



Panel 1
Minería, Pulpa & Papel,
y otras industrias: El
Futuro para los
Procesos Industriales

09:00 - 09:55 hrs

## **Moderador**

### Javier Ruíz del Solar

Ingeniero civil eléctrico de la Universidad Técnica Federico Santa María, con postgrado en España y un doctorado en Alemania. Profesor e investigador de la Universidad de Chile



Javier Ruíz del Solar Director Ejecutivo, Centro Avanzado de Tecnología para la Minería - AMTC, Chile

## **Panelistas**



Pablo Figueroa C.
Local Division Mgr, Drive
Products, Motion, ABB



**Cristian Aranda S.**Business Sales Mgr.,
Electrification, ABB



Iván Villegas M.
Latam Automation Mgr.
Process Automation, ABB



# ABB Ability<sup>TM</sup> Condition Monitoring for powertrains





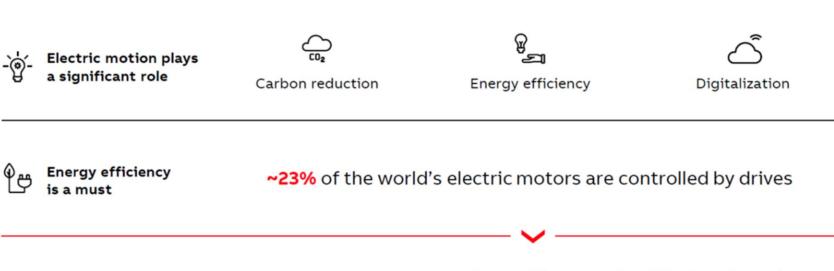






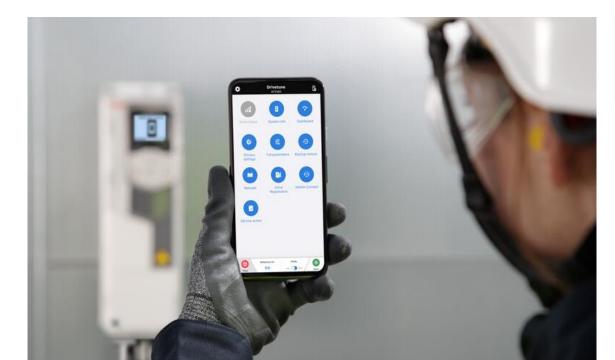
## Efficiency The world is going electric

45%
of the world's electricity is converted into Motion by electric motors



Demand for electric motion to double by 2040<sup>1</sup>

## Reliability Secure, plug&play access to digital solutions



Discover ABB Drivetune app



Download it now!



Download it now!





## Our divisions deliver the most comprehensive product offering in its industry

Unique scaling from lowest to highest power

Differentiated by application specific software

Perfect match of motors and drives





















### **Electrification market dynamics**

Next wave of macroeconomic and technological trends...



Data demand, industry 4.0, 5G driving market growth Electrical vehicles, renewables and storage driving growth Urbanization and digitalization of electricity value chain

...drive changes in electrical energy landscape...



