



MNS[®] Low Voltage Switchgear

Power with purpose



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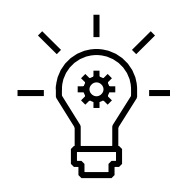
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SMART INDUSTRY

The new energy ecosystem

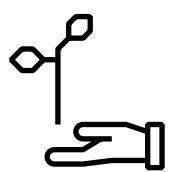
The global energy landscape is shifting. Advances in digitalization and control mean the way operational managers approach challenges like sustainability, efficiency and evolving regulations is changing for good.

The time has come to future-proof your facility with smart energy solutions designed to optimize visibility, enhance control and create operational value.



Introducing the MNS solution range

The result of 30+ years' experience in digital switchgear, MNS is a smart, scalable low voltage switchgear. Its connected, internet of things (IoT) based technology allows remote operation and monitoring and enables condition-based maintenance. In short, it helps you drive value at every point of the value chain.



The smart way to sustainability

Smart and digital switchgear allows you to monitor energy use so you can get greater visibility to help inform sustainable choices. It can connect to ABB Ability™, which will use the data you collect about switchgear condition or your energy usage and turn it into insights. You can then use these to make better decisions to optimize your operations, schedule predictive maintenance, and improve sustainability while reducing your carbon footprint.



THE MNS PLATFORM

Writing the future of electrification with MNS

A legacy of innovation

As the world's largest low voltage switchgear OEM with unmatched domain expertise and support in more than 30 countries, ABB Electrification truly is your local partner.

MNS Low Voltage Switchgear

The MNS portfolio provides comprehensive scalability, from cost-effective energy distribution to high-end systems providing digital twin solutions.

MNS Digital combines the latest advances in smart electronics, edge computing and cloud technology to create a low voltage switchgear solution with built-in intelligence.

The journey with MNS starts with the smart configuration tools that assist generating the required switchgear layout, select the right components and allow the use of Building Information Modeling (BIM).

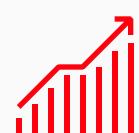
Utilize digital twin capabilities in ABB Ability™ to help optimize performance and identify any issues or maintenance requirements, and also schedule predictive maintenance.



THE MNS PLATFORM

Efficient and sustainable power with ABB MNS

ABB MNS low-voltage switchgear stands for top-tier safety, reliability, and adaptability in energy distribution. These robust switchgear systems ensure continuous operation even under extreme conditions and promote sustainable production and energy efficiency.



Performance oriented

ABB's MNS switchgear solutions set the benchmark for safety, reliability, and adaptability, maintaining continuous power and keeping operations running even in the harshest environments. ABB's verification testing and arc protection technologies provide superior safety for people and processes. Its modular design makes it easy to scale and adapt to a site's changing power requirements.



Sustainability embedded

Integrate ABB Ability™ for real time power management and continuous condition monitoring into operations with ABB MNS switchgear. MNS enables users to optimize operations, track sustainability metrics – and lower energy and maintenance costs. ABB's independently verified Environmental Product Declarations and green manufacturing processes provide transparency and sustainability.



Peace of mind

Rely on the world largest installed base of power distribution switchgear and motor control centers engineered by a global network of the industry's most skilled switchgear experts. Our teams are committed to delivering a superior customer experience with world-class quality from our state-of-the-art production facilities.



THE MNS PLATFORM

Meet the MNS Low Voltage Switchgear portfolio

Discover a switchgear solution that fits your facility's needs.



MNS Front

Up to 6300A and 100kA

Access for modules and cable terminals from the front of the switchgear. Installation back to wall.

- Module connectivity versions
 - Withdrawable
 - Plug-in including compact
 - Fixed
- Busbar configurations
 - L and U turn configurations
 - Back to back
 - Duplex
- Power Delivery Units (PDU)

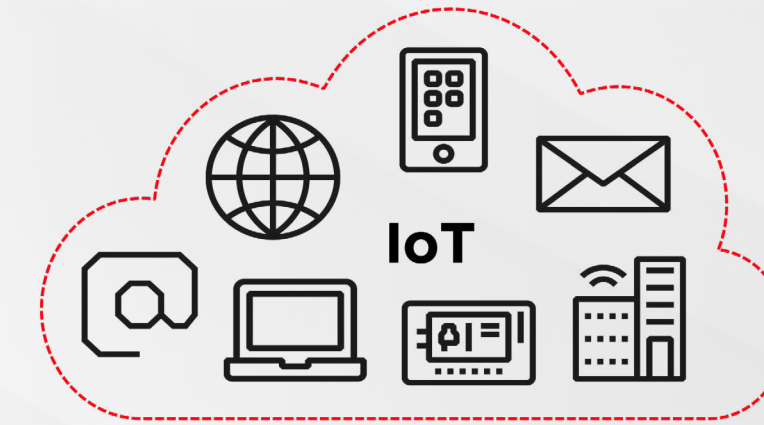


MNS Rear

Up to 7300A and 100kA

Access to cable terminals from the rear and to modules from the front

- Module connectivity versions:
 - Withdrawable
 - Fixed



MNS Digital

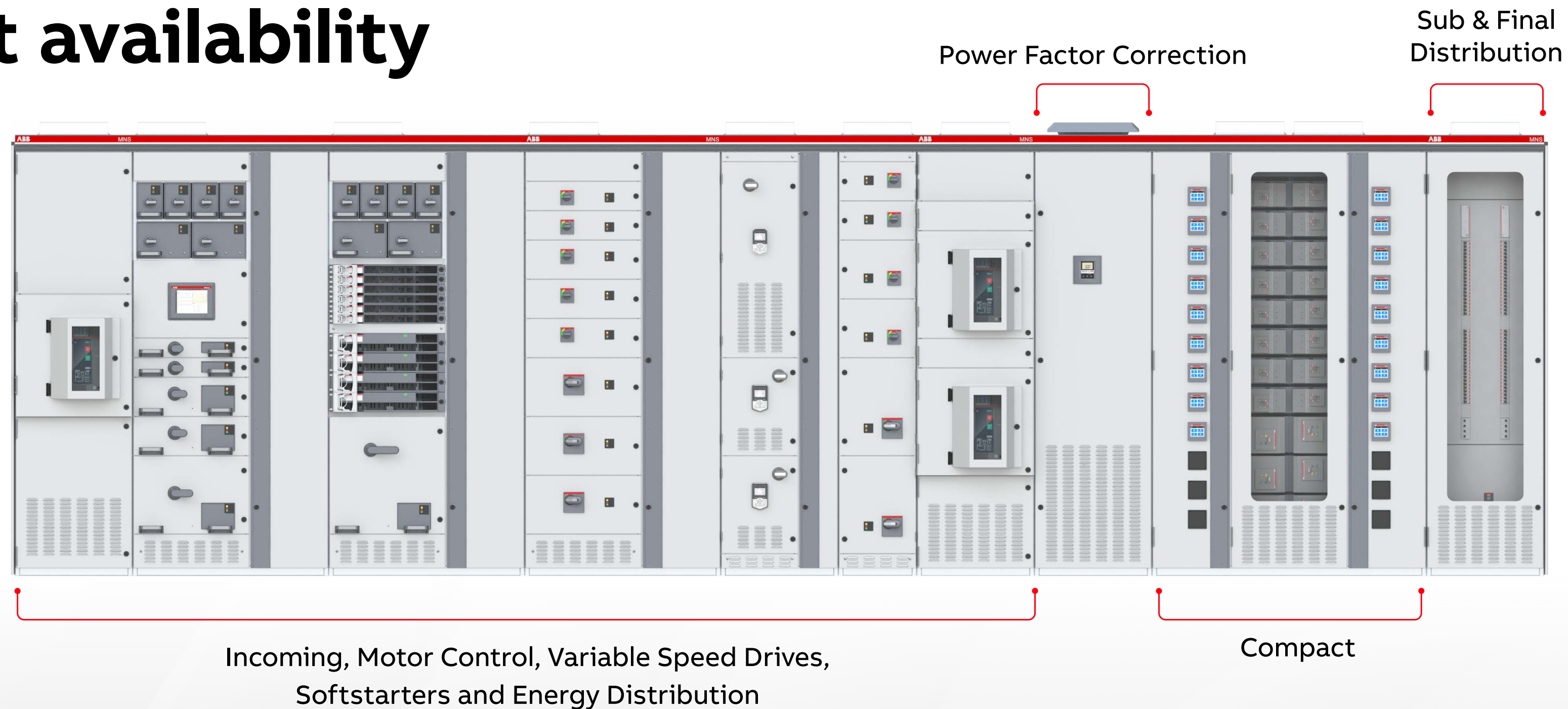
ABB Ability™ Condition Monitoring (CMES) and Energy Manager

- On premise or remote



THE MNS PLATFORM

Scalable solutions to ensure asset availability



MNS: the switchgear that sees everything
Connect your intelligent devices, MNS' smart device family forms the backbone for your data collection.



ABB Ability™ CMES
Diagnose issues and ensure availability with on-premise condition monitoring and predictive maintenance.



ABB Ability™ Energy Manager
All your real-time data, alarms, events and trends visualized in the cloud. Maximize productivity & reduce OPEX.



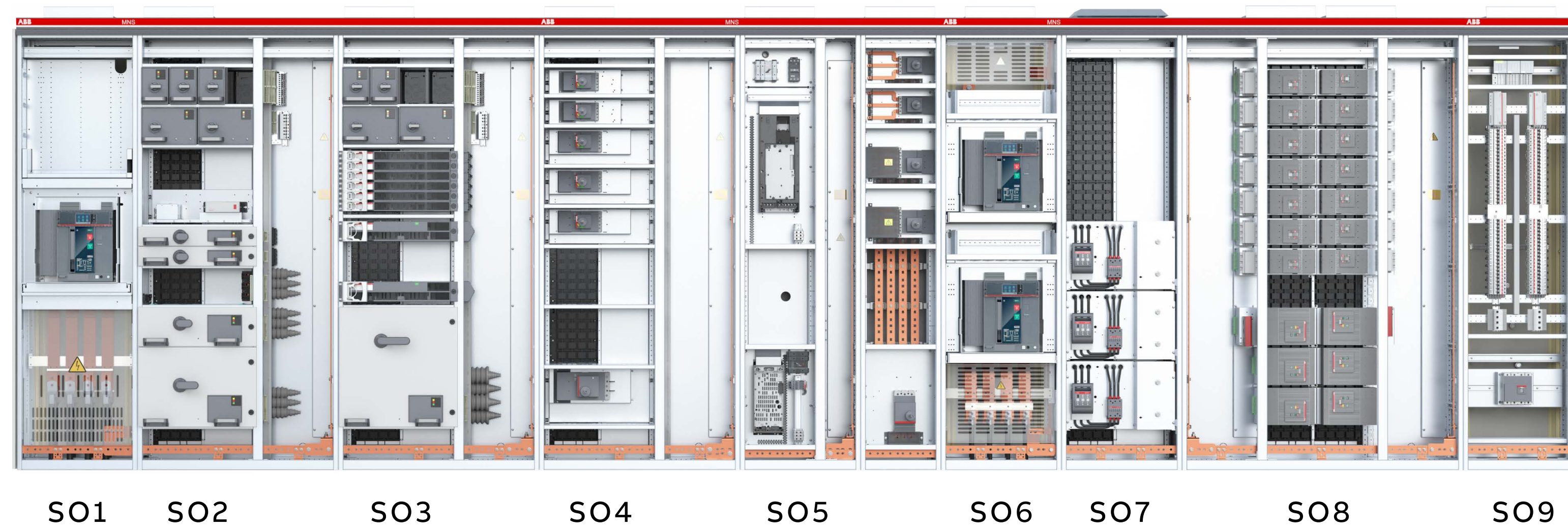
THE MNS PLATFORM

MNS Features

Take a look inside the highly customizable MNS set-up.

