

# „Digital Dialogue“ Agenda | September 23, 2020

01.

8AM | 3PM

Keynote – How to achieve sustainability targets

Dr. Amina Hamidi

Chief Technology Officer, ABB Electrification

02.

9AM | 4PM

How to keep reliable electrification

Luca Cavalli

Head of Asset Management, ABB Electrification

03.

10AM | 5PM

Energy management solutions for increased efficiency

Valerio Livoti

Head of Energy Management, ABB Electrification

04.

11AM | 6PM

How to reduce cost of ownership of EV chargers

Sydney Van Bokhoven

Global E-Mobility Solutions Development Manager, ABB Electrification

Please wait. The webinar session is about to start soon!

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# Luca Cavalli

Head of Asset Management  
ABB Electrification

How to keep reliable  
electrification?

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 [luca-cavalli](#)





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LUCA CAVALLI | HEAD OF ASSET MANAGEMENT, ABB ELECTRIFICATION

# ABB Ability™ “Digital Dialogue” webinar

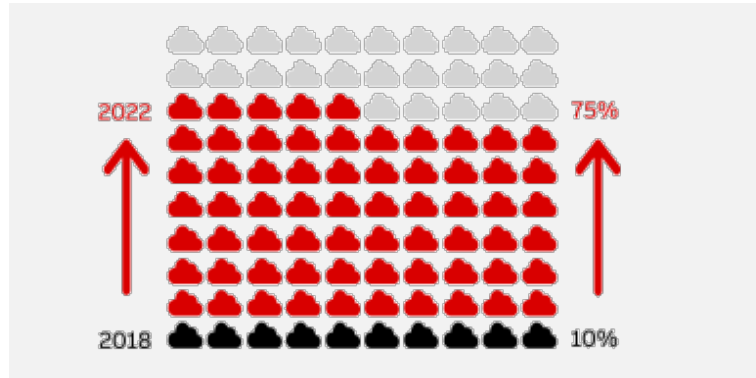
## How to keep reliable electrification





# Global growth drivers require more reliability

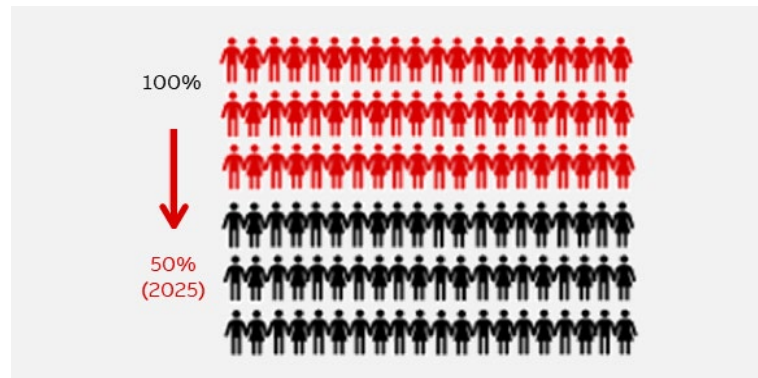
## Data and digitalization



**7.5x**

Increase in data processed  
outside of originating core

## Experienced workforce



**-50%**

US utilities experienced workforce will  
retire by 2025

## Health, Safety, Environment

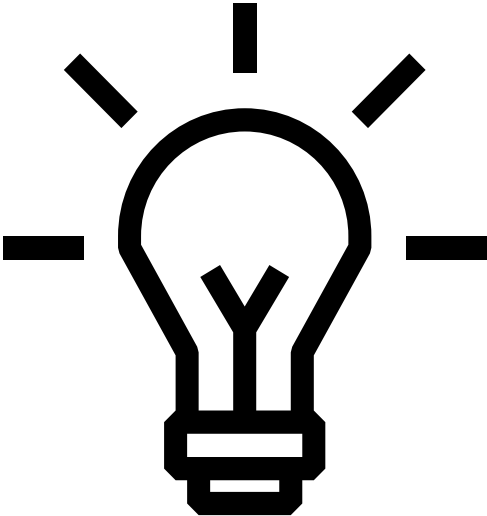


**+47 %**

Direct and indirect costs of workplace  
injuries

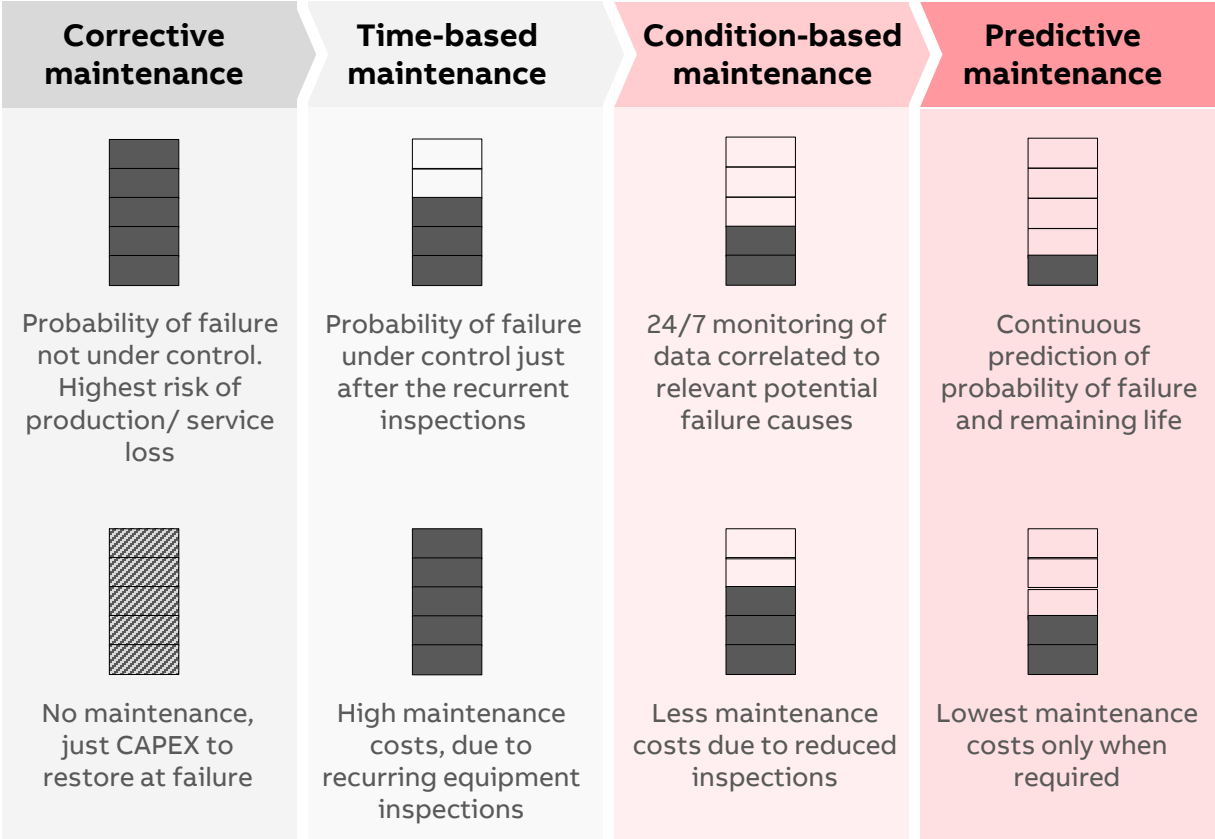
# Maintenance strategies digital re-volution

Digital helps to evolve



Indirect costs  
(consequence  
of failure)

Direct costs  
(maintenance  
and spares)



