

Maximizing ROI and Sustainability in Mining Through Digital Transformation

Explore >

se.com/mining



Life Is On

Schneider
Electric

Table of contents

Industry challenges today and tomorrow

1

Mining operations face five main challenges.

Our digital differentiator

2

We empower through digital transformation to ensure our customers' competitive advantage.

Resiliency through EcoStruxure

3

Build a collaborative digital environment with EcoStruxure, our open and interoperable IoT architecture that makes mining sustainable, safer, and more efficient.

Ensure four competitive advantages

4

Discover the wide array of benefits that digital transformation unleashes.

Mining solutions in action

5

Optimize for today and build for tomorrow with EcoStruxure™ Ready products, software, and services for mining.

Companies that digitally transformed

6

Hear directly from industry leaders on how they're bringing operations into the digital age.

Our mission in mining

We help the mining industry adopt a culture of innovation that ensures long-term sustainability, productivity, energy efficiency, and value chain excellence.

Our digital-first approach integrates automation, power, and process solutions. The result of this connected consolidation is enhanced stakeholder return and a more sustainable, efficient operation.

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed



Industry challenges today and tomorrow

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed



Challenges

Mining operations today face five main challenges.

License to operate

In addition to adhering to the highest safety standards, mining companies today need to contribute to community development and environmental sustainability. Expectations for responsibility are embedded in the industry's social license to operate; mining companies must navigate stakeholder pressure while driving down OpEx.

CapEx and OpEx constraints

The demand to remain profitable in a very competitive landscape, all while doing more with less, is another hurdle mining companies must face.

Value chain responsiveness

Mining operations need to be able to swiftly pivot to the traditional value chain. Market changes and price volatility undergird the values that digitization brings to the mining industry, including improved connectivity and flexibility.

Workforce shift

By 2025, millennials will comprise 75% of the workforce. As experienced employees retire, it's important to transfer their knowledge by leveraging technology. Right now, however, the mining industry needs to attract new talent and improve gender diversity.

Culture of innovation

As it's true in many industries, there's a relentless drive to accelerate digital transformation, technology adoption, and innovation to remain competitive.



Digital transformation — the promise of new technology

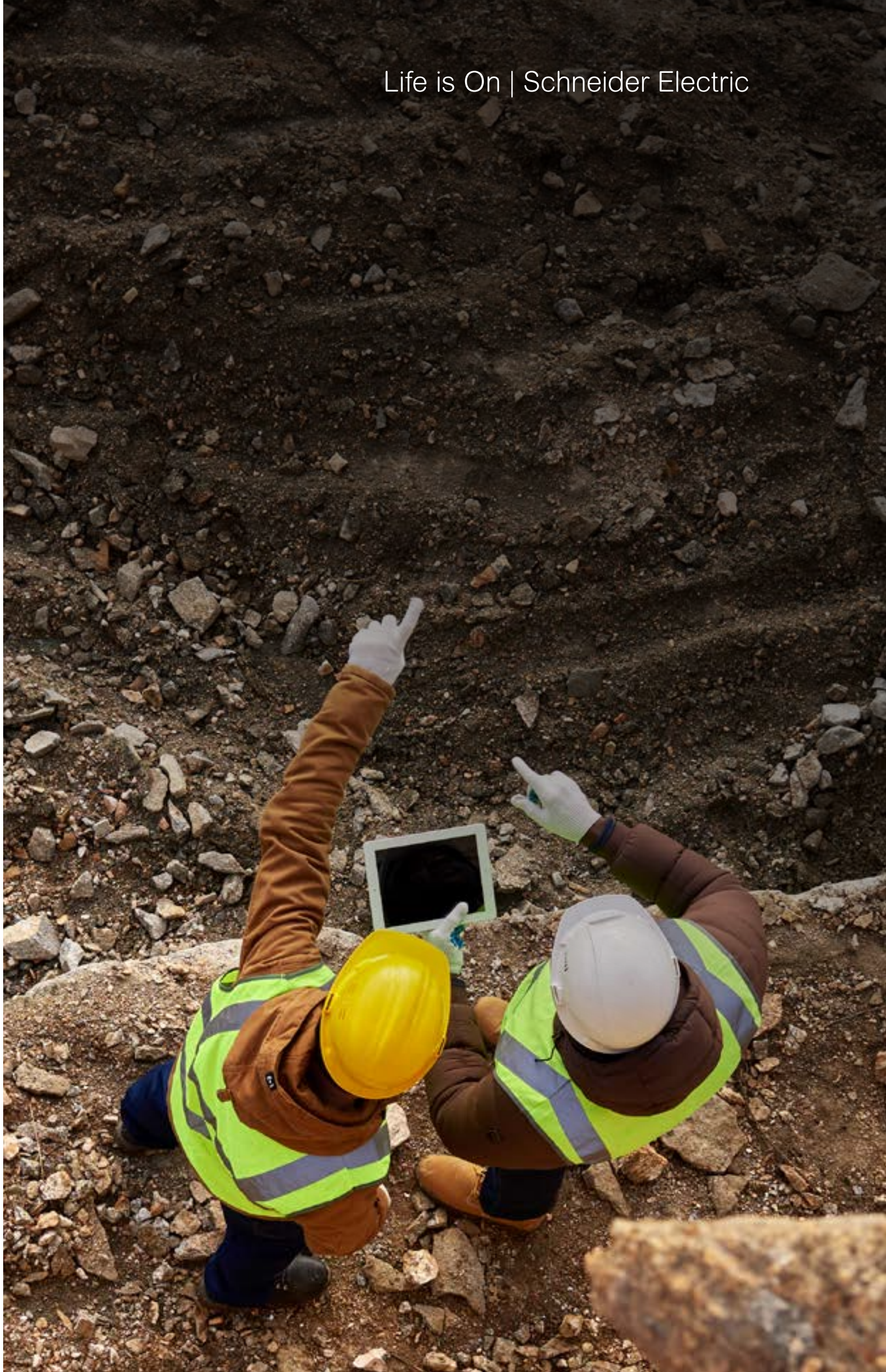
Digital technologies and IIoT

Digital transformation is happening all around us, and the mining industry has taken notice. The advantages of a digital, IIoT-connected environment are necessary not just for survival, but to attract the best and brightest of the next generation of workers. It's also a key contributor in maintaining and improving sustainability.

From data to wisdom

Smart devices and sensors are generating lots of data from processes, from both fixed and mobile equipment, and with unprecedented granularity. They even allow data to be collected from things such as fire extinguishers and personal protective equipment that are not typically connected

to a network. But massive amounts of data alone is not an answer. Companies need to derive real business value from this ocean of data and turn it into meaningful, insightful information – and that is achieved thanks to intelligent software and technology that can transform data into information, information into knowledge, and ultimately knowledge into action that advances efficiency and profitability.



