ABB

ABB Ability™
Electrical Distribution Control System
Understanding power

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ABB Ability™ Electrical Distribution Control System is the innovative cloud-computing platform designed to monitor, optimize, predict and control the electrical system.

ABB Ability™ Electrical Distribution Control System is built on a state-of-the-art cloud architecture for data collection, processing and storage.
This cloud architecture has been developed together with Microsoft in order to enhance performance and guarantee the highest reliability and security.

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Overview
New outlines for Energy and Asset management

Through a compelling web app interface, ABB Ability™ Electrical Distribution Control System assists anytime and anywhere via smartphone, tablet or personal computer so the user can:

Monitor
Discover plant performance, supervise the electrical system and allocate costs.

Optimize
Schedule and analyze automatic reports, improve the use of assets and take the right business decision.

Predict
Supervise the system health conditions and predict next maintenance actions.

Control
Set up alerts and notify key personnel, and remotely implement an effective power management strategy to achieve energy savings in a simple way.

ABB Ability™ Electrical Distribution Control System also provides access on a multi-site level - monitoring and comparing the performances of different facilities at the same time.

In addition, it allows profiling of the users' experience according to the level of access they require.

According to the customer needs and application, the user can choose between two configurations to connect the system to ABB Ability™ Electrical Distribution Control System: embedded or external.

The first, just a cartridge-type module, the innovative Ekip Com Hub, has to be provided to Emax 2 circuit breaker, Ekip UP and TruONE™.

The second, the Ekip E-Hub module has to be mounted on DIN-rail.

Architecture
Truly plug & play

Embedded solution with Ekip Com Hub
Emax 2, Ekip UP and TruONE equipped with the new Ekip Com Hub establishes the cloud connection for the whole switchboard.

This dedicated cartridge-type communication module just needs to be inserted into the terminal box and connected to the internet.
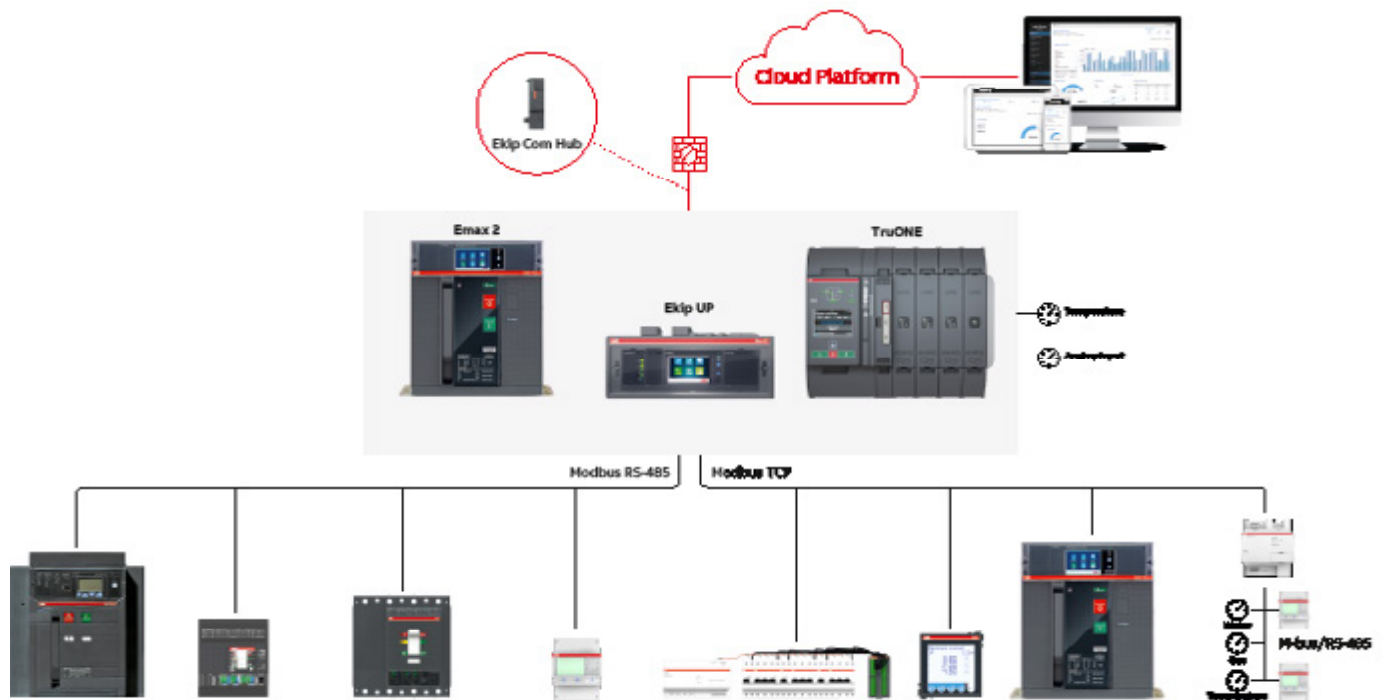