Explore MNS

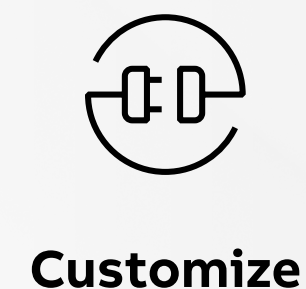
For more information click on the sections below



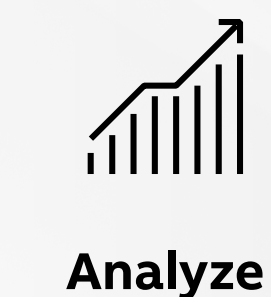
MNS DIGITAL

MNS Low Voltage Switchgear Digital

ABB Low Voltage Switchgear Digital gives you access real-time data from across operations. Its intelligent sensors connect your assets to on-premises solution ABB Ability™ CMES or cloud-based ABB Ability™ Energy Manager for ultimate visibility and control.



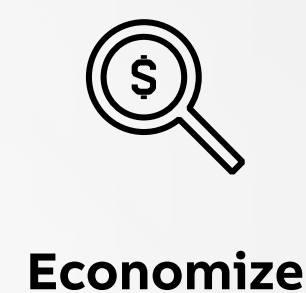
- Easy connection to any process control system and ABB Ability™
- Future-proof operations – identify & prevent potential issues, and update asset functionality through the cloud
- Scalable, modular & flexible – choose from a variety of space-saving options with fixed, plug-in or withdrawable technology
- ABB Ability™ CMES or cloud-based ABB Ability™ Energy Manager



- Access critical process data for better informed decision making
- View advanced analytics, reports and big data with ABB Ability™
- See critical process data anytime, even during device failures



- Continuous operation - plan maintenance only when required
- Better, more transparent energy management achieving savings up to 30%



- Increased service productivity with optimized maintenance & minimized downtime
- Reduce investment by 20% with PLC-free design and ethernet-powered infrastructure
- Improved lifecycle & performance management – reduce upgrade costs by 30% with retrofitting





MNS DIGITAL

MNS Digital Solutions

It’s never been simpler to unlock your operation’s digital potential. Connect your MNS with any of the digitally-enabled solutions below and start making billions of better decisions.

Explore MNS Digital

For more information click on the sections below





CMES

ABB Ability™ Condition Monitoring for electrical systems (CMES)

Identify & manage problems before they occur

The ABB Ability™ CMES is an innovative on-premise monitoring platform that allows you to monitor and manage electrical distribution systems in real time.



Meeting traditional challenges



Reducing OPEX & CAPEX



Reducing unplanned downtime



Increasing availability & reliability



Maximizing safety

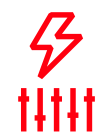
Creating digital opportunities



Future proofing with simple upgrade management



Data analytics supporting remote diagnostics



Lowering cost of ownership with optimized power management



Process optimization. Enabling predictive maintenance



Optimal sustainability with asset management



Robust response to climate change by optimizing efficiency & power usage



SMART ENERGY DISTRIBUTION

Power distribution solutions

Reliable and safe power distribution is the backbone of all industries and other segments. Energy supply 24/7 is no longer a demand, it's a must. The change of the energy generation mix to incorporate more renewable and other sources into the global network is another critical factor. Advances in digitalization are enabling management of an increasing number of electrical loads through better monitoring and advanced analytic solutions ensuring continuous, safe and reliable energy distribution.

With the latest circuit breaker technologies in MNS switchgear, such as the all-in-one Emax 2 circuit breaker, you can cope with any grid condition, thanks to its advanced functions. Load feeder are operated utilizing Tmax XT circuit breaker with monitoring options like FC610 feeder controller or any energy meter. Once

integrated into the digital switchgear solution, your network is effectively and efficiently protected and controlled. But also energy and load data are used to optimize the plant energy flow and energy consumption for an improved sustainable operation. With condition monitoring available as part of the digital switchgear offering, circuit breaker are also easy to use and maintain.

ABB Ability™

Use ABB Ability suite of solutions to apply to the on-premises CMES condition monitoring or connect to the cloud to create further insights from your data, which you can use to help reduce costs and optimize your operations. ABB Energy Manager, a state-of-the-art cloud solution, integrates energy management for the plant electrical distribution solution in a single intuitive dashboard.



SMART MOTOR CONTROL CENTER

Process control solutions

MNS MCC is a safe, simple-to-use means of optimizing your processes while reducing your capital expenditure. It gives you all the solutions you need to tailor your motor starting requirements across your installations.

Direct online motor starting solutions provide a cost-effective and compact design for an optimized footprint. For control and protection, smart motor control and protection relays ensure enhanced availability and provide fundamental data for condition monitoring.

90 percent of all motors are used in full speed applications, in cases where a variable speed drive (VSD) offers limited process value. The optimal compromise

between a direct online and a VSD is to control start up speed and torque using the PSTX softstarter.

Where the process requires premium motor control, with precise speed and torque, opt for ACS 880 with direct torque control (DTC).

When coupled with Emax 2 and Tmax XT circuit breakers, plus temperature monitoring technology, 24/7 data analysis and collection is possible with ABB Ability™ CMES without interfering with other operations or control applications.





LEADING THE WAY TO A CIRCULAR ECONOMY

Advancing Sustainability in Low Voltage Switchgear

Our ABB EcoSolutions™ portfolio supports sustainable decisions with products offering transparent circularity values and environmental impacts. We continuously innovate and expand this portfolio with our value chain partners.

ABB EcoSolutions products meet our circularity criteria throughout the product life cycle, as outlined in ABB’s circularity framework, and have Type III Environmental Product Declarations

(EPDs). These values and EPDs are accessible via QR codes and verified by a third party (ISO 14025 Type III compliant).

ABB uses EPDs in MNS switchgear to make environmental performance transparent. These EPDs provide verified information about a product’s environmental impact throughout its lifecycle, helping customers make informed decisions and achieve sustainability goals.

Read more in our White paper:
ABB’s third-party verified Environmental Product Declarations

ABB’s circularity criteria include:

- Durable design with sustainable materials
- Waste-avoiding processes and sustainable packaging
- Enhanced resource and process efficiency, upgradability, and optimized equipment lifetime
- Take-back services for refurbishment, reuse, or recycling, with end-of-life treatment instructions

MNS includes a global sustainability program focused on:



Waste Management:
Optimize waste sorting, reduction, and reuse.



Paperless Factory:
Use e-drawings and recycled paper.



Energy Initiatives:
Purchase green energy, transition to 100% EVs, and generate solar power on-site.



AFTER SALES AND SERVICE

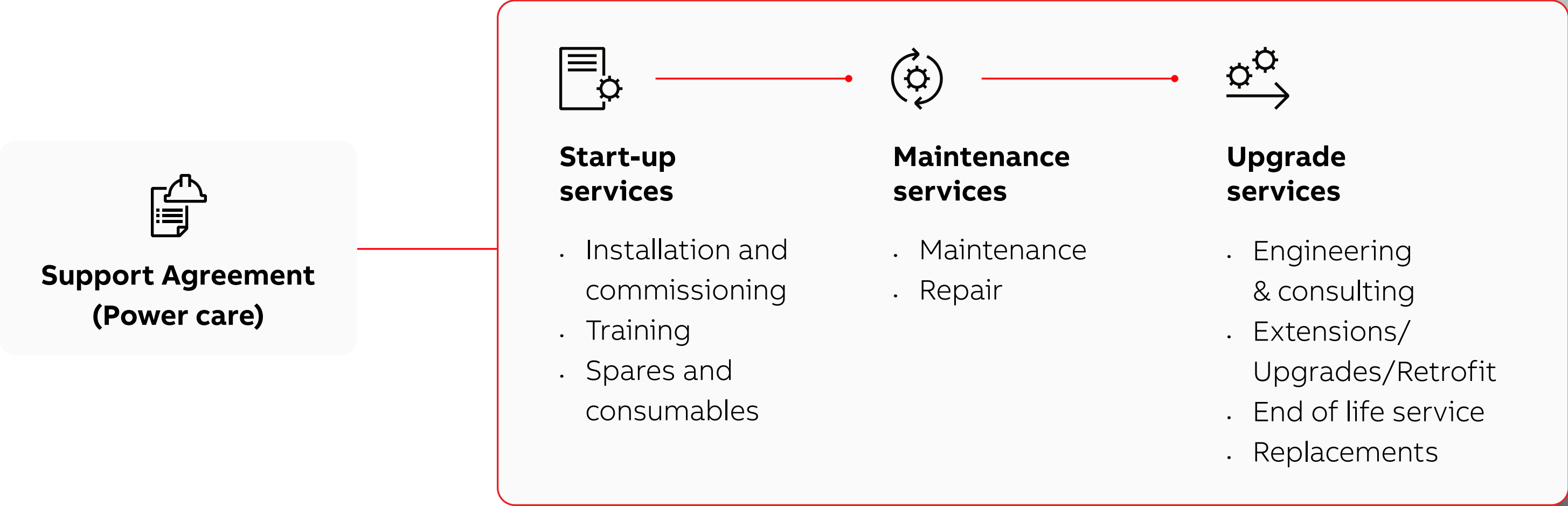
We're committed to ongoing service

With over 1.7 million low voltage switchgear cubicles installed worldwide, ABB offers unparalleled global support from installation to commissioning and beyond.