# Predictive maintenance savings

100%

PREDICTION AVOID  
HIGH COSTLY  
UNPLANNED LABOR

30%

DECREASE  
MAINTENANCE TIME

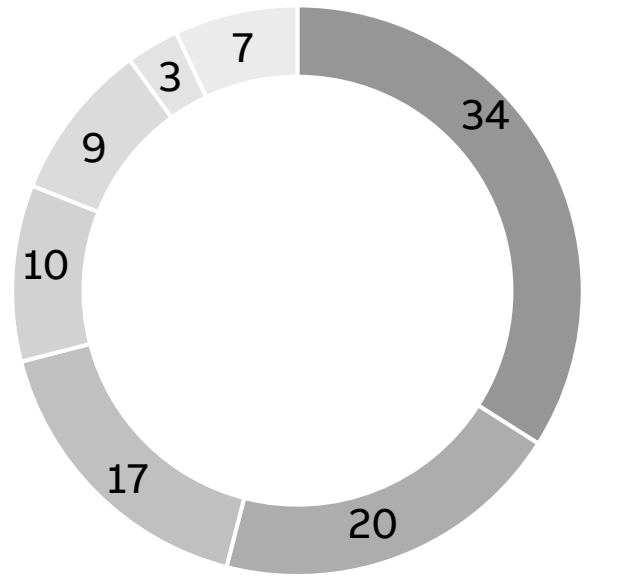
30%

REDUCE  
MAINTENANCE  
FREQUENCY

Equipment	Maintenance	Preventive (time-based)		Predictive	
		Frequency	Time	Frequency	Time
MV circuit breaker	Visual/Basic	3 years	2 h	4 years	1.4 h
	Advanced	5 years	2 h	6 years	1.4 h
MV switchgear	Visual	0.5 years	0.5 h	3 years	0.35 h
	Basic	5 years	0.75 h	6 years	0.5 h
	Advanced	10 years	2.5 h	13 years	1.75 h