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ABB showcases a further evolution in the low-voltage distribution business, setting a new benchmark in terms of simplicity and performance.

ABB Ability™ Electrical Distribution Control System enables the collection of relevant information from the ABB devices installed in the low-voltage power distribution system.

These devices can be connected, plug & play, to the cloud-computing platform by sharing data either with Emax 2 (equipped with Ekip Com Hub) or with Ekip E-Hub via Modbus RS-485, Modbus TCP.

Family	Device
Low voltage MCCB	Tmax XT
	Tmax T
Low voltage ACB	New Emax
	Emax 2
Digital units	Ekip UP
Low voltage switches and fusegear	TruONE ATS
	Slimline XR ITS 2.1
Digital inputs interface	Ekip Signalling MODBUS TCP
Sub-Metering	EQ Meters
Power meters	M2M
Branch monitoring	CMS700
Medium voltage relays	REF 542 Plus
And many others to come...	

External solution with Ekip E-Hub
The Ekip E-Hub module can be mounted on DIN rail to collect data throughout the system. Moreover, it is possible to connect sensors for environmental parameters (temperature, water, gas) via both analog and digital I/O. Modules for Wi-Fi or GPRS connection are provided as optional features.
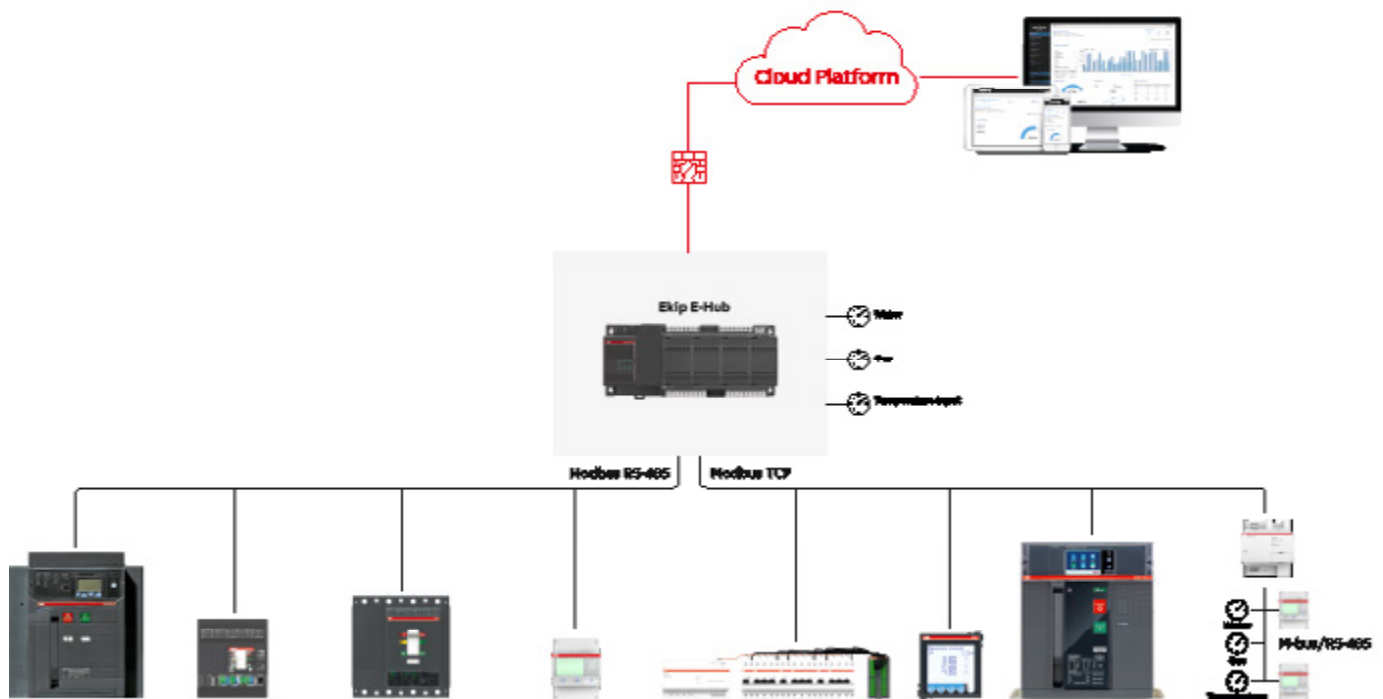
	INFORMATION										COMMUNICATION
State	Current	Voltages	Power	Energy	Power factor	Power quality	Maintenance & Diagnostics	Load management	Analog or pulse/ digital inputs		Protocol
•	•	•	•	•	•	•	•	•		•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•	•	•	•		•				Modbus RS485
•	•	•	•	•	•	•	•				Modbus RS485
•	•	•	•	•	•	•	•	•		•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•	•	•	•	•	•	•		•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•	•	•	•	•	•	•		•	Modbus RS485, Modbus TCP, Ekip Com Hub
•	•	•					•				Modbus RS485
•										•	Modbus TCP
	•	•	•	•	•						Modbus RS485
	•	•	•	•	•	•					Modbus RS485, Modbus TCP
	•	•	•	•							Modbus TCP
	•	•	•	•	•						Modbus TCP
* Provided the product with dedicated accessories for communication and metering functions ** only with Ekip E-Hub module											