Custom service agreements

Unplanned downtime and shutdowns are a huge - but avoidable - drain on profits.

With one of ABB's custom service agreements, you can incorporate services ranging from emergency call-outs to predictive maintenance. No matter your facility's needs, we'll work with you to ensure production remains optimal throughout your solution's lifecycle.





SERVING YOUR INDUSTRY

Meeting your industry’s challenges

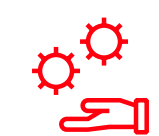
Discover how the MNS platform can help your industry lower energy consumption and meet its unique efficiency and sustainability challenges.


MNS is certified to IEC 61439-2 and IEC TR 61641, to ensure safety, quality, and reliability across all applications.







Ready for enhanced visibility and control?

 Optimize operations and add value with real-time data

 Industry 4.0 opportunities made simpler and scalable

 All the benefits of ABB’s broad digital portfolio, ongoing service, and domain expertise

 You can see it all with MNS Low Voltage Switchgear

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ALL INDUSTRIES

Data Centers

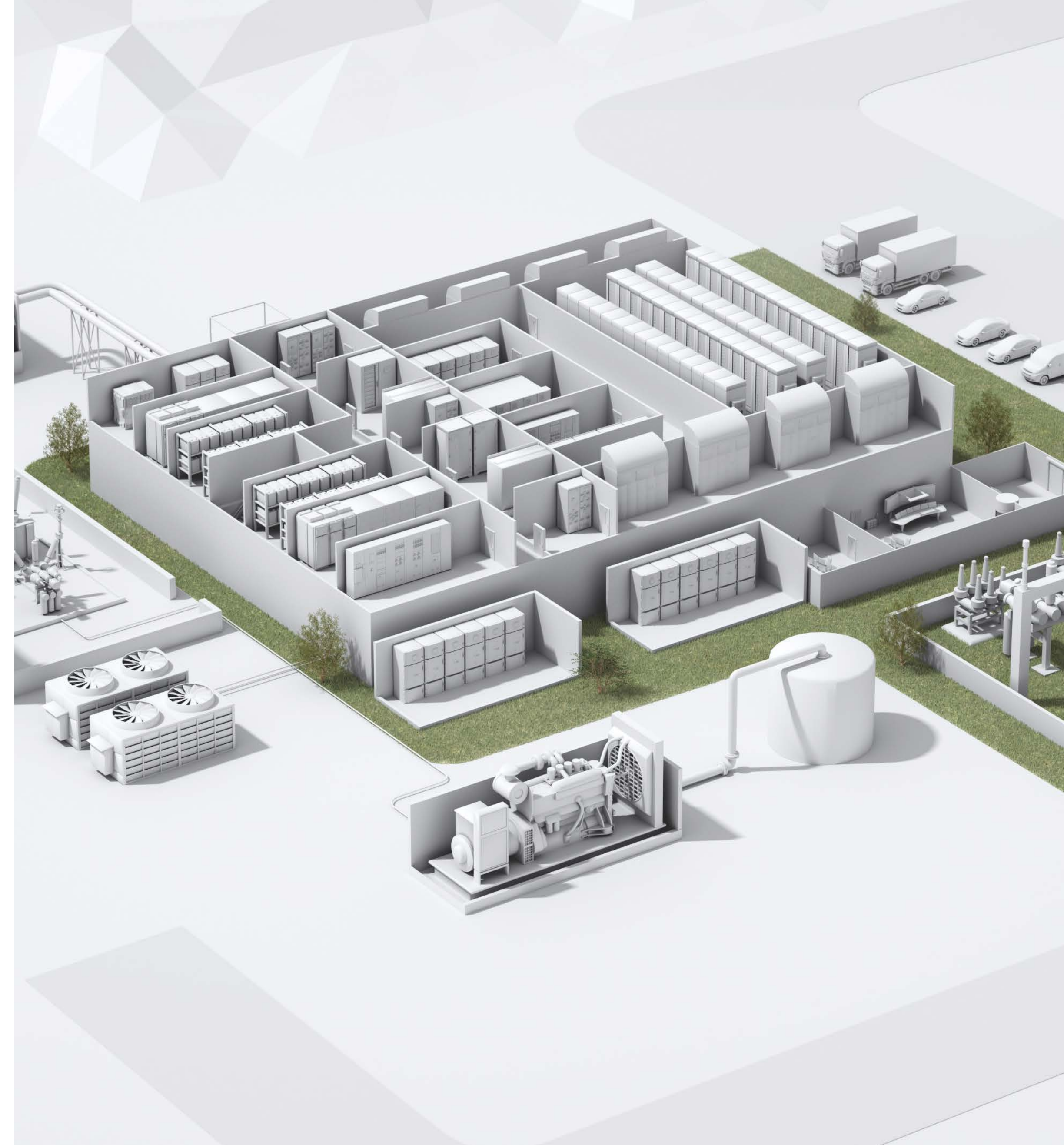
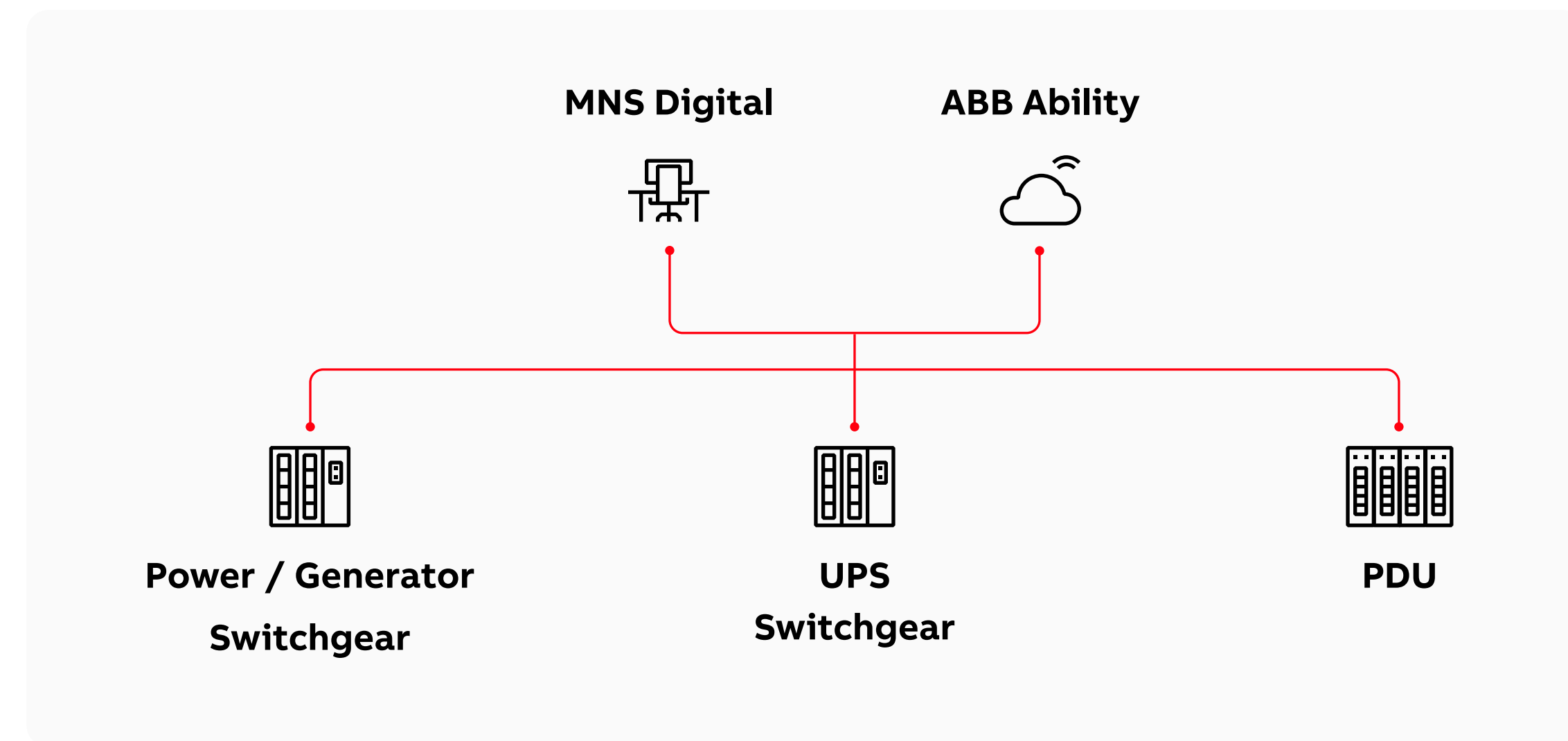
Challenges

- Maintaining maximum availability following your customers' demand
- Conserving space

MNS Solution

- Secure power with a dedicated MNS product line that will keep your customers online

- A complete digital solution, with temperature and circuit breaker monitoring, for all applications, from power distribution to server supply.
- The proven technology in MNS Compact and PDU, and ABB Ability™ ensures asset availability you can rely on
- Comprehensive certification to ensure highest possible availability