Examples based on ABB experience

## Predicting main electrical failure causes

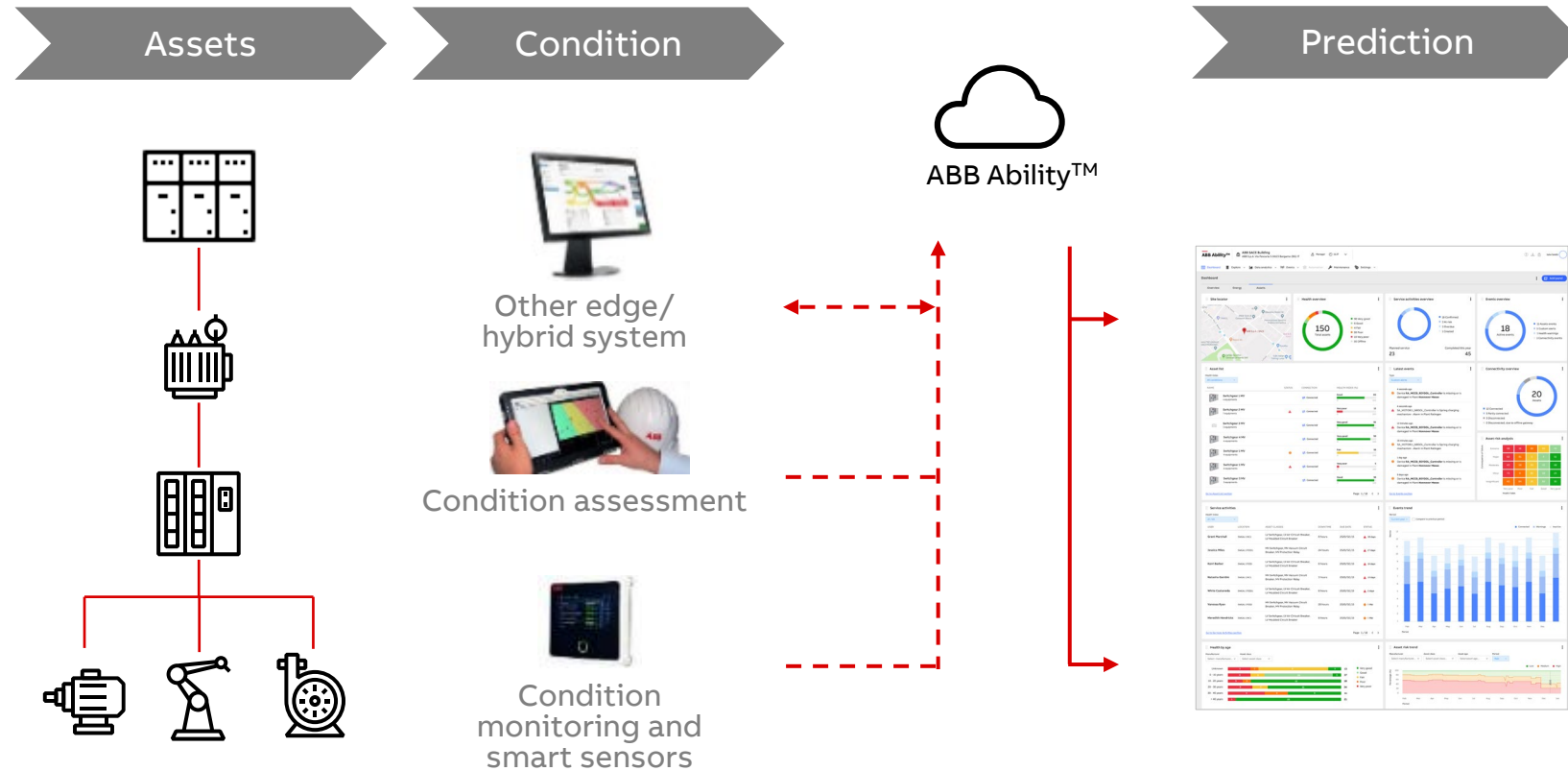


- Loose connections/joint
- Environment & humidity
- Incorrect work
- Faulty insulation/short circuit
- Faulty equipment (mechanical)
- Overload
- Other

## Relevant benefits

- Minimized risk of unplanned downtime
- Up to 40% maintenance-cost reduction: avoid unnecessary inspection and maintenance
- Up to 15% extended asset lifetime
- Monitoring up to 70% of potential asset-failure causes
- Keep operators safe with remote monitoring, and schedule maintenance remotely

# Scalable and flexible predictive insights



## ACTIONABLE INSIGHTS

**Health dashboard:** How are the assets performing? Which one needs attention?

**Predictive analysis:** When is the best time to schedule maintenance? And what do I need to do?

**Optimize maintenance:** Schedule and track service activities driven by predictive analytics actionable output.



# Predictive analytics example

## Conditions

- \* Vibration ☒ Low ☐ Medium ☐ High
- \* Corrosion ☒ Low ☐ Medium ☐ High
- \* Dust level ☒ Low ☐ Medium ☐ High