Monitor
Discover facility performances any time, anywhere

ABB Ability™ EDCS Dashboard provides users with an entry-level energy management solution based on preconfigured widgets.

Single or multi-site information is processed to display energy consumption and on-site power generation trends.

Both the compelling user interface and the intuitive and immediate availability of data help users to check up on the most relevant information related to different facilities.

ABB Ability™ EDCS Assets enables simplified and enhanced management of low-voltage power distribution system. Users are able to create a sketch or overview of the assets and link it to its "digital twin." Further, users can upload custom diagrams, photos, technical drawings of switchboards and plant synoptic panels. As in the social media world, these images can be made interactive through tags and markers. Users are now able to access, at any time, all the information they need for the devices monitored (as state of devices, present of alerts, maintenance, etc..).

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Control
Implement your strategy
and reach the goal

The **ABB Ability™ EDCS Power Controller** feature makes load management simple, accurate and remote by combining ABB Ability™ EDCS and Emax 2 Power Manager.

Users can set remotely the power demand they want to target with a weekly, daily or hourly resolution.

Savings and penalty avoidance are guaranteed by simply cutting down demand through a non-priority load shedding / reinsertion routine.
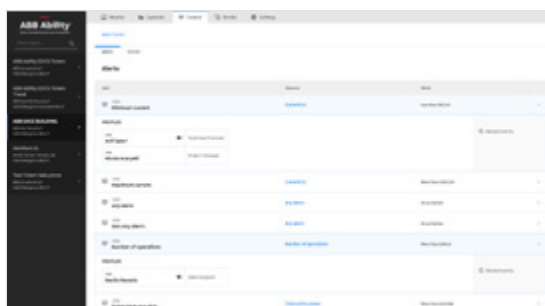
ABB Ability™ EDCS Alert Center provides the users with a plant watchdog. Users can customize alert on single measurement and device level to suit their needs and intervention plan.