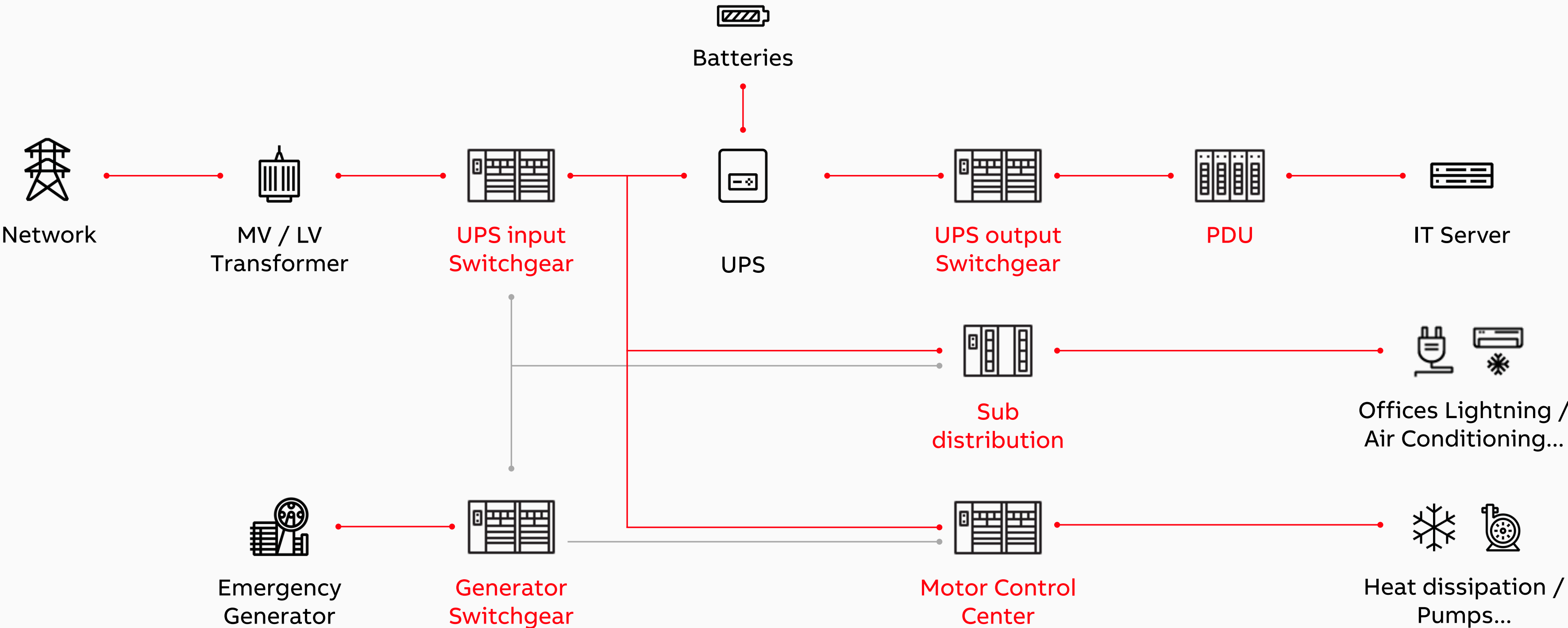




ALL INDUSTRIES

Data Centers electrification infrastructure

Benefit from a complete digital solution that powers all applications, from building management (heating, lighting, and so on) through to IT servers.



ALL INDUSTRIES

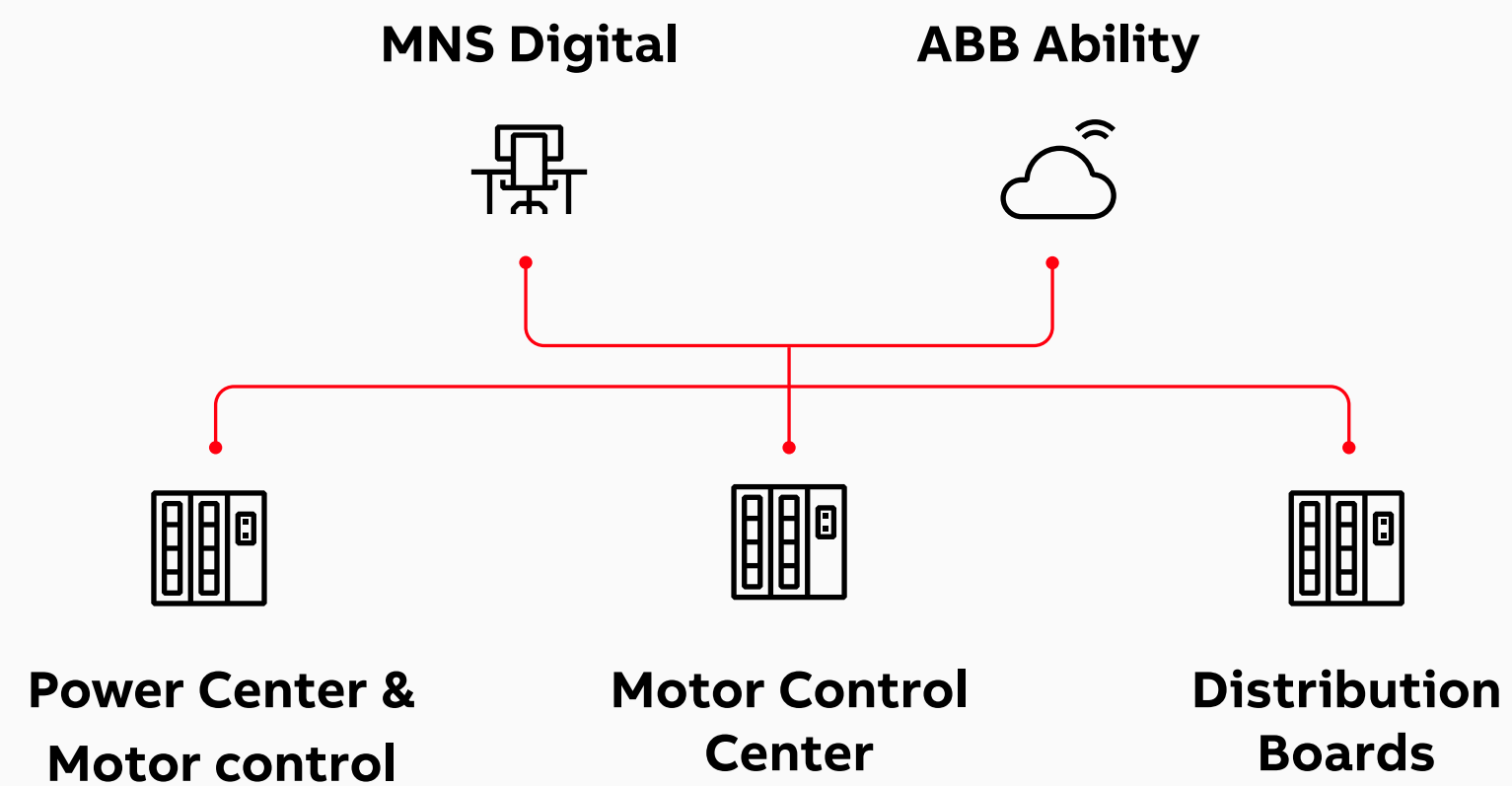
Chemical, Oil & Gas

Challenges

- Ensuring safety, reliability and availability remain uncompromised
- Addressing climate change with alternative energy solutions that ensure greater sustainability and efficiency

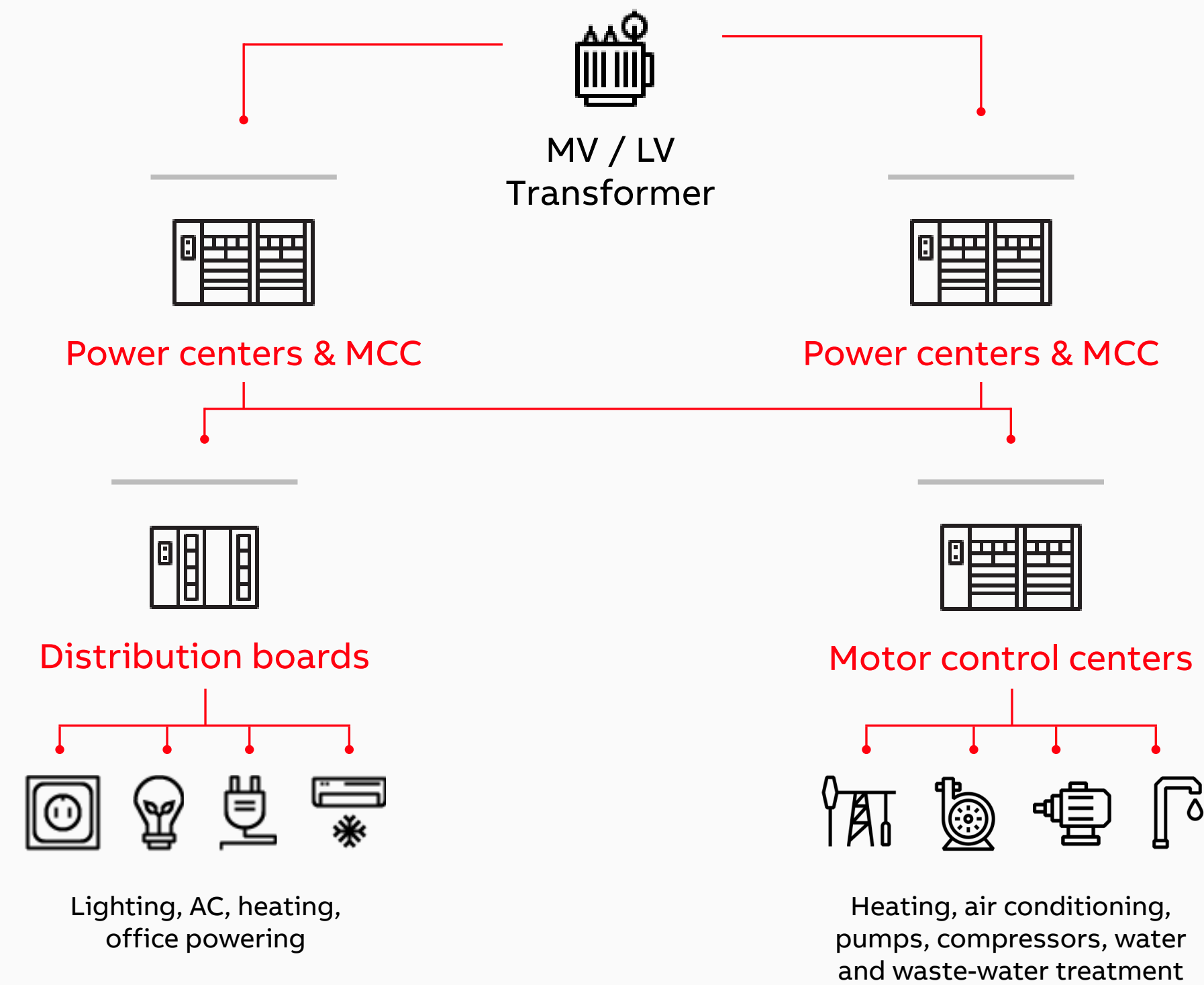
MNS Solution

- Enable process optimization through ABB Ability™ and predictive maintenance interfaces.
- MNS scalable and space saving solutions for energy distribution, motor starting and power quality reduce total cost of ownership by extending asset lifecycles



