



**01|2021**

Powered by  
knowledge



**02|2021**

Machines with  
intelligence

## Innovation highlights 2021

08 Selected innovations in brief

## Technology insights

24 Innovation and speed in industrial AI  
28 ABB's Industrial AI Accelerator  
30 5G for digital industries  
37 Ekip UP asset and power management  
42 Quantum computing: hype & hopes

## Productivity

50 Condition monitoring  
54 Stretching measurement limits  
60 The road to automated engineering  
66 MP<sup>3</sup>C for electric devices  
74 Robots on automotive assembly

## Buzzword demystifier

78 Golden batch analytics

## Machines with intelligence

08 The digital Lighthouse Program  
14 Autonomous anomaly detection  
18 Machines and robots  
22 One-stop-shop solution  
24 Explainable artificial intelligence  
31 Golden batch analytics  
36 Humanizing technology

## Sensors and analytics

40 From sensors to deep insights  
46 Digital services for gas analyzers

## Energy for action

52 Computer-based dielectric testing  
58 EV charging  
62 The Tmax XT digital breaker  
68 ReliaGear® neXT and ReliaGear® SB  
72 Puffer-type load break switch  
78 Rogowski sensors

## Buzzword demystifier

82 Smart materials



## 03|2021

### Assets and connectivity

#### Digital assets

- 08 ABB Ability™ Genix
- 14 Delivering digital tools faster
- 20 The digital twin
- 26 Product digital twin
- 32 Hybrid predictive maintenance

#### Productivity

- 42 IE5 synchronous reluctance motors
- 46 A new class of coworkers
- 52 Steel melt shop

#### Connectivity

- 60 Ethernet-APL with OPC UA
- 68 New circuit breaker
- 74 Cleaner future for ships and ports

#### Buzzword demystifier

- 78 Multibody simulation



## 04|2021

### Logistics

#### Research Award

- 06 Hubertus von Grünberg Award

#### Logistics

- 10 ACOPOS 6D
- 16 ACS880 with anti-pendulum function
- 26 mySpareParts widget
- 32 Operator audit trails
- 38 Mine electrification
- 44 Marine emission monitoring
- 48 Hydrogen fuel cell research
- 50 Optimizing stockyard operations
- 54 Stockyard Management System

#### Efficiency & Productivity

- 60 ABB Ability™
- 62 Home automation system
- 66 System pro M compact® InSite

#### Perpetual Pioneering

- 74 Azipod® propulsion

#### Buzzword Demystifier

- 80 Autonomous shipping