Moreover, they can prompt key personnel to take swift action at any time: notifications are sent to the chosen recipients via text messages and/or email. In this way, ABB Ability™ EDCS makes it possible to automatically check up on the electrical systems any time, identify abnormal operations and proactively restore performance.

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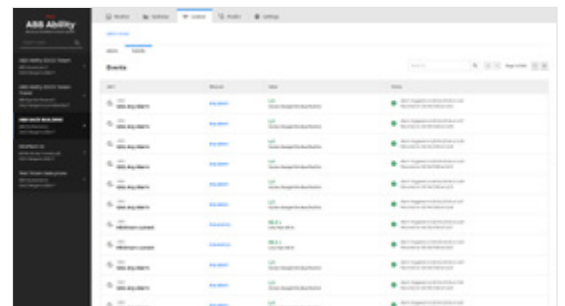
Optimize
Collect your data, analyze information and take your decision
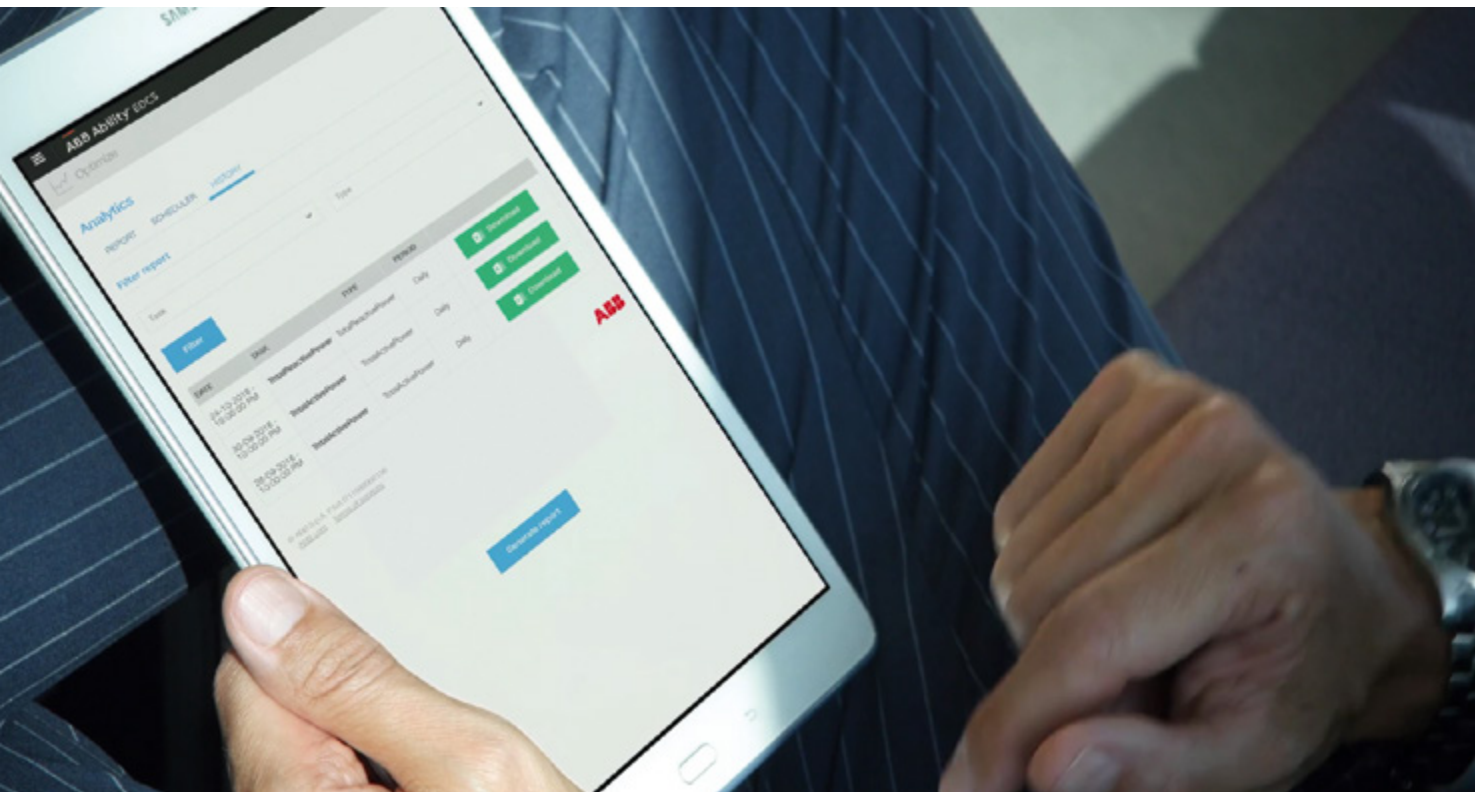
ABB Ability™ EDCS Analytics enables collection and export of data and historical trends, via on-demand query or automatic report scheduling. Users can achieve full knowledge of the electrical systems to set effective benchmarks and compare with best practices. Furthermore, users can digitally file service operations and leverage the power of data for predictive maintenance.