Digital priorities over the next one to two years¹



91%

of mining and metals companies plan to increase investment in digital transformation during the next 12 months.¹

¹ "The top 10 risks and opportunities" – EY, 2022

Our digital differentiator

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed



Why partner with Schneider Electric?

We empower through digital transformation to ensure our customers' competitive advantage.

We have an unrivaled ability to integrate power and process throughout the entire value chain — from design, planning, and scheduling to operation, production, and maintenance.

- Our deep industry knowledge features demonstrated value through our mining-specific application portfolio.
- We offer the greatest breadth of smart connected products, edge control solutions, and analytics that cover the entire industrial automation and energy management space.
- Our strategic partnership with AVEVA™ allows us to build digitally connected, unified environments.
- EcoStruxure for Mining delivers IoT-enabled solutions that drive operational and energy efficiency in the essential resources industry.



Resiliency through EcoStruxure

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed



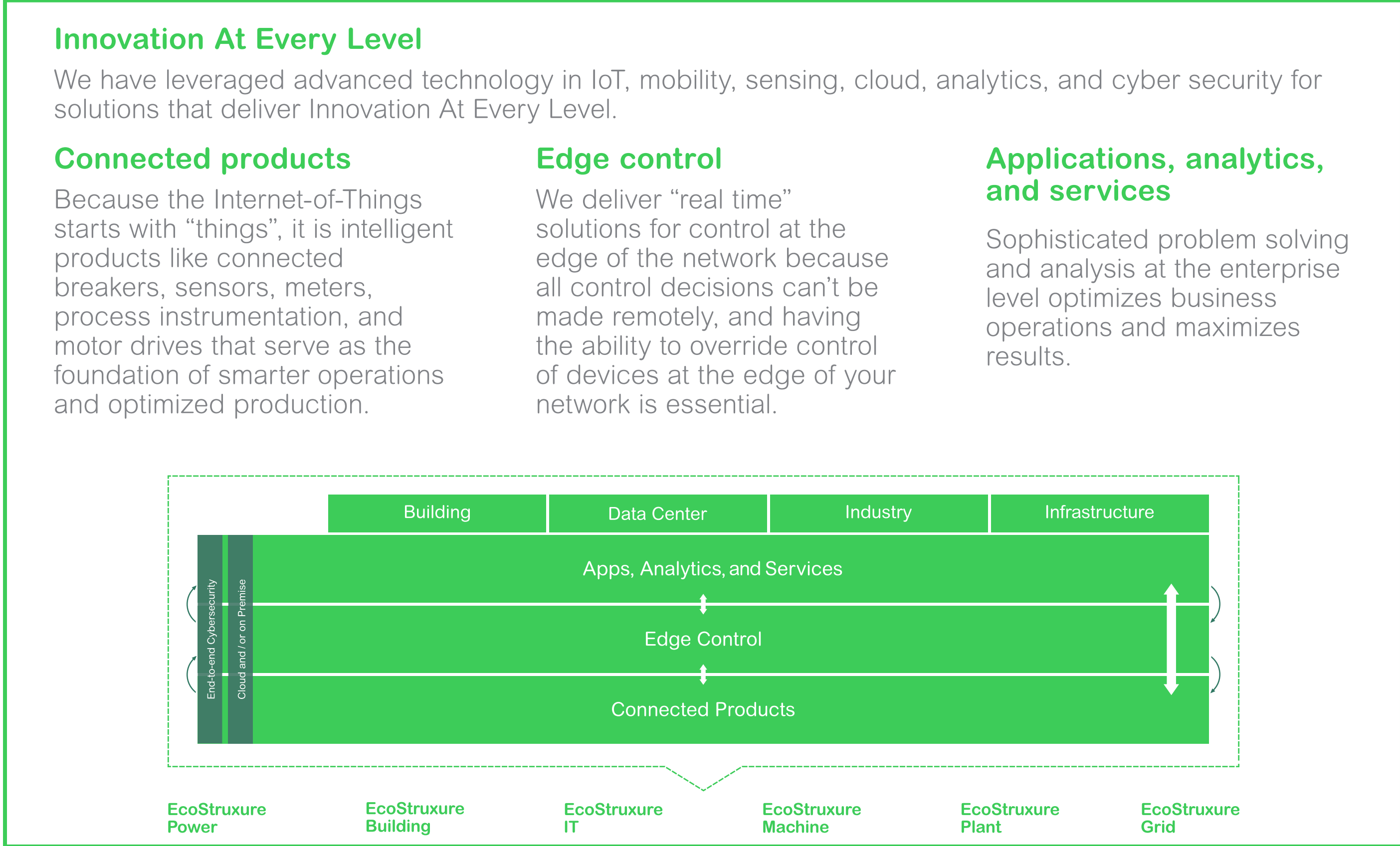
EcoStruxure for Mining

What is EcoStruxure for Mining?

EcoStruxure™ is the IIoT architecture designed to improve profitability, efficiency and sustainability in the mining business. This open framework allows for seamless and cybersecure linkages of smart devices, edge control and software analytics. As a result, end users can generate more precise, and more profitable operational decisions ensuring optimized production and operations.

How are we different?

1. Most wide range of products and solutions, from energy management to industrial automation
2. Our solutions are scalable and interoperable; open standards allow for seamless integration of third-party systems and devices
3. Our offers enable users to access data on-premise or via the cloud, depending on your specific needs and requirements



Ensure four competitive advantages

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed



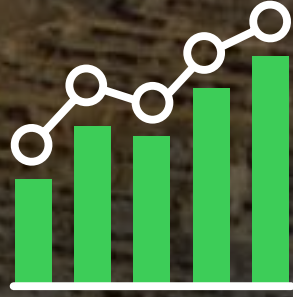
Four values enabled by digital transformation

Discover the wide array of benefits unleashed by digital transformation.

Mining industry leaders will achieve their biggest successes by embracing digital technologies like IIoT and advanced analytics. We see four main areas that digitization will improve:



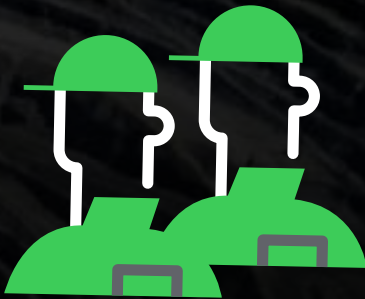
Maintain license to operate
Reduce emissions and provide cleaner, safe and reliable operation while ensuring compliance and brand image by increasing end-to-end sustainability and corporate transparency.



Improve asset efficiency
Digitally transform operations for reduced OpEx and resiliency. Improve process and technology interoperability through integrated power and process for data-driven decision-making.



