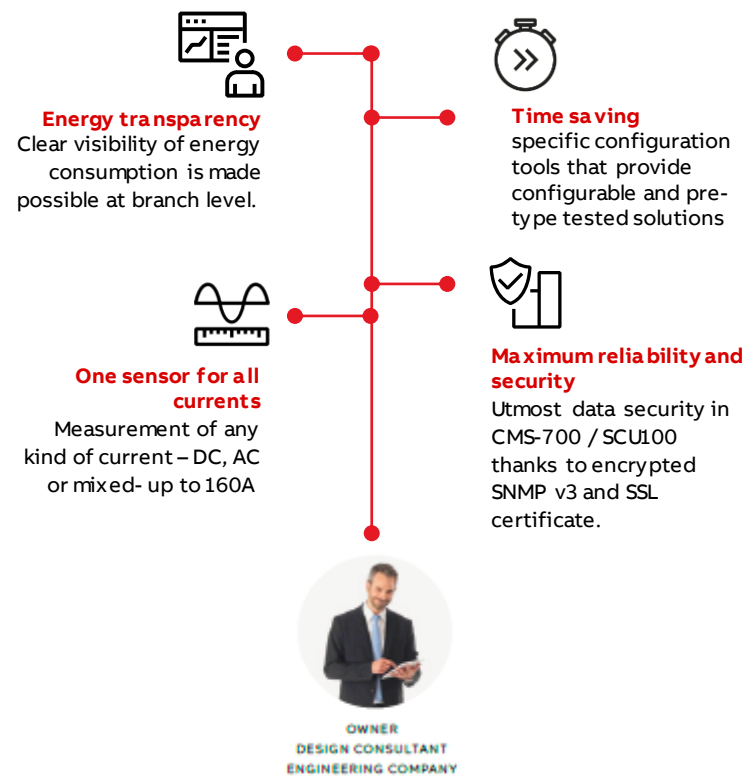
Combination for Success



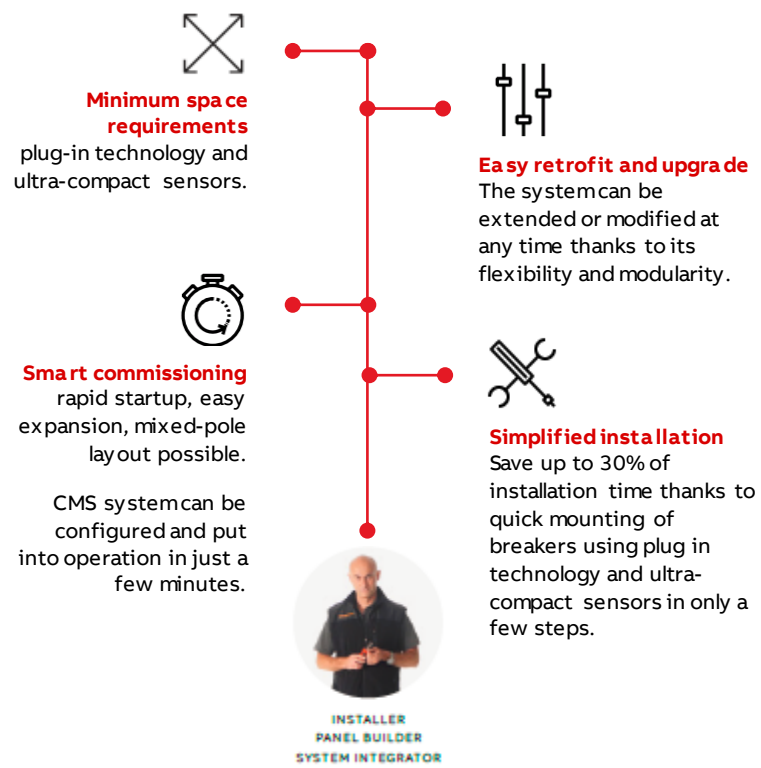
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Smart Power Distribution Center (RPP) Value proposition

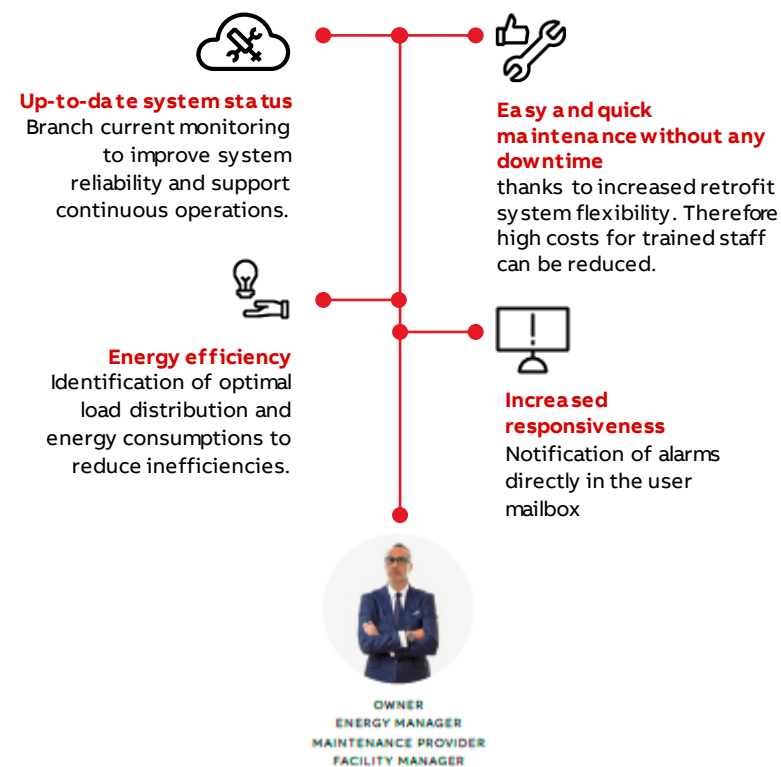
Design and Specification



Installers and Panel builder



Operations



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ABB Data Centers 3D Configurator