ABB Ability™ EDCS Analytics simplifies and enhances the analyses of power factor compensation, energy management and cost allocation.

By leveraging a comprehensive collection of data, at the single or multi-site level, taking the right decisions is made easier than ever.
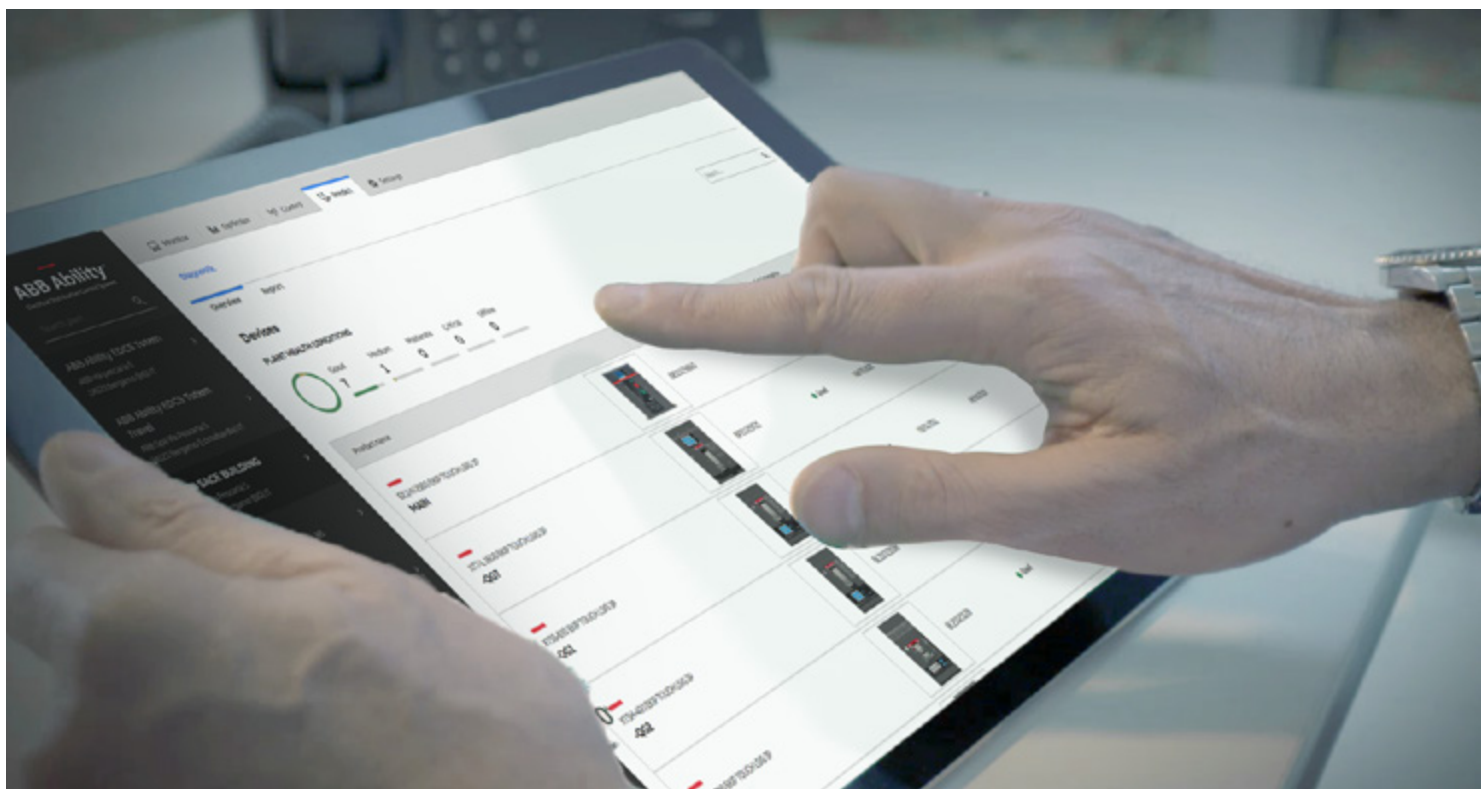
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Predict
## Supervise the system and schedule its maintenance