\* Humidity

Less Than 70%

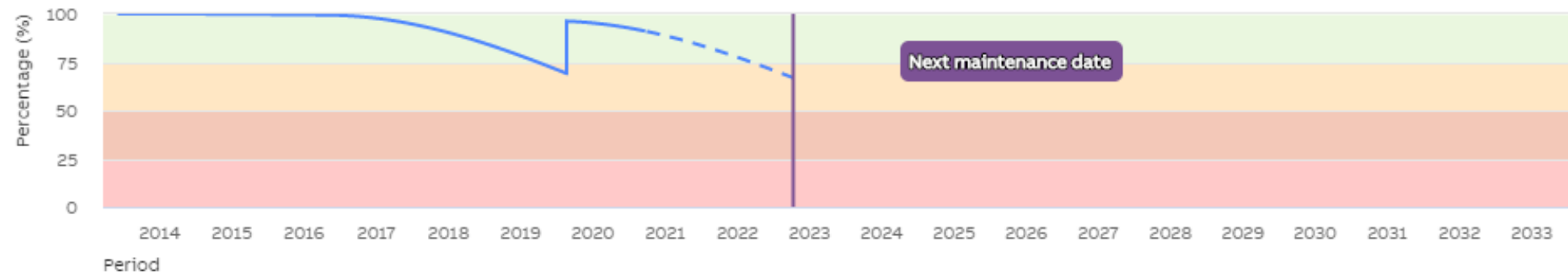
\* Salt

Between 1 and 10Km

\* Average yearly T

Between 0° and 25°

Last maintenance **19/08/2019** Next maintenance **09/10/2022**



# Facility, asset and maintenance manager journey

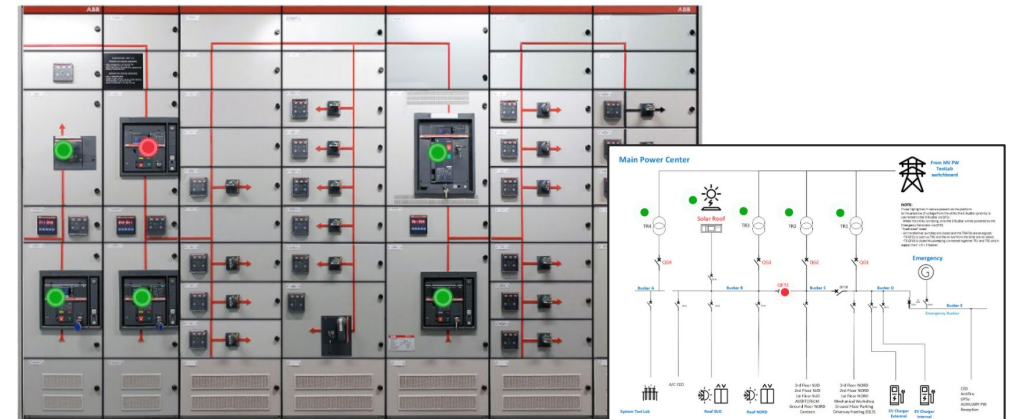
## 01. Sites view

Remote supervision of the facilities (multi-site): owner or service provider can take action everywhere, anytime



## 02. Electrical system digital twin

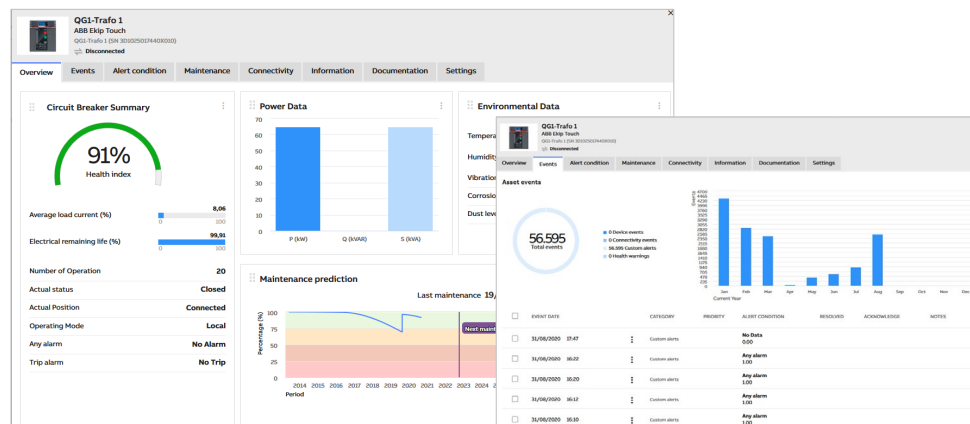
ABB Ability™ enables a digital twin of the electrical system. Ease of use: interactive images through tags and markers.



# Facility, asset and maintenance manager journey

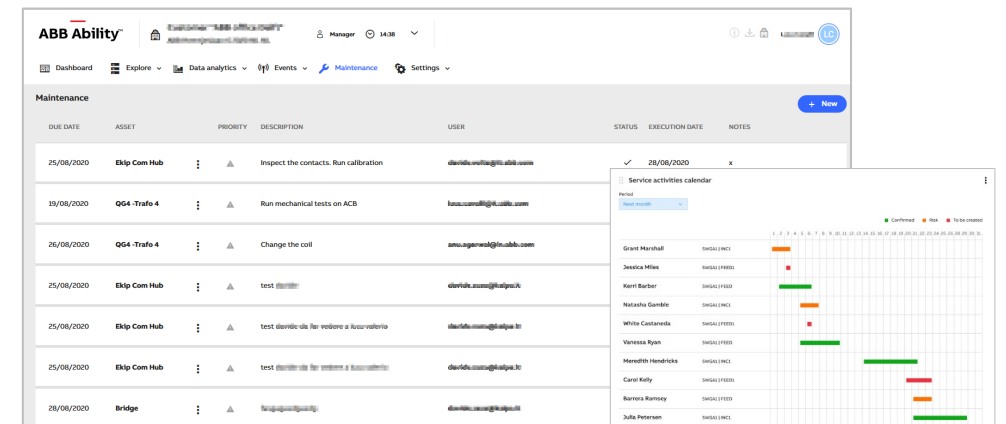
## 03. Asset insights

Get the full picture remotely: asset health indication, events and alerts management, maintenance date and prescriptions, and documentation