Convergence of data and electricity

Electricity demand growth 2x other energy sources

Complexity of distributed generation and consumption

...and evolving customers needs



Shifting from products to solutions

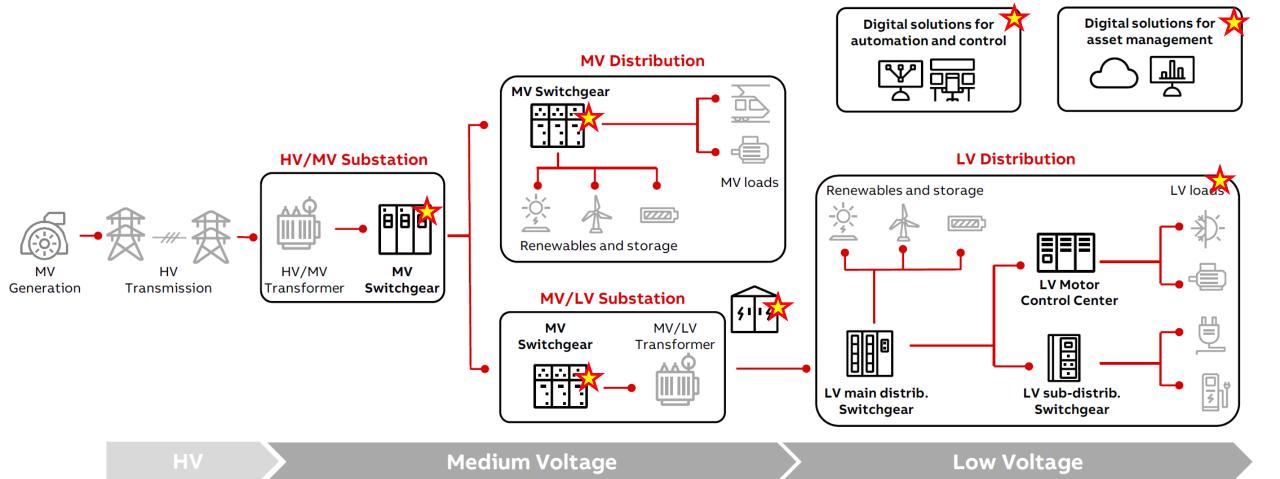
Shift from CAPEX to OPEX

Customers research and purchase online (e-commerce)