ABB Ability™ EDCS Diagnostic lets customers optimize system operating conditions evolving from a pure routine to need-based maintenance.

The ABB Predictive maintenance algorithm makes maintenance smarter, quicker, and less expensive enabling the users to remotely monitor the health of their power system providing an accurate predicting maintenance analysis and optimizing service intervals only when needed.

The analysis combines different key factors such as the real-time number of mechanical operations, nominal current, overloads and short circuits, and environmental conditions such as humidity, temperature, vibration and corrosion.

This cloud-based solution significantly reduces the risk of unplanned shutdowns maximizing service continuity, management and investments costs.

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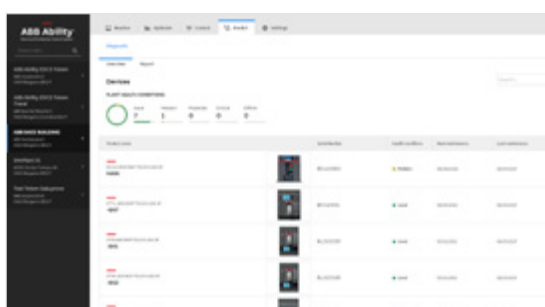
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Ease of use
Power of understanding at your fingertips

ABB Ability™ Electrical Distribution Control System's ease of use sets a benchmark thanks to its integrated and plug-and-play architecture. ABB Ability™ Electrical Distribution Control System requires neither engineering nor special support for commissioning, so users can forget about the cost and time-consuming setup of an energy monitoring and management system involving many components.

For the embedded method, a cartridge-type module - the innovative Ekip Com Hub - just has to be added to the Emax 2 circuit breaker, Ekip UP and TruONE™. The external method simply involves mounting an Ekip E-Hub module on a DIN rail. Then, Ekip Connect commissioning software will set up the system and enable ABB Ability™ EDCS with a few steps.

Once the connection is set up, it is possible with a few clicks to extend access to the platform to further users such as partners and staff. Each of them can be entrusted with tasks and authorizations according to their appointed role in the specific plant.
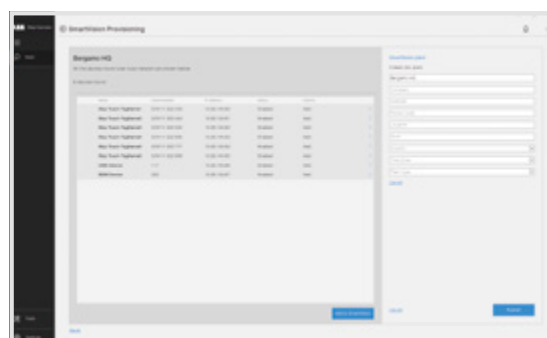
ABB Ability™ Electrical Distribution Control System features an intuitive and compelling graphic interface that guides the user through their job, presenting all the relevant information they seek, derived from thousands of parameters collected from the field.