ALL INDUSTRIES

Chemical, Oil & Gas electrification infrastructure



ALL INDUSTRIES

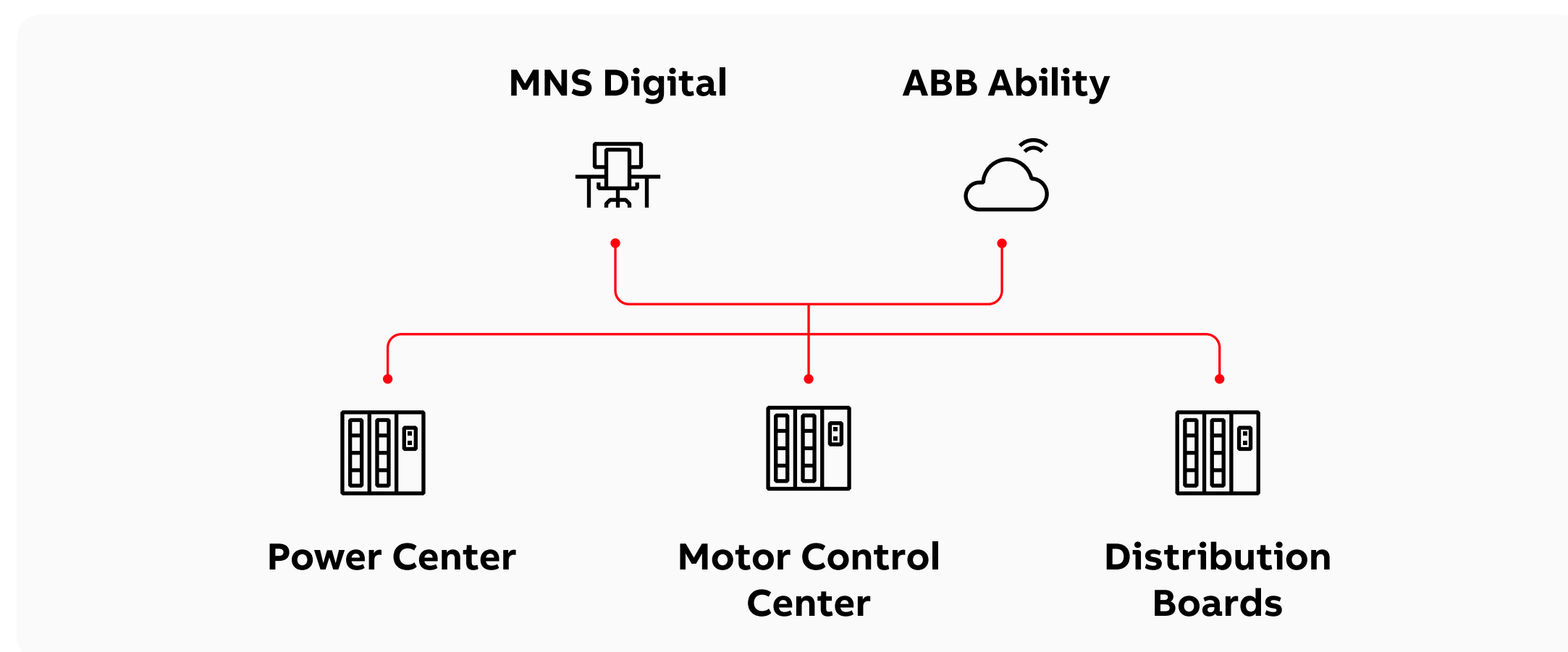
Pulp & Paper

Challenges

- Increasing productivity, improving safety and reducing waste
- Maintaining cost efficiency with existing assets

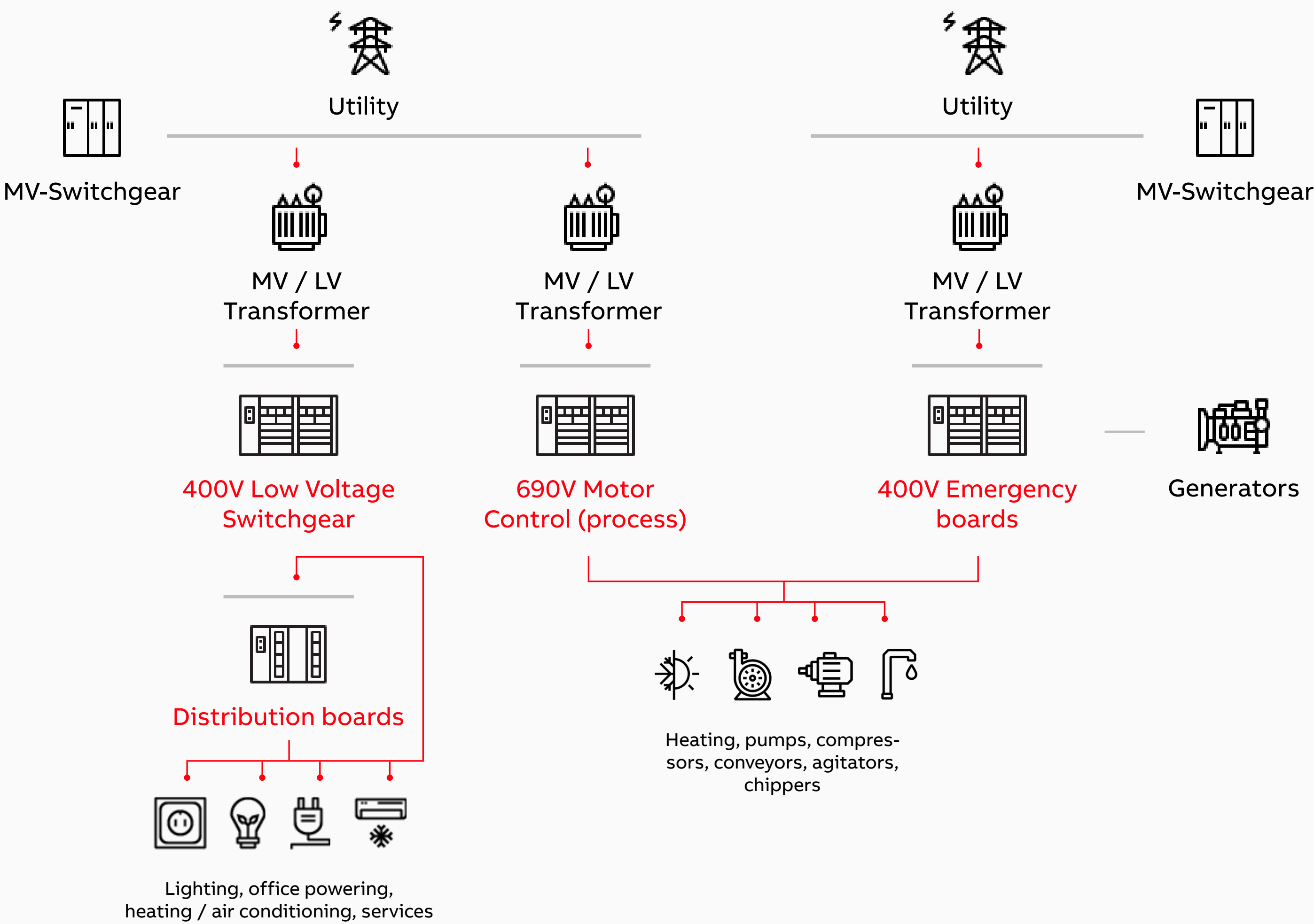
MNS Solution

- MNS 3.0 and ABB Ability provide a digitalized platform that improves the efficiency and reduces waste across production
- Retrofitting existing switchgear with MNS Digital can reduce CAPEX by 30%



ALL INDUSTRIES

Pulp & Paper electrification infrastructure



ALL INDUSTRIES

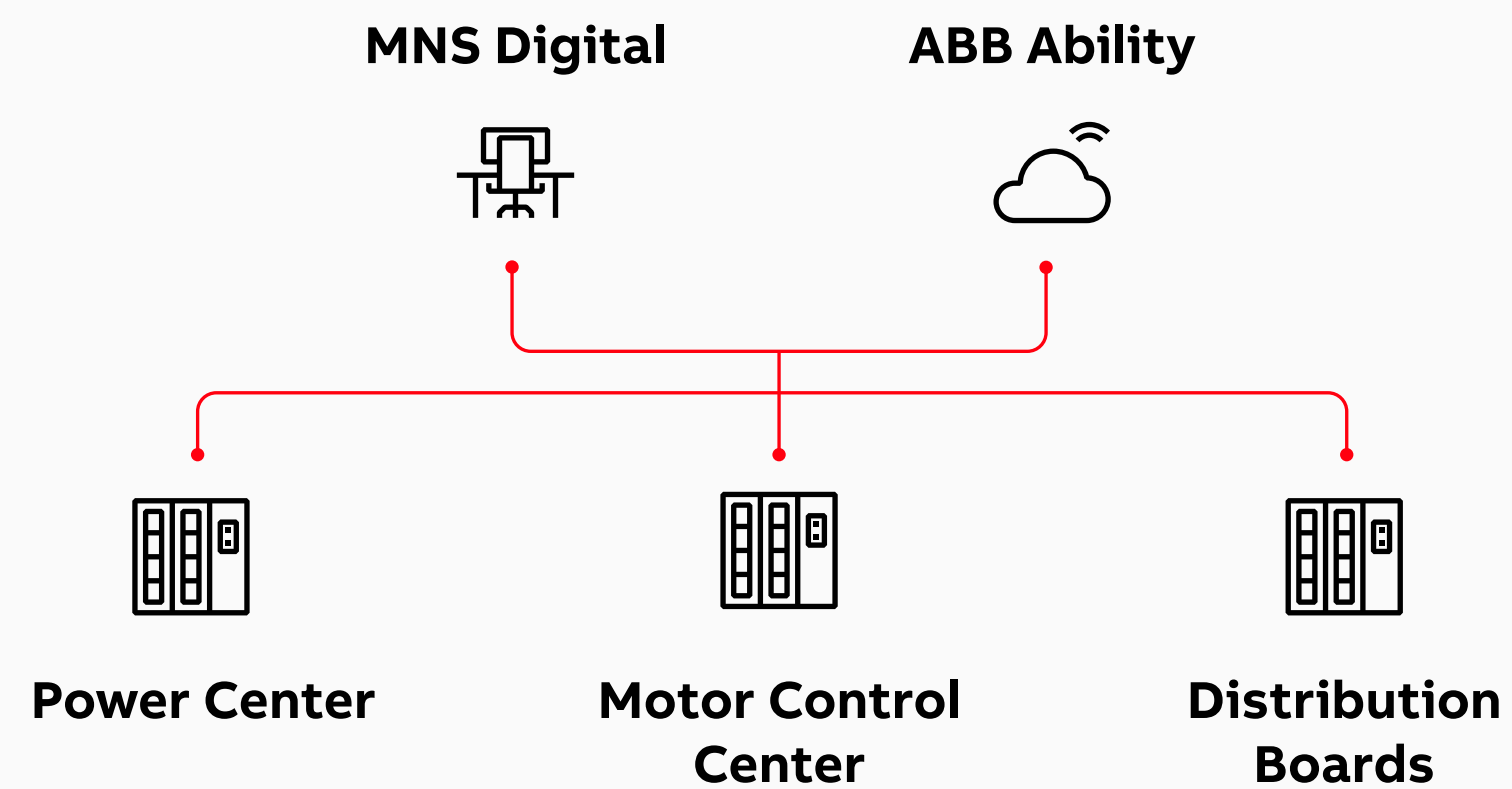
Marine & Offshore

Challenges

- Responding to trends shaping the industry: propulsion and power, smart shipping, big data and analytics
- Optimizing loading efficiency
- Reducing fuel consumption