Optimize value chain from resource to market
Increase value chain flexibility, agility, and predictability to boost competitiveness in a volatile environment.



Empower workforce
Retain knowledge, eliminate information silos, improve operator safety, and provide virtual learning programs, immersive training, and collaborative digital environments that allow for informed decisions in real time.

Maintain license to operate

Digital transformation helps our clients transition to renewable energy while facilitating clean, safe, and reliable operation. In addition to allowing mining companies to more easily meet compliance goals, digital transformation enhances brand image by increasing end-to-end sustainability and corporate transparency.

Digital transformation is greatly enhancing mining companies' social license by:

- Improving compliance and safety of people, buildings, and assets with integrated safety and security

- Reducing power incidents and supporting business continuity through reliable power distribution and automation
- Increasing corporate sustainability and transparency with a comprehensive strategy and implementation plan

- Optimizing resource usage with real-time control and operations analytics.
- Decarbonizing and reducing energy costs while making it easier for companies to manage a complex energy mix
- Protecting business, assets, and people with end-to-end cyber security



Improve asset efficiency

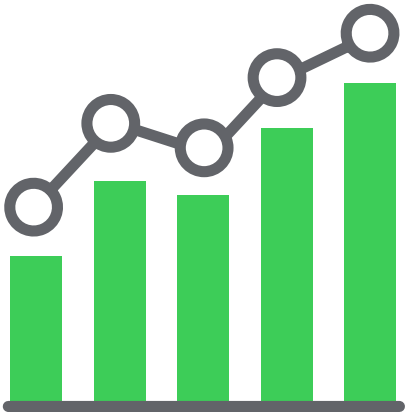
Digitally transform operations for reduced OpEx and resiliency. Improve process and technology interoperability through integrated power and process for data-driven decision-making.

Digital transformation is improving asset efficiency for the mining industry by:

- Mitigating information silos by unifying key power and process across the value chain
- Minimizing production losses through integrated asset performance

- Allowing for the real-time analysis of performance indicators through production optimization solution
- Reducing process variability and increasing profitability with state-of-the-art advanced and automated process control, operational artificial intelligence and "self-learning process"

- Improving operations efficiency by optimizing power and process engineering, and designing via simulation
- Decreasing costs by minimizing maintenance OpEx with an integrated, mobile workforce



Optimize value chain

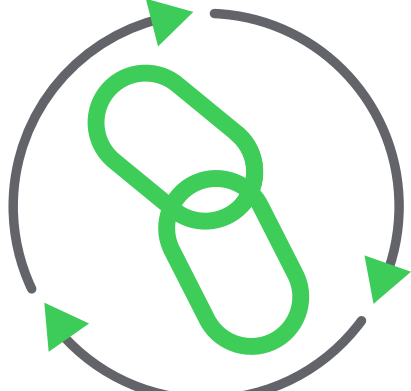
Increase value chain flexibility, agility, and predictability to boost competitiveness in a volatile environment.

Digital transformation is optimizing the mining industry's value chain at every level by:

- Improving decision-making by integrating key power and process information across the value chain through integrated operation

- Optimizing value chain visibility with planning and scheduling solutions
- Reducing transfers, damages, and bottlenecks in supply lines with automated material handling solutions

- Improving response agility with real-time inventories that allow rapid containment measures and enable optimized stock levels and fast reaction to changing demand needs



Empower workforce

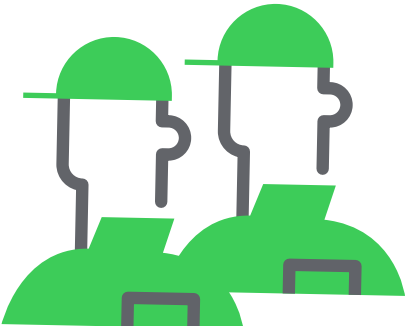
Retain knowledge, eliminate information silos, improve operator safety, and empower workforce through virtual learning programs, immersive training, and collaborative digital environments that allow for informed decisions in real time.

Digital transformation greatly enhances process management and empowers all levels of the mining industry's workforce by:

- Allowing for rapid training of new teams on safety and other best practices via immersive virtual training

- Enabling faster and better-informed decisions with instant, hands-off augmented reality digital diagnostics and maintenance
- Mitigating information silos for improved decision-making in a collaborative environment

- Equipping field workers with essential data on operations and maintenance, equipment diagrams, and operating history using digital, current, and valid technical and process information
- Lowering training costs with fast, easy access to training modules, especially during production stoppage



Mining solutions in action

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed





Energy management and renewables

Energy and Sustainability Management

Schneider Electric offers a comprehensive set of services across all areas of an organization’s energy and sustainability management program, including supply, demand, and sustainability. Our solutions provide comprehensive, real-time reporting and visibility of the critical energy measures in a production context, enabling miners to make fully informed energy management decisions that maximize energy performance and deliver critical energy savings.

Hybrid Energy Generation Management Systems

Our combined expertise in solar and microgrid technologies allows us to deliver effective renewable-based solutions for mining operations.

CUSTOMER CASE

Solution: Energy Management System
Customer: Gold mine, Canada

A centralized enterprise-level energy management and reporting system is used across multiple mining operations and reduces the time required to consolidate energy performance data.





Energy management and renewables

Microgrid Solutions

Our microgrid solutions help ensure power reliability through optimized digital management of Distributed Energy Sources. Aside from reducing emissions, digitization also allows mining companies to optimize resource usage based on availability and pricing, and enables energy to be sold back to the grid.

Energy as a Service (EaaS)

We offer as-a-service cloud-based and enterprise-wide energy and sustainability information and management system that helps improving your financials and energy usage. This business model empowers companies to embrace microgrids, enabling energy consumers to solve for energy resilience, sustainability, and cost that is tailored to their unique objectives without requiring them to operate a utility or break their budget.





Water and environmental management

Water and Environmental Management

The use of water in mining has the potential to affect both surface water and groundwater sources. In response to environmental concerns and regulations, miners are looking to implement effective strategies to monitor water consumption, quality, and discharges. Schneider delivers telemetry, sensing, and mobility technologies for collecting water data from different sources as well as software analytics solutions to aggregate and display process and water information under a production context (water balances, KPIs). By integrating additional data from other sensing technologies for such variables as dust and noise, a mining operation can achieve a comprehensive environmental monitoring system covering alerts and reporting.

CUSTOMER CASE

Solution: Water and Environmental Management System
Customer: Coal mine, Australia

Turnkey environmental condition monitoring, water management, dust control, and noise monitoring provides real-time monitoring of environmental conditions and meets mandatory reporting needs.