All the operations run on the ABB Ability™ Electrical Distribution Control System platform are simple, expediting the task of delivering the maximum result.
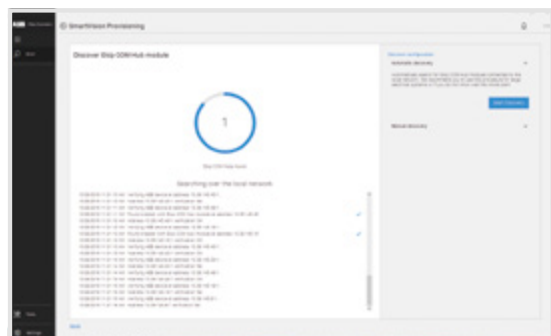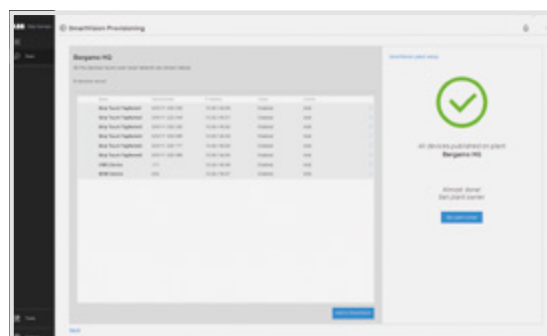
Start Ekip Connect 3.0 wizard
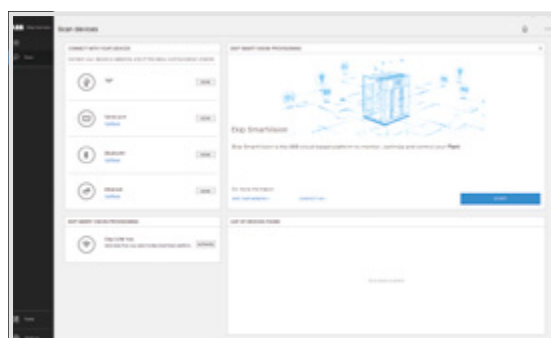
Configure devices and plant

Scan the network

Publish to cloud

Value propositions
Your added value
from design to operations

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ABB Ability Electrical Distribution Control System brings advantages to customers from the design to the operations stage.

The digital solution adds value to facilities, meeting customer demands and enabling them to comply with higher energy efficiency standards.

Real time analysis of valuable data from field devices enables customers to closely monitor the performance of multiple installations with a single supervision system.
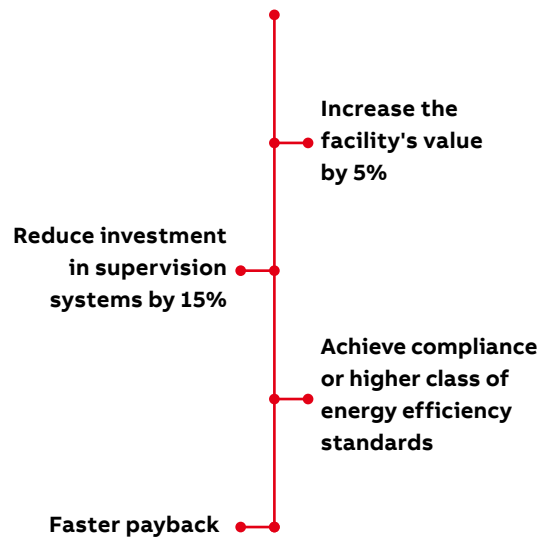
Clear information about consumption and improvement opportunities makes cutting waste and improving energy efficiency simple. Customers also benefit from lower energy bills and reductions in unplanned downtime.