MNS Solution

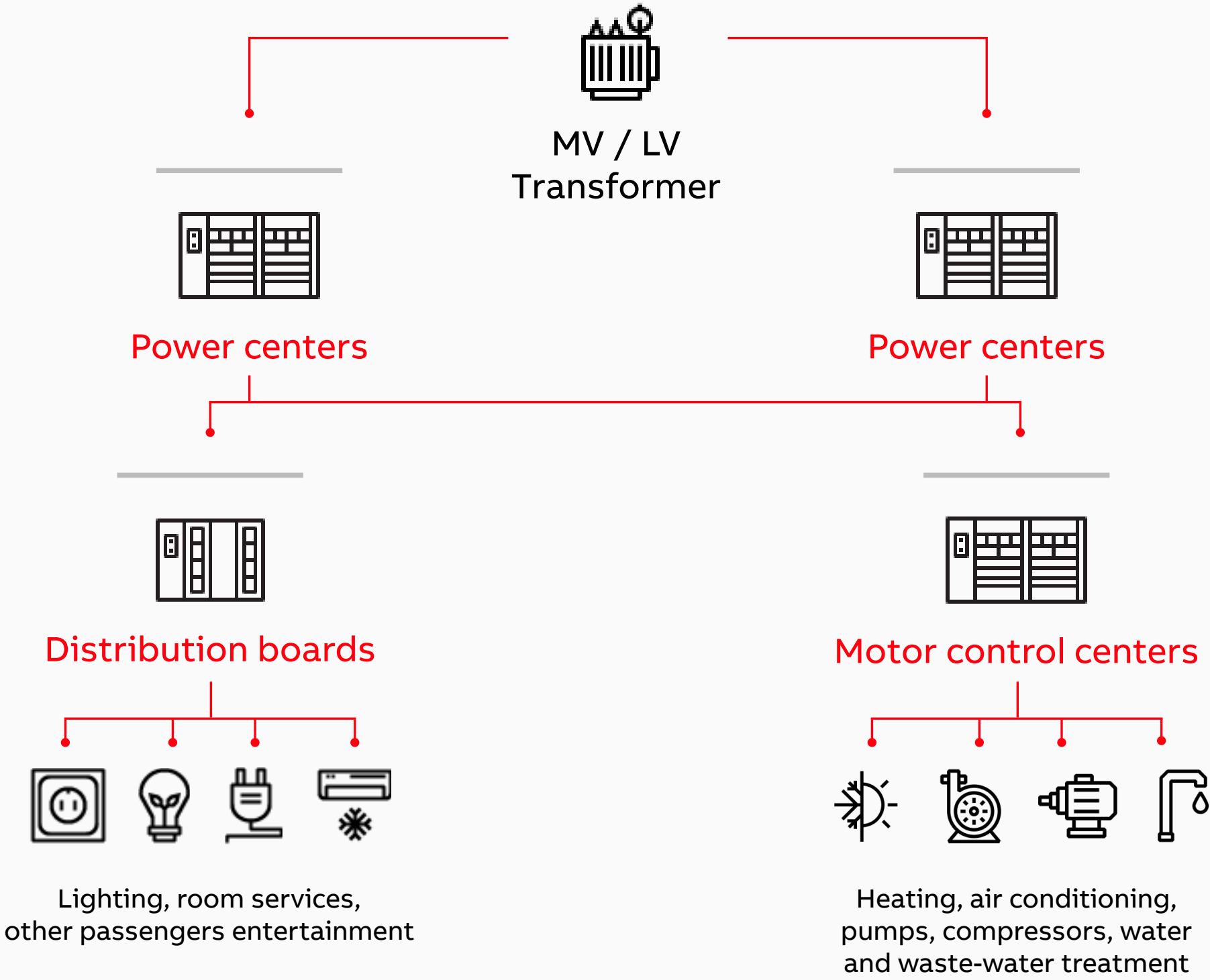
- MNS 3.0 works with CMES to provide predictive maintenance and remote diagnostics to optimize efficiency and reduce downtime
- Unlock the data you need to optimize engine loading and reduce fuel consumption
- ABB Ability™ provides a shore-charging solution designed to reduce noise and overall carbon footprint





ALL INDUSTRIES

Marine & Offshore



ALL INDUSTRIES

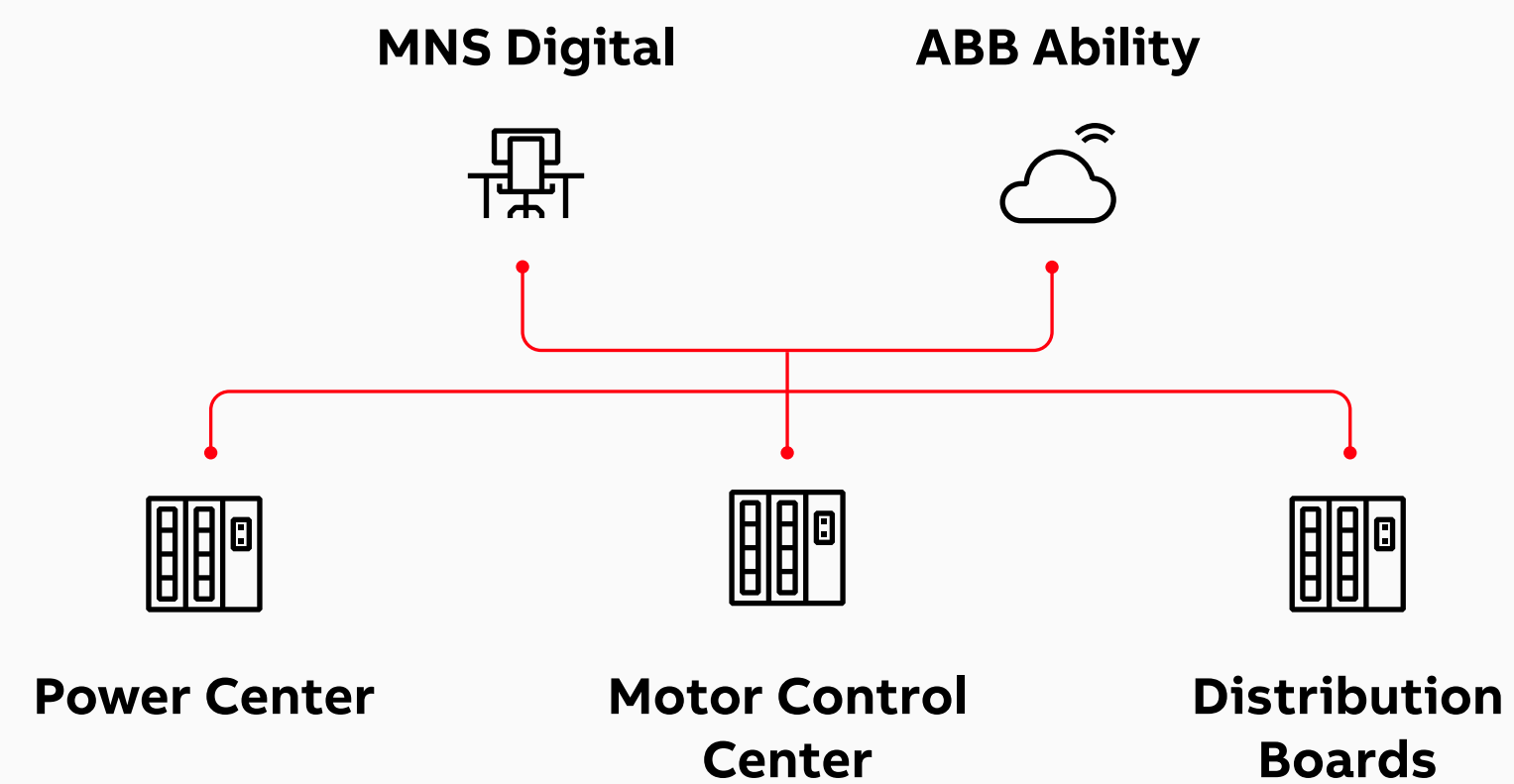
Food & Beverage

Challenges

- Preventing wastage by maintaining high availability and continuous operation across production
- Ensuring safety and creating cost savings that scale