Mining power systems

Integrated Power Solutions

Integrated electrical architectures from a single supplier provide reliable performance at an optimized cost for mining applications. Significant cost reductions can be achieved in your electrical power system through optimized voltage levels, transformer size, cable and busbar ratings, short circuit currents, and proper motor and generator parameters. As a global partner with an extensive presence in over 100 countries around the world, Schneider Electric can deliver complete, integrated solutions that meet both local and international standards. Regardless of where in the world a project is located, we can help you comply with all applicable electrical standards.

Prefabricated E-House

E-House is a complete power distribution substation that integrates medium and low-voltage switchgear, motor control centers, transformers, HVAC, UPS, and building management and control systems in a single, modular enclosure. It is designed, engineered, assembled, and tested in the factory prior to delivery at the mine site and significantly reduces installation and commissioning, especially in remote and harsh environments. The solution brings digitally connected power distribution enabling remote management - from connected power equipment, to integration of energy and process automation, control and monitoring, or digital services on thermal monitoring, asset management, etc.

CUSTOMER CASE

Solution: Prefabricated E-House
Customer: Copper/gold mine, Indonesia

E-House power solutions for a remote, high altitude underground mine site in Indonesia were delivered and commissioned on schedule. Units include gas-insulated switchgear, air-insulated switchgear, medium-voltage motor control, low-voltage motor control, speed drives, and UPSs.

White Papers Series

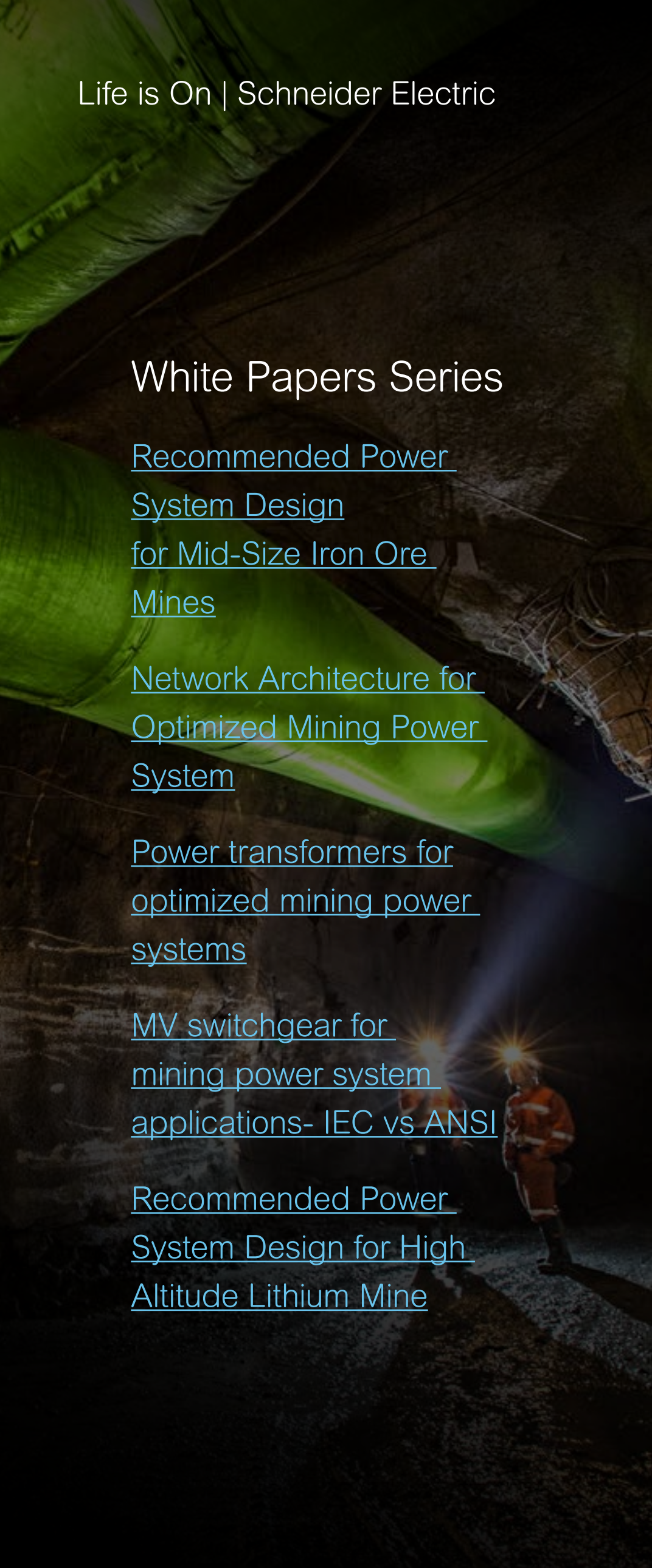
[Recommended Power System Design for Mid-Size Iron Ore Mines](#)

[Network Architecture for Optimized Mining Power System](#)

[Power transformers for optimized mining power systems](#)

[MV switchgear for mining power system applications- IEC vs ANSI](#)

[Recommended Power System Design for High Altitude Lithium Mine](#)