ABB's "plug and play" devices make installation quick and easy. Customers can make existing installations smart with no need to replace components. New and retrofitted solutions are up and running in no time, immediately starting to collect data.
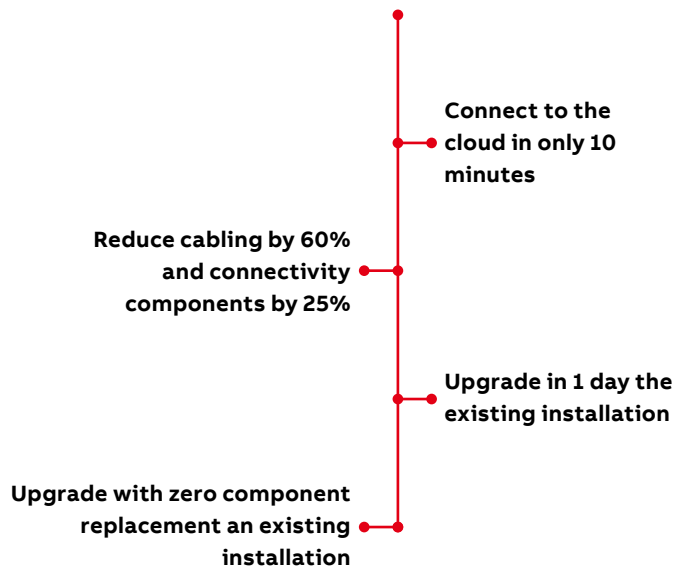
Design and Specification

Speed up
your project

Increase the facility's value by 5%

Reduce investment in supervision systems by 15%

Achieve compliance or higher class of energy efficiency standards

Faster payback

OWNER
DESIGN CONSULTANT
ENGINEERING COMPANY

Installation

Easy
to install

Connect to the
cloud in only 10
minutes

Reduce cabling by 60%
and connectivity
components by 25%

Upgrade in 1 day the
existing installation

Upgrade with zero component
replacement an existing
installation

INSTALLER
PANEL BUILDER
SYSTEM INTEGRATOR

Operations

Energy
efficiency

Save up to 20%
on maintenance
costs

Save up to 20%
on energy bill

Get proactive alerts
and guarantee
operations in 1
minute

Remove energy
inefficiency by
up to 10%
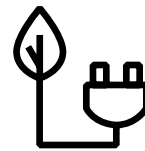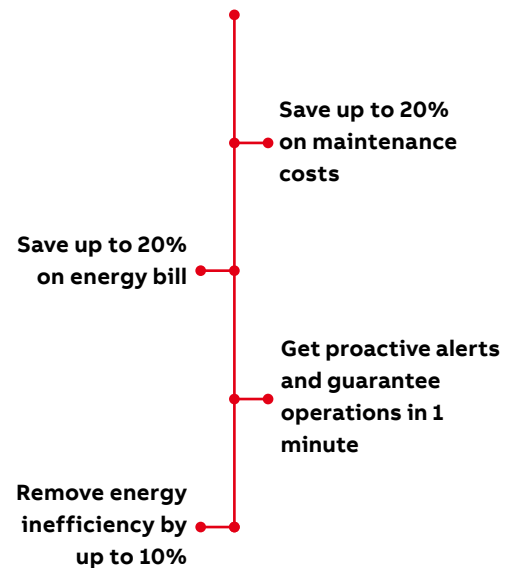
OWNER
ENERGY MANAGER
MAINTENANCE PROVIDER
FACILITY MANAGER

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Applications
High flexibility

ABB Ability™ Electrical Distribution Control System is based on a simple and integrated architecture, with self-configuring connection and guided commissioning that guarantees high flexibility of application.

Buildings
- Commercial buildings
- Offices
- Shopping malls
- Hotels
- Retail or chain stores

Public facilities
- Schools
- Sport centers
- Healthcare facilities

Industrial sector
- Small to mid-sized production plants
- Infrastructure
- Process plants

Commercial Info
How to get started

A very simple shopping list, for your easy energy and asset management solution.

Hardware
- **Ekip Com Hub**
  Emax 2 air circuit breaker embedded communication module for cloud-connectivity.
- **Ekip E-Hub**
  DIN-rail mounted communication module for cloud-connectivity.

Services
- **ABB Ability™ EDCS subscription**
  12-months subscription to monitor, optimize and control one site. Up to 15 users access, 2 year historical data depth*

Commissioning tool
- **Ekip Connect 3.0**
  The commissioning and programming software available via free download.

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By purchasing the connectivity hardware, you will be able to access the ABB Ability EDCS Dashboard for up to 2 years.

In order to benefit of all the features of ABB Ability EDCS, you can simply purchase online a 12-month subscription (with an initial 6-month free trial period).

* Price varies according to the number of connected devices within the site

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