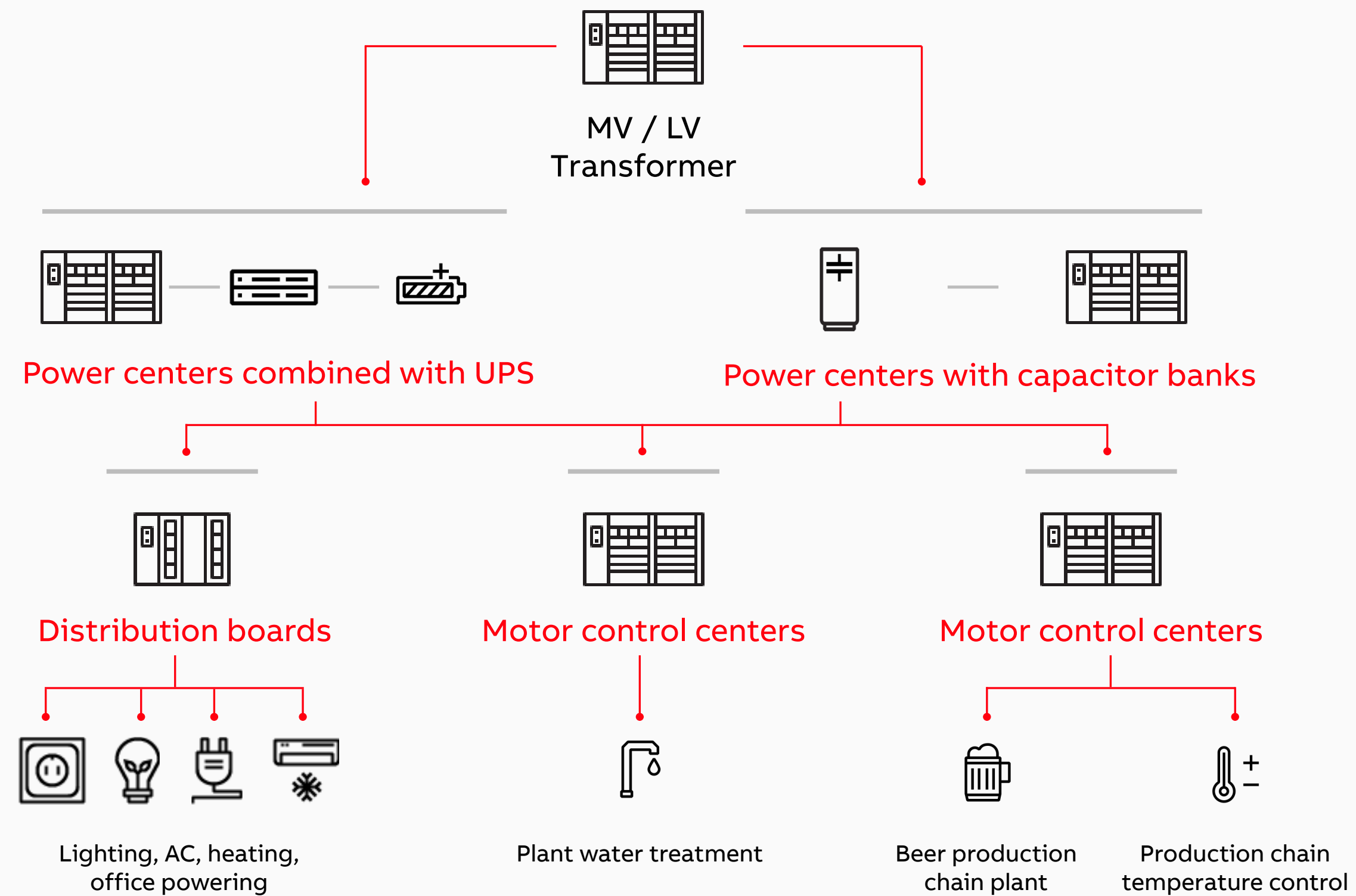
MNS Solution

- Temperature sensors at critical points and switchgear condition monitoring through ABB Ability CMES ensure safe operation and predictive maintenance
- MNS scalable and space saving solutions for energy distribution, motor starting and power quality reduce total cost of ownership by extending asset lifecycles



ALL INDUSTRIES

Food & Beverage electrification infrastructure





ALL INDUSTRIES

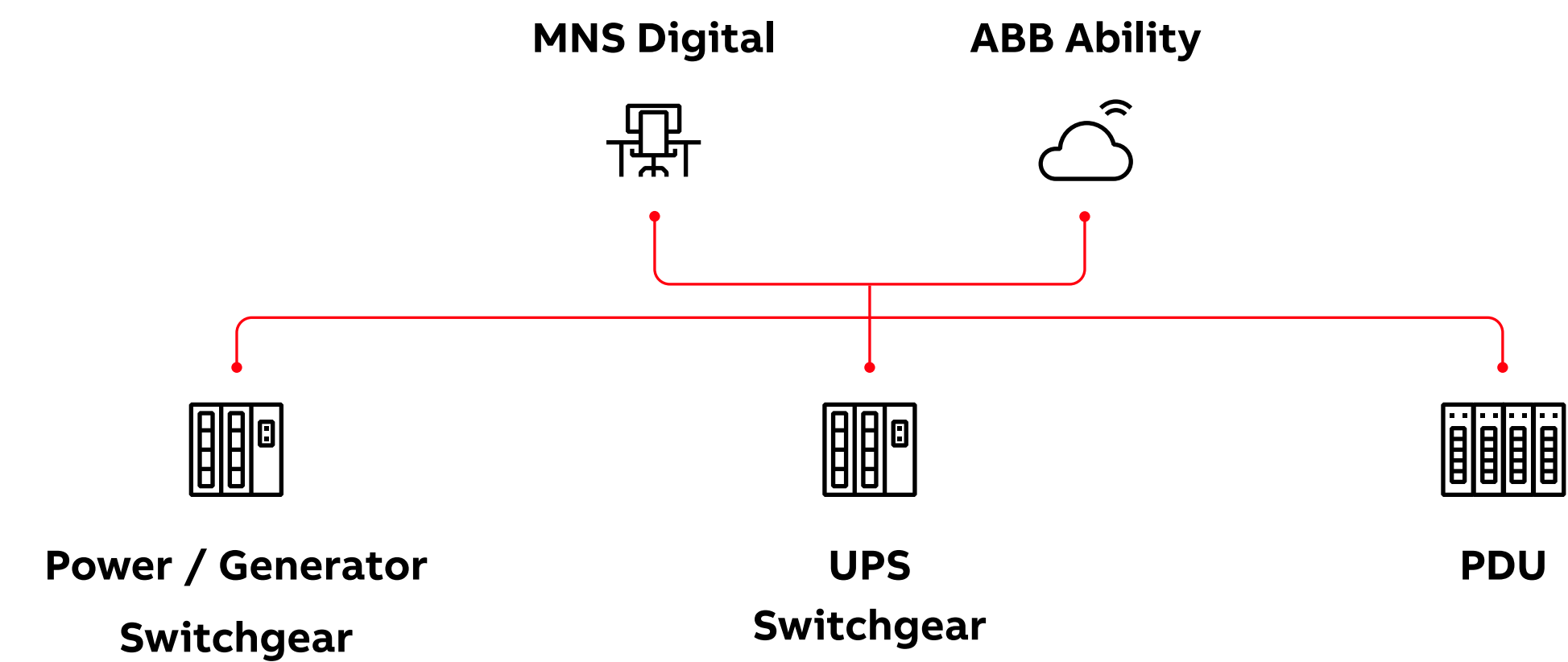
Buildings & Infrastructure

Challenges

- New builds face increasing sustainability and energyconsumption regulation
- Infrastructure needs to handle new economies and population expansion
- Climate change demands a robust response and reduced emissions

MNS Solution

- ABB Ability™ is your one-stop platform, providing real-time insight that allows you to meet sustainability demands with ease and transparency
- MNS and ABB Ability™ provide robust solutions for predictive maintenance and energy management
- The proven technology in MNS Compact and Fixed, and ABB Ability™ ensures asset availability you can rely on