Security and facility management

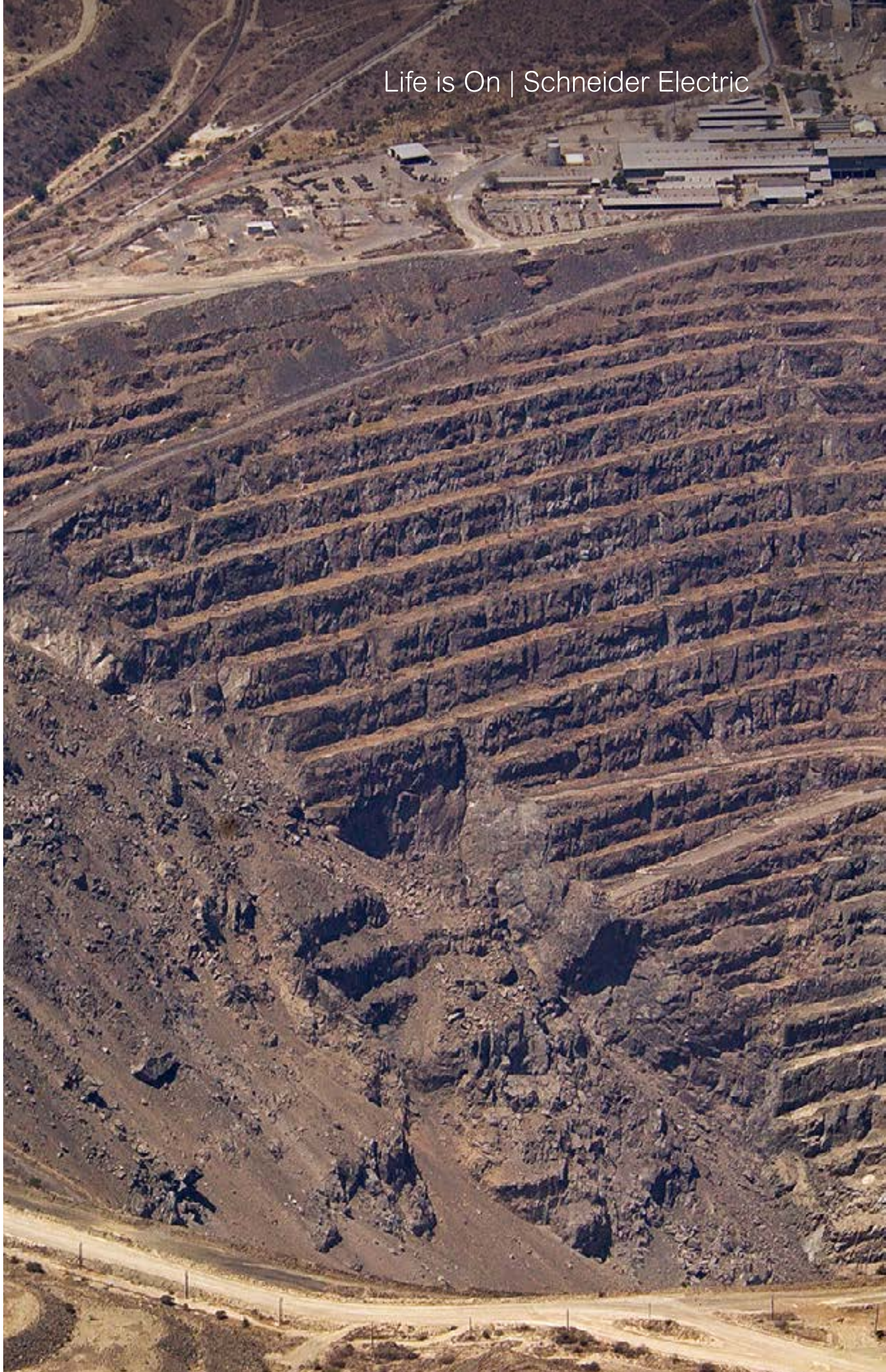
Building Management

Schneider Electric offers an integrated architecture for building management that provides interoperability and openness for full visualization and control of all building systems, including: access controls, surveillance, HVAC, lighting control, and energy management.

CUSTOMER CASE

Solution: Mine-wide Surveillance System
Customer: Copper mine, Chile

A site-wide surveillance solution, including: positioning systems; digital video recorders; and explosion-proof, 24/7 camera systems that protect industrial infrastructure, buildings, inventory, and other assets.





Integrated operations center

Bringing together information and action through a collaborative environment

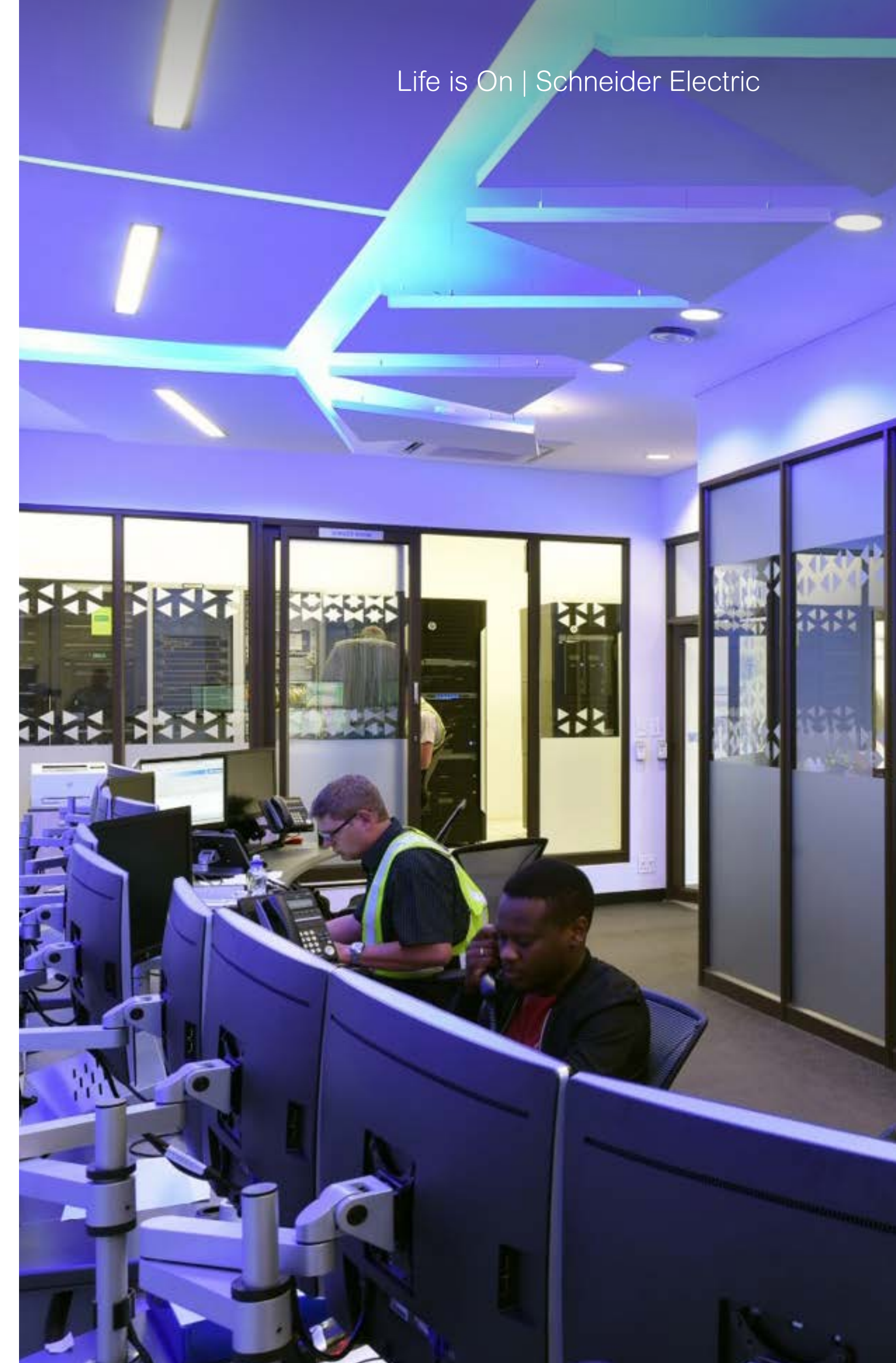
An integrated, open and scalable platform that delivers command, control and operation-wide visibility for the management of multiple remote operations in a central location: the Integrated Operations Center. This unified operations hub enables you to locate five key functions all under one digital roof: planning, process & operation, assets & maintenance, energy and sustainability. This capability allows you to reduce cost per tonne, get closer to nameplate capacity, optimize the supply chain or foster more efficient problem-solving, delivering savings to the bottom line for a greater competitive edge.