## 04. Act: scheduled and track maintenance

Based on prescriptions plan maintenance, assign to field service, track activities and reporting.



# New business model for software: from CAPEX to OPEX

ABB Ability Marketplace™



## Asset management Software as a Service

no need to implement complex systems  
on site



## Subscription model

easy to purchase. Get only what you need,  
only pay for what you get



## Quick return of investment

no big investment upfront reduces the  
payback period. Total Cost of Ownership  
under control.

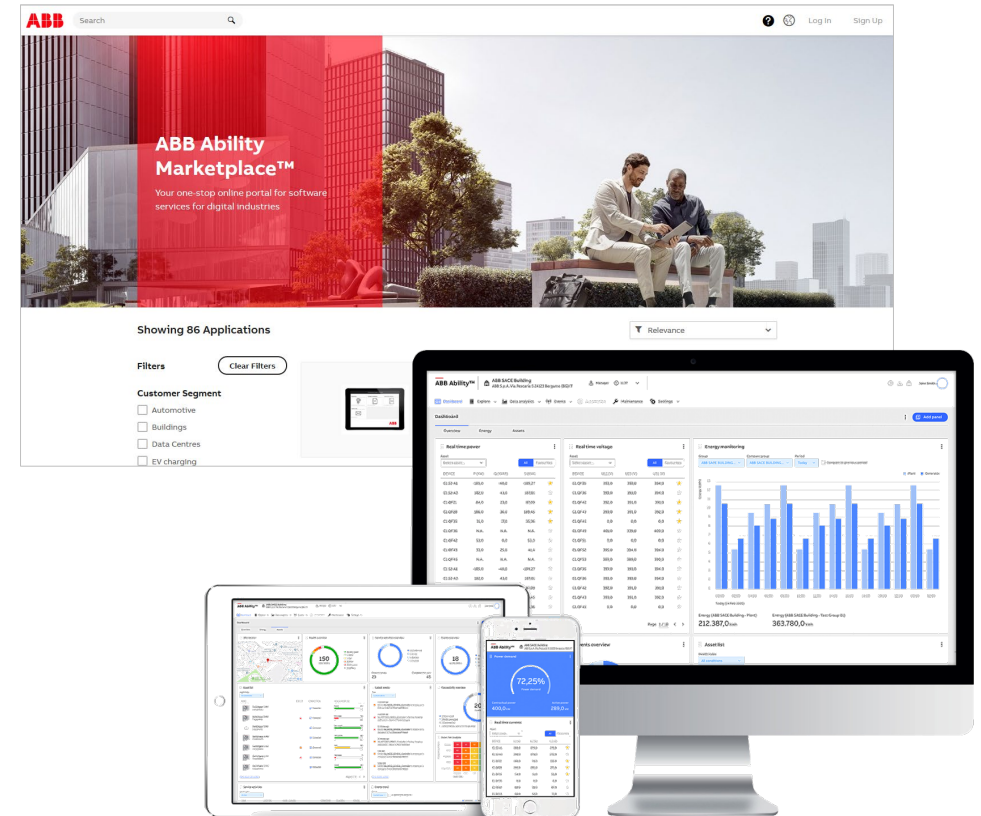
**SIMPLE**

**FLEXIBLE**

**SCALABLE**

**LOW TCO**

**EASY TO  
DEPLOY**





# Coming soon!

## ABB Ability™ Asset Manager



Improving overall performance

You can save up to...

- 20% on energy bills
- 100% on unplanned labor
- 40% on maintenance costs
- 30% in operational costs



**Q&A**





**ABB**