Accelerating change and dynamic opportunities for the future

## **ABB Electrification – Digital Substation Products & Digital Systems**

To what we contribute

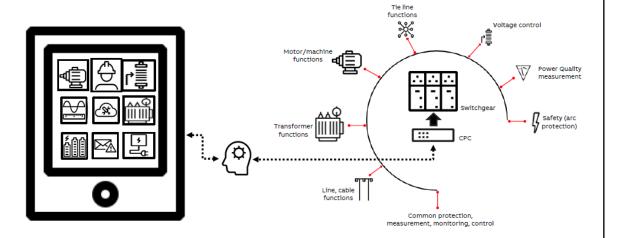


## ABB Electrification – Digital Substation Products & Digital Systems Future challenges in Power & Distribution Grids

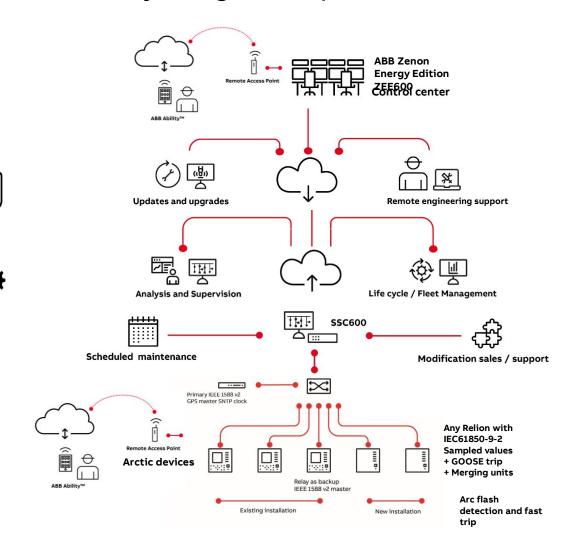
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integrate distributed generation in low voltage grids
                                        continuous feedback and resilience
                                                                         Production vs. Consumption
                           investments
              Prosumer
                                                   Cloud computing
                                                                        Integration & Stability
                       hackers Battery technology
                                                            Adaptability Educated staff reliability, stability
       interoperability
                            Increased consumption
                                                                            Direct Current
            Decentralization
intelligent reliable connectivity Distributed generation
                                                                                 Digitization Modularity
                                                                           artificial intelligence
                   cyber security Reliability Complexity Climate change
                                                                                                Production
                                                                      ageing infrastructure
                     Security
 Energy availability
                  Dijital Availability Cybersecurity Flexibility Car charging
                                                                                             Over loading
                                                                Stability Decentralized
                         DERs Capacity energy demand
              growth
                                                                    Demand/Supply Balance
              Efficiency, Reliability "green energy" implementation
                                                                 Efficiency
                                                                            Long distances
           Local infrastucture
                                   communication, integration
                                                               GridStability
                           reliable Electrification of heating
                                                                PowerGrid stability
                  Renewable Integration Renewable re-new-able energy
```

## ABB Electrification - Digital Substation Products & Digital Systems

How we see the future

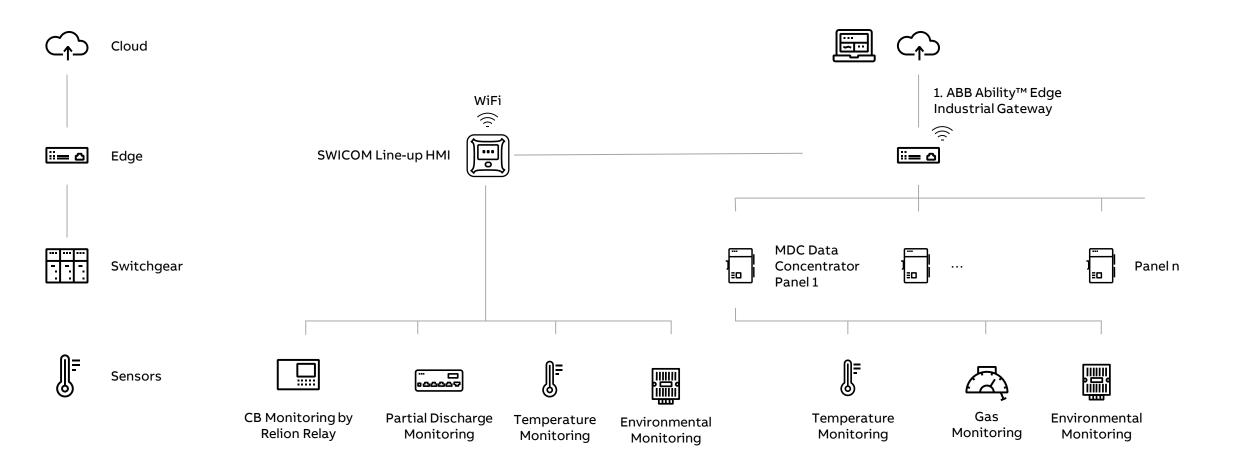


**ABB Ability & Digital Proposal** 



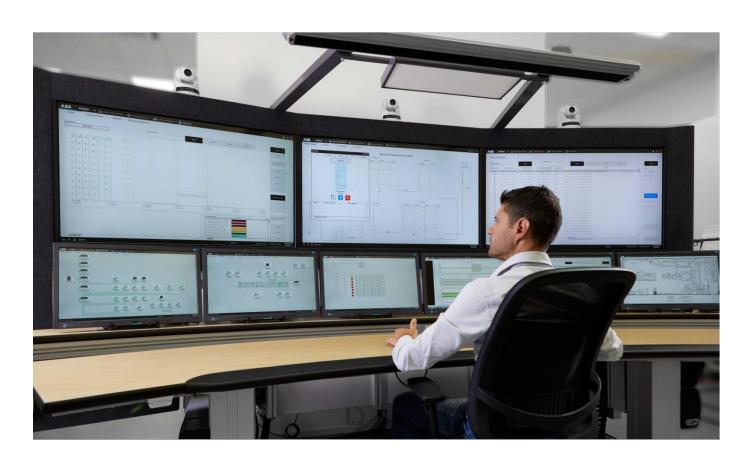
## **ABB Electrification – Monitoring & Diagnostics**

### Communication architecture



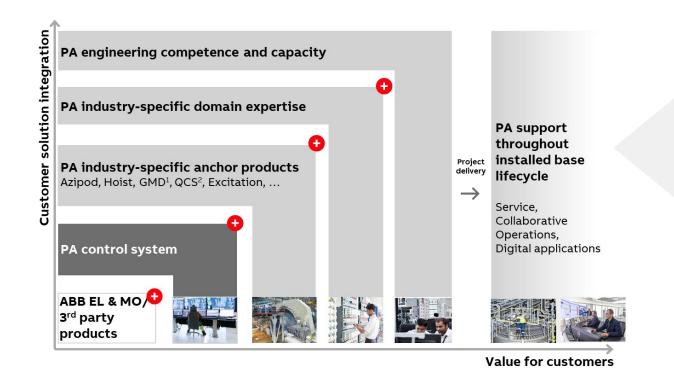
### The Electrification Future in Industries and Power & Distribution Grid







## We integrate products, systems and services for end-toend asset lifecycle value creation in process





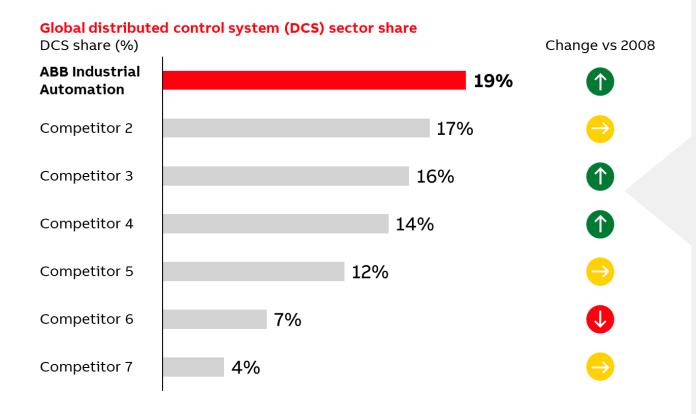








## Leading in control systems



Evolution without obsolescence

Scale with industryspecific offering

DCS at the core of digital offerings



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