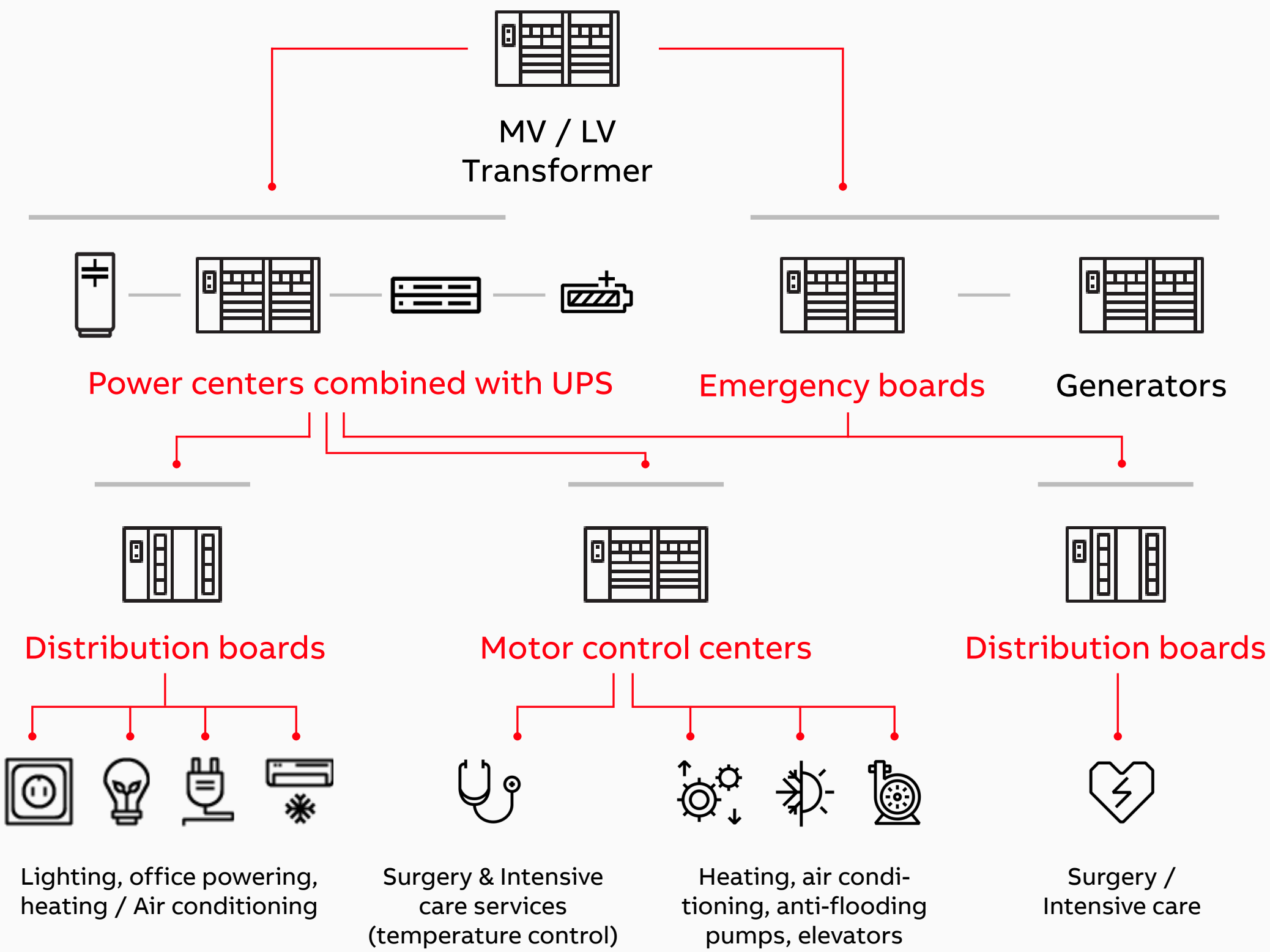




ALL INDUSTRIES

Buildings & Infrastructure electrification infrastructure

Hospitals

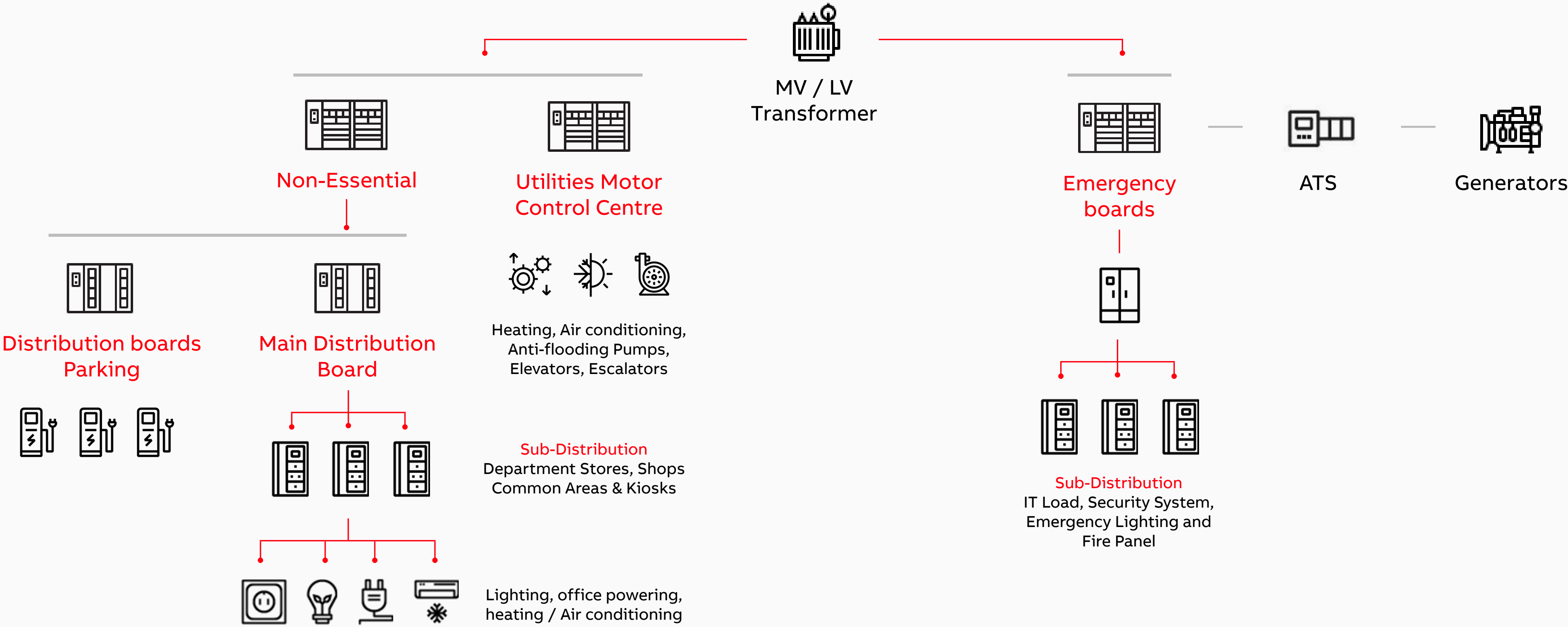




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Buildings & Infrastructure electrification infrastructure

Hospitals





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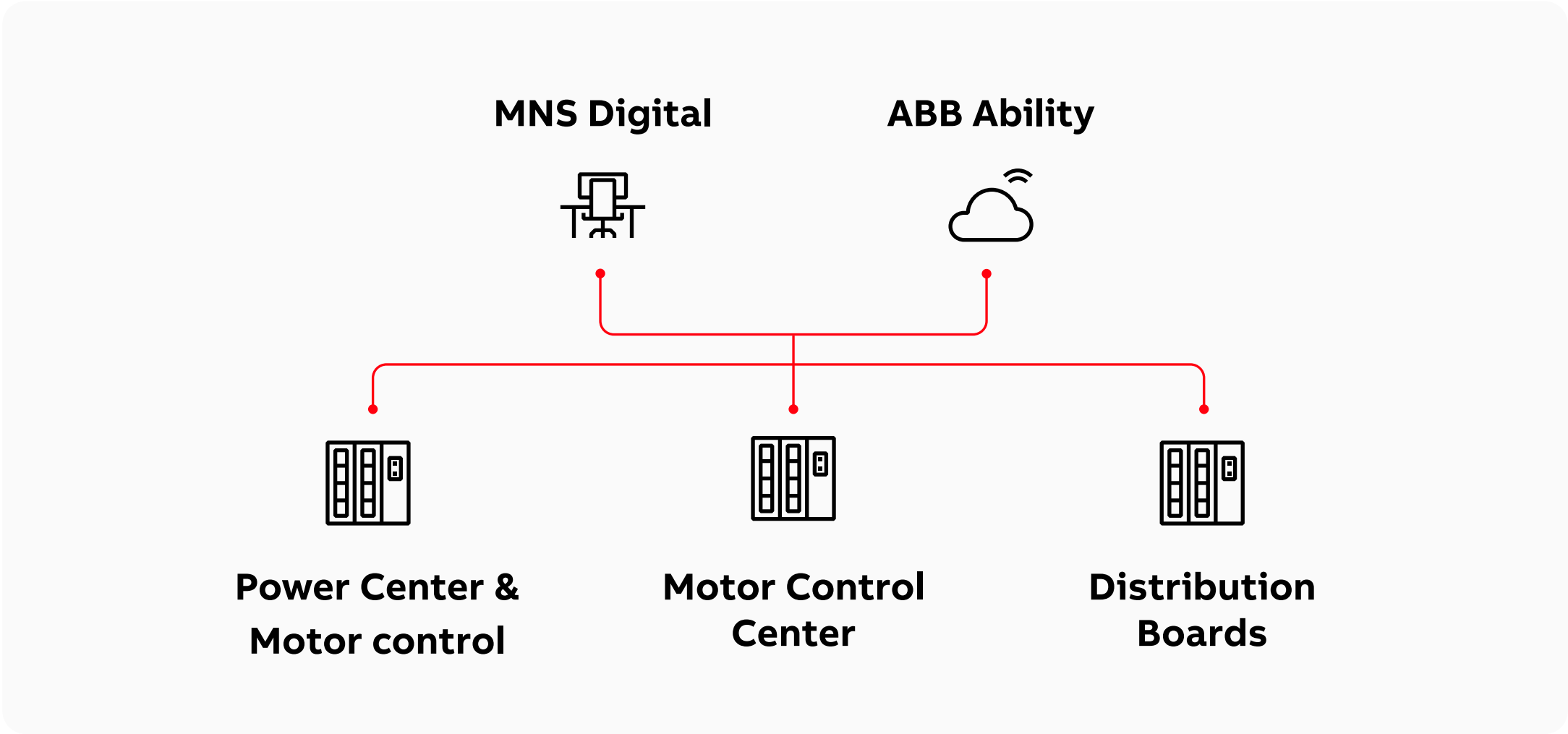
Mining

Challenges

- Meeting escalating standards for reliability, safety and productivity
- Committing to sustainability and reducing your overall carbon footprint

MNS Solution

- MNS 3.0 works with CMES to provide predictive maintenance and remote diagnostics to optimize efficiency and reduce downtime
- Unlocking your facility’s data increases transparency and reveals opportunities for improving sustainability measures



ALL INDUSTRIES

Mining electrification infrastructure

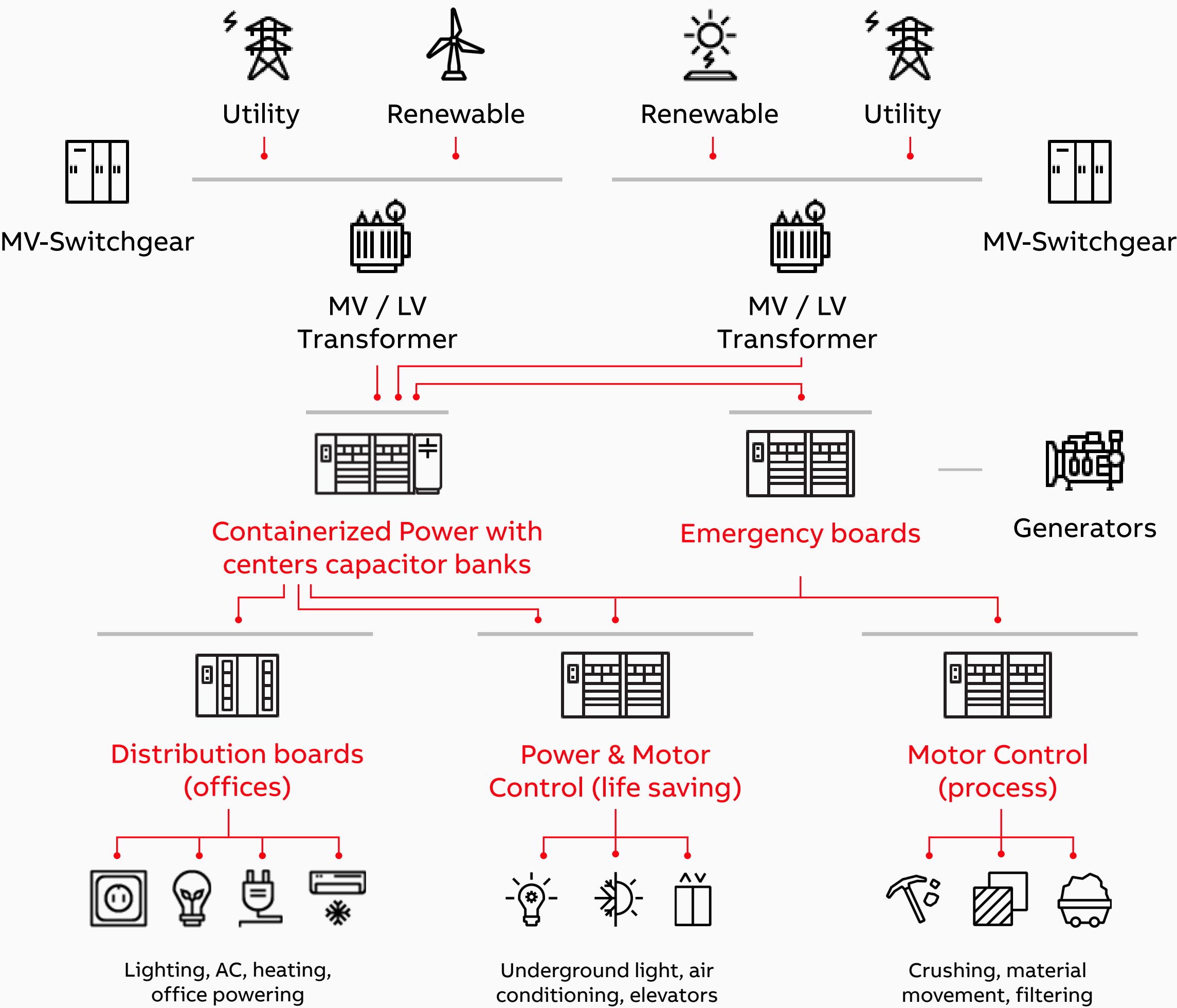




ABB Low Voltage Switchgear

Additional information

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