CUSTOMER CASE

Solution: Data collection and visualization solutions

Customer: Iron/manganese mine, South Africa

By unifying data collection processes and improving data sources, site-wide visibility was achieved. This new data abundance was brought to life via a 10-meter video wall in the new central control room, enabling real-time operational visibility. Improvements to safety and asset uptime, as well as a nearly double-digit productivity increase, are just the first steps in this mine's digital transformation journey.





Process optimization

AI and IIoT Process Optimization

Scalable process optimization leverages Artificial Intelligence (AI) and Industrial Internet of Things (IIoT) to improve sustainability and efficiency all along the value chain.

- Providing a higher degree of **predictive operational data**.
- Enabling **continuous learning** with AI models that enrich worker knowledge based on new daily activity.
- Improving **prediction accuracy** to lower production costs while accelerating the time-to-market of products
- Determining **root-causes of anomalies** and sending **recommendations** with Service Bureau experts.

Advanced Process Control

Advanced Process Control systems stabilize and optimize processes above and beyond what is possible from normal process control, ensuring quality and resulting in faster throughput, and better energy efficiency.

Comminution typically accounts for approximately 50% of a mine's electrical load, making Advanced Process Control a perfect fit for complex applications like grinding circuits and flotation, as well as metal processing facilities such as furnaces and smelters.

CUSTOMER CASE

Solution: Advanced Process Control
Customer: Nickel smelter, Canada

Our Advanced Process Control systems improved the customer's two furnaces by a combined 2.5%, resulting in a metal value increase of \$20,000 a day.





Process simulation

Dynamic Solution

Process simulators enable companies to meet plant lifecycle requirements, from steady state simulation for plant and process design to dynamic simulation for process control engineering, control check out, operation, process scalability studies, process benchmarking, and optimization.

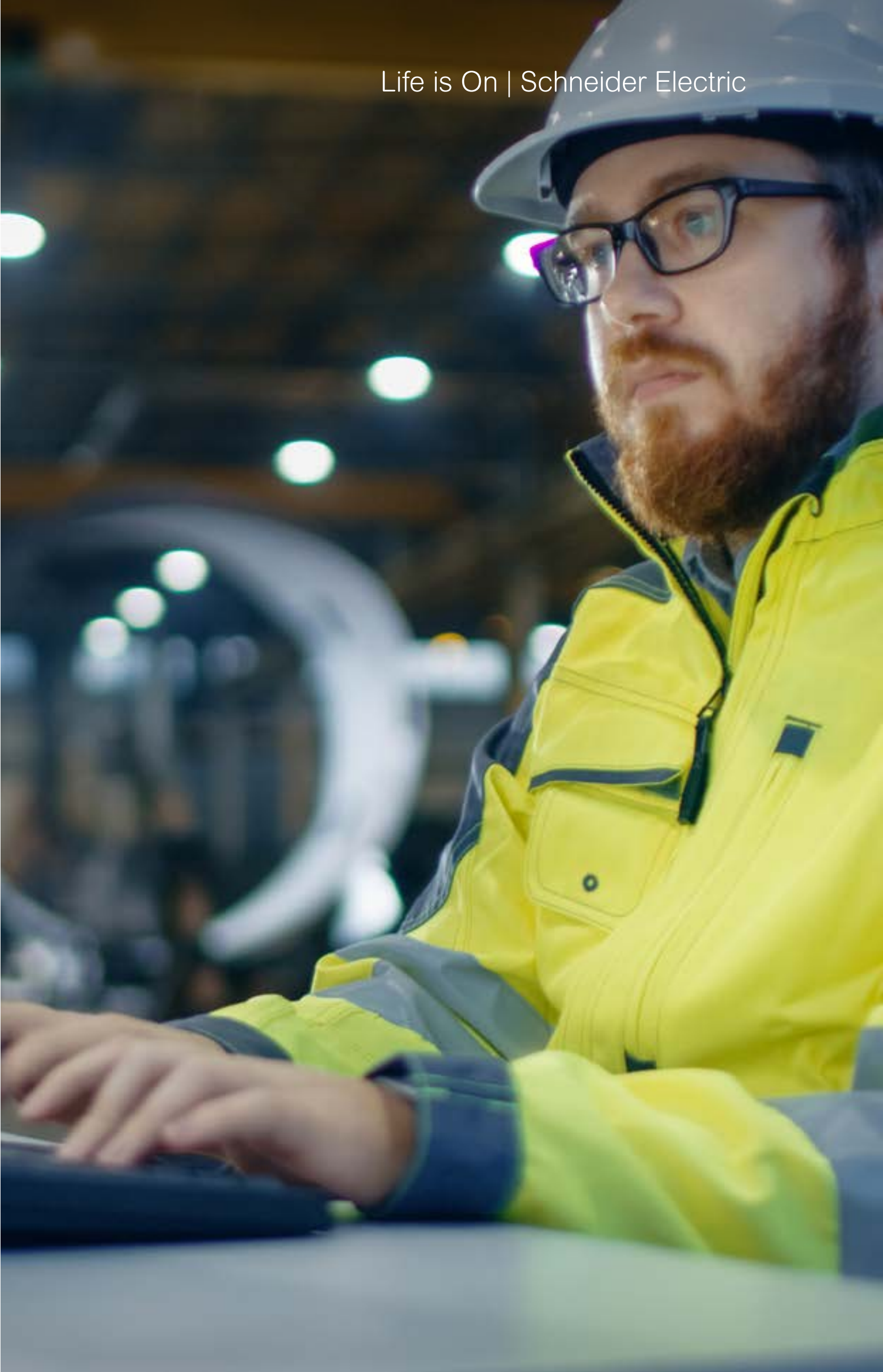
Virtual Reality and Immersive Operator Training and Simulation

Our Operator Trainer Simulator (OTS) provides plant personnel with a high-fidelity 3D virtual process and plant environment to learn operating procedures and train for emergencies. It also enables best practices knowledge transfer, increasing efficiency and reducing costly errors.

CUSTOMER CASE

Solution: Operator Training and Simulation
Customer: Zinc-lead smelting and refining operations, Canada

Our Operator Training and Simulation solution is used at a groundwater treatment plant to meet critical environmental requirements. The solution helps train new operators on preventing above-limit groundwater from being dumped into their outflow.