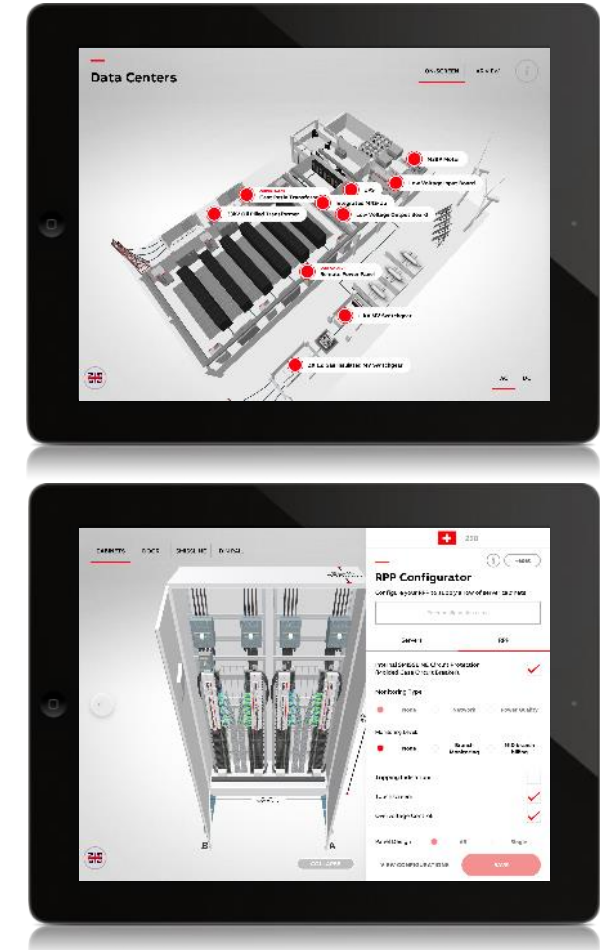
Configure RPPs according to your requirements

- Design RPPs based on IT related specifications
- Modify specifics of the RPP (e.g. measurement, MCB characteristics etc.)
- Receive technical specifications, type test certificate and a bill of material via e-mail

Access:

- Via Google Chrome: <http://abbrpp.hiddenltd.com/>
- Via iOS (iPad only): «ABB Data Centers 3D» in the App Store
- Available in 4 languages: German, English, French, Japanese

QR Code for iPad

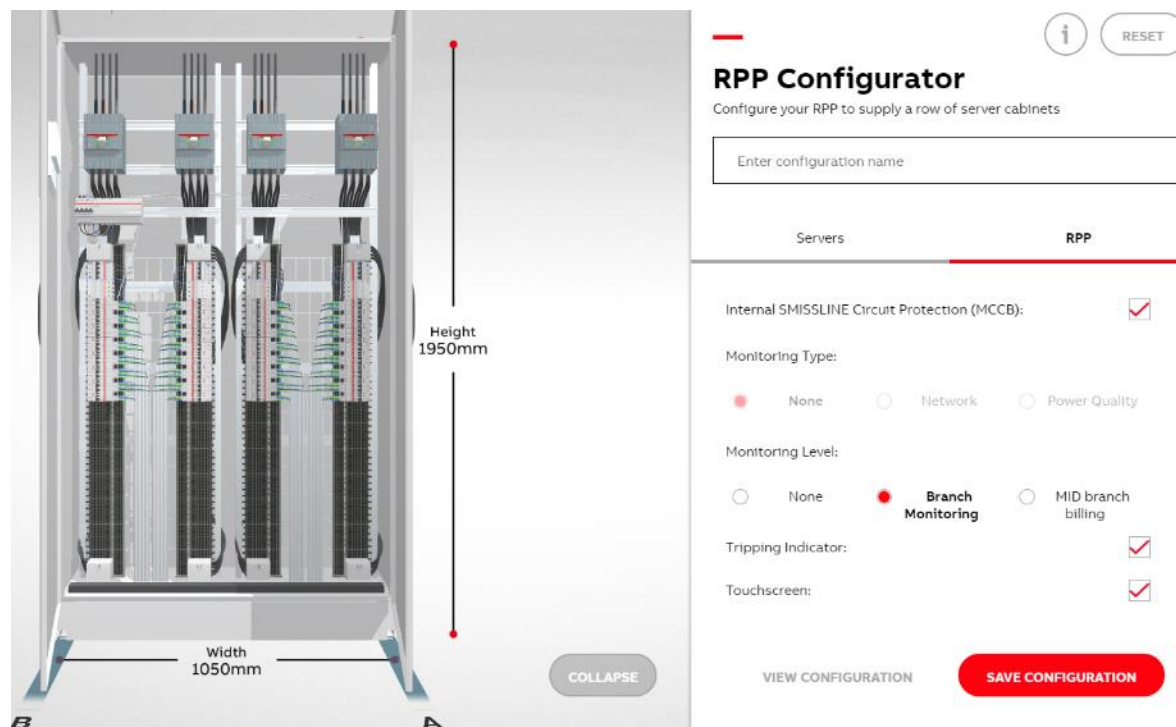


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Value proposition for different stakeholders

Consultants

The configurator generates time saving thanks to **specific configuration tools** that provide pre-engineered solutions. Our flexible solutions can easily be adopted to the specific needs in customer projects.



EPC / Constructors

Additional projects can be planned in **shorter time**. Moreover the configurator **generates cost and time saving** in terms of staff and resources.

ABB