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Group’s strategy: opportunities and risks
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

1. Key megatrends driving growth

Progress for all and a sustainable future for our planet

Today’s climate crisis is a global emergency we cannot ignore. Thankfully, we’ve reached a turning point: the energy transition holds the