Process and automation control

Flexible Automation and Control Platforms

Mining control applications can be highly distributed and heavily instrumented, requiring an integrated and flexible automation and control platform that can address their complexity. Our process control portfolio provides solutions for small operations as well as advanced Ethernet-distributed architectures able to manage complex instrumentation networks and motor driven applications. Users get a single software environment that delivers flexible engineering, operation, and maintenance capabilities that are necessary to address these challenges, and which is also both process and object-oriented. The application is modeled according to the actual mining operation and process (digital twin), making it intuitive to configure and easy to use.

Mining and Mineral Processing Object Library

We offer comprehensive mining and minerals object-oriented libraries that provide both control and graphical objects. The libraries help to reduce engineering time and project risk through standardization and reusability of the objects, all with the reassurance that they have been fully tested and validated.

CUSTOMER CASE

Solution: Process Automation
Customer: Iron ore mine, Brazil

We provide a full Ethernet-based mine-wide automation and electrification system in a turnkey project that includes process controls, supervision, and electrical distribution.





Asset and maintenance management

Condition Monitoring and Predictive Analytics

Millions of dollars are lost each year due to preventable unplanned downtime and equipment failures. From condition monitoring to advanced machine learning and modeling solutions that identify subtle changes in system behavior, our solutions identify the early warning signs that can lead to diminished equipment performance and unplanned downtimes. Solutions are available for both on-premise and the cloud.

Enterprise Asset Management

Maintenance costs in the mining industry can range from 30% to 50% of total operational budget. With our Enterprise Asset Management software you can ensure you are getting the most out of your assets through proper maintenance scheduling, tracking, and inventory management, as well as procurement capabilities that ensure efficiency across the entire spectrum of your asset portfolio.

Remote Asset Monitoring for Electrical Distribution and Secure Power

With this predictive analytics service, we remotely monitor critical systems and proactively address issues to mitigate electrical failure risks. The solution combines a best-of-breed technological platform with our expertise in maintenance and electrical equipment manufacturing.

CUSTOMER CASE

Solution: Advanced Predictive Analytics
Customer: Coal-fired power plant

Our Enterprise Asset Management system identified an imminent equipment failure, saving the customer an estimated \$40 million when compared to savings from automatic generation control, repair costs, and labor costs.





Fuel management and truck maintenance

Fuel Management

An integrated fuel management system enables miners to get a complete picture of fuel usage at the mine site, including fuel levels in each area, fuel dispensed to each asset, and alarms and reports. Unlike other fuel systems, ours is based on industrial-grade telemetry that keeps data safe and secure even through a power outage. It is also an open solution enabling integration with other systems.

Integrated Truck Workshop and Warehouse

For the truck maintenance workshop, we offer an integrated solution that covers maintenance activity management, inventory management, and facility infrastructure and process systems, including access control, communications, fire systems, surveillance, water, lubricants, and compressed air.



“The Schneider Electric fuel management system has provided data reliability and integrity for multiple mining sites never achieved before by other suppliers. In addition, the system provides close to a 9% increase in data accuracy.”

– Major copper producer, USA





Resource-to-market integration

Production Performance Management

It is difficult to make real-time decisions based on information spread across various databases, applications, and spreadsheets.

Our production management solution consolidates and manages data from multiple mine, plant, and business systems, enabling miners to identify production issues, manage inventory and quality, track production and asset performance, understand costs, and analyze business KPIs.

Supply Chain Management

Our pit-to-port unified solution for planning and scheduling takes into account the mined materials, processing, supply chain capabilities, and costs to deliver an optimal plan that maximizes profit. The optimized plan sets targets for detailed scheduling, focusing on long-term efficiency instead of short-term gains.

The scheduler allows miners to quickly see how closely the schedule is being followed, and to adapt if necessary to meet the plan.





Material handling automation

Conveyor Systems

Schneider Electric provides integrated systems for mining conveyors through integrated architectures that seamlessly connect all the key components in a system, including power, controls, drive systems, surveillance cameras, sensors, and other field devices.

Stacker-Reclaimers

We also provide full solutions for the automation, power, and motor management of stacker-reclaimers, including integration with specialty sensors and systems such as collision avoidance, positioning, and stockpile management.

CUSTOMER CASE

Solution: Stacker-Reclaimer Automation
Customer: Metals/mining company, India

This turnkey project includes a full suite of automation and machine positioning systems, as well as motor control, drives, operator consoles, and remote communication equipment.





Connected worker

Real-time Data Acquisition and Reporting

Our mobility solutions allow users to view data and KPIs on devices like smartphones and tablets and enable real-time decision-making.

Safety, Maintenance, and Environmental Inspections

Mobility technology for workflow, data collection, and general task management (safety, maintenance, and environmental) helps achieve consistent and precise execution of procedures.

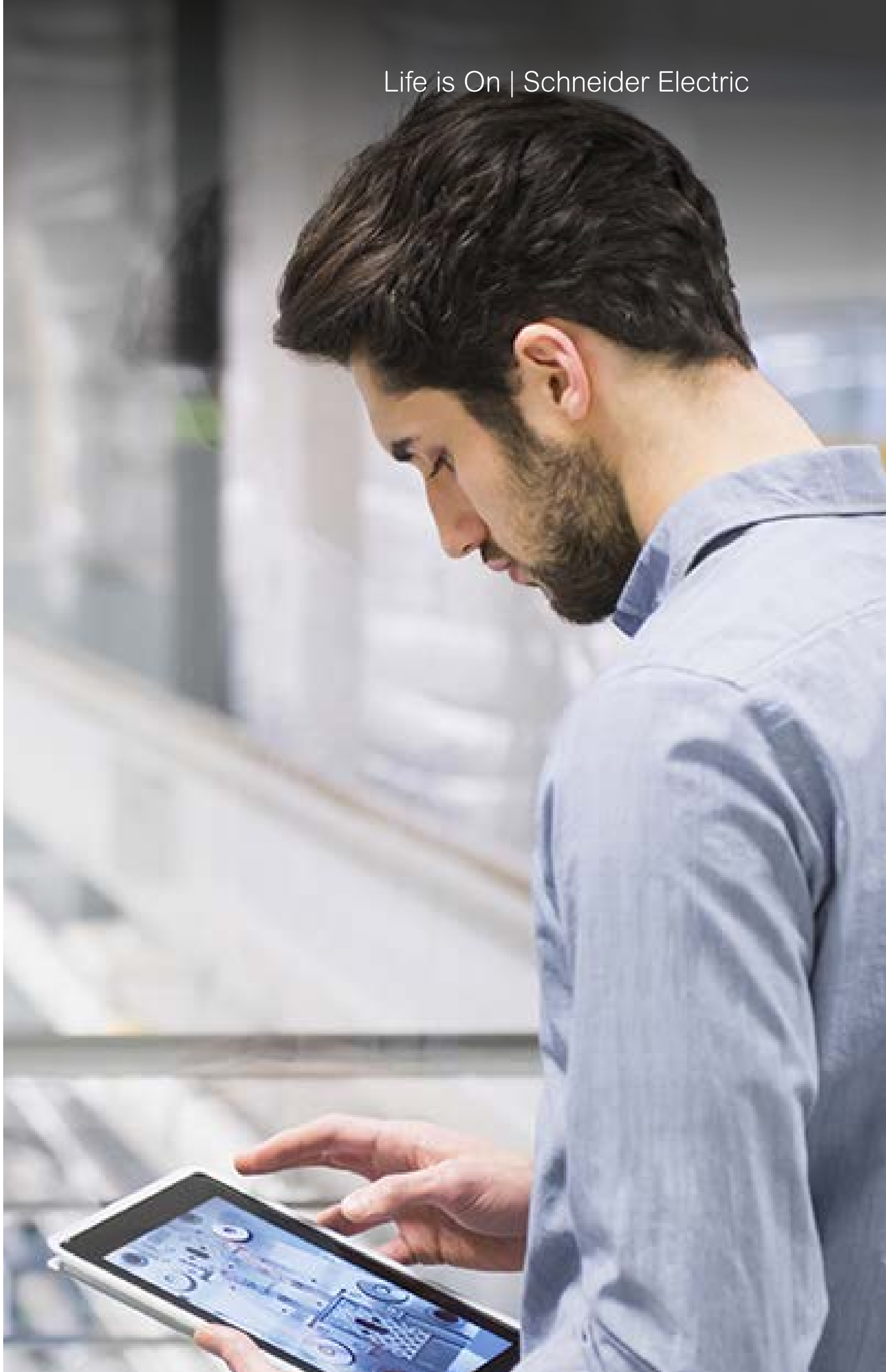
Augmented Reality

Innovative augmented reality software for mobile devices uses the device's camera to recognize electrical panels, cabinets, machines, and process areas. It then superimposes real-time data and virtual objects onto them. This gives operators, maintenance personnel and technicians immediate access to relevant technical, performance, and condition information and speeds up decision-making, troubleshooting, and performance efficiency.

CUSTOMER CASE

Solution: Mobile Inspection Systems
Customer: Copper mine, Chile

Our Mobile Operators Round mobile workforce software enables the standardization of inspections (even when performed by different people), provides full traceability by worker, time, and equipment, and optimizes maintenance processes.





IT infrastructure

Data Center Solutions

Our solutions for data centers include the capability to deliver full enterprise data centers and prefabricated customized systems.

Critical for managing, storing and securing crucial data collected throughout the site, our prefabricated data centers are especially useful in remote mining applications because they are designed to withstand harsh environmental conditions, can be deployed quickly at a mine site, offer highly predictable performance, and can be scaled as needed.

Our edge computing solutions add computing capacity closer to the user or data source, ensuring connectivity at the edge of your network and low latency, and keep IoT applications running at the speed of digital business.

Ruggedized Uninterruptible Power Supply (UPS)

Schneider's Uninterruptible Power Supplies are designed to withstand the harsh environments of mining applications, including seismic activity and extreme temperatures.

CUSTOMER CASE

Solution: Modular Data Center
Customer: Potash mine, Canada

A complete modular data center was built off-site and installed in only two days. It's designed for reliable operation in a challenging environment of corrosive gases and extreme cold, and can even withstand up to four feet of snow on the roof.





Services

Field Services

During decades, Schneider Electric Field Services has been modernizing and extending the useful life of equipment for electrical distribution, automation, critical power, and building management systems around the world, keeping employees and assets safe and increasing the efficiency and reliability of the overall technical infrastructure at thousands of industrial installations.

Remote Access Management

Our Monitoring & Diagnostics Services Center can remotely supervise your industrial assets as a service, in which our engineers use predictive analytics technology to monitor all covered assets and provide early warnings and diagnostic guidance. This service enables organizations to improve equipment reliability and performance, and reduce maintenance costs, CapEx, and total cost of ownership.

Energy and Sustainability Services

Schneider Electric offers a full scope of energy and sustainability services as well, including demand side, supply side, sustainability strategy (reporting, compliance management), and technology implementation (software, reporting).

CUSTOMER CASE

Solution: Carbon Management and Reporting
Customer: Iron ore mine, USA

Schneider Electric Sustainability Services delivers analysis and guidance covering sustainability metrics reporting, including consumption of fossil fuels and greenhouse gas emissions. Our support significantly decreases the administrative burden on facility and corporate stakeholders, and helped the customer meet EPA compliance deadlines for reporting.





Projects and consulting

Projects

Schneider Electric’s project delivery organization offers the advantage of being a single, highly qualified source for the definition, design, implementation, testing, installation, commissioning, and hand-over of automation, electrical distribution, and associated systems for your project. We employ a robust and proven project delivery methodology that is utilized by project teams around the world, ensuring a standard, consistent approach throughout the project lifecycle, even when multiple teams are involved.

Consulting

Schneider specialists can help miners get the most of their operations, with proven, experienced consulting for resource to market integration, supply chain management, data management and integration, analytics, asset optimization, process optimization, mineral processing, and energy optimization.

CUSTOMER CASE

Solution: Prefabricated E-House
Customer: Copper/gold mine, Indonesia

Our solution covers the fabrication, delivery, and installation of 14 switch rooms, including MV and LV power distribution, variable speed drives, UPSs, DC battery chargers, and cooling equipment — all compliant with strict safety, seismic, and cyclonic standards. The complex design and supply chain for the project involved sourcing equipment worldwide, delivered in multiple phases over a period of one and a half years. Schneider employees were stationed at the project site to supervise the mechanical completion, testing, and pre-commissioning.



Companies that digitally transformed

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed



Companies that digitally transformed

Hear directly from industry leaders on how they're bringing their operations into the digital age.

[Tüprag gold reserve enhances safety and reliability](#)

[GTK Mintek promotes mining circular economy with automation modernization and digital twin solution](#)

[First Quantum Minerals reduces OpEx](#)

[Lonmin Mining centralizes operations](#)

[MMG Limited increases asset utilization by 10% globally](#)

[Black Rock Mine Operations consolidates its value chain](#)

Industry challenges today and tomorrow

Our digital differentiator

Resiliency through EcoStruxure

Ensure four competitive advantages

Mining solutions in action

Companies that digitally transformed



Life Is On



Visit our website to learn more.

se.com/mining



Schneider Electric

35 rue Joseph Monier
92500 Rueil-Malmaison, France
Tel : +33 (0)1 41 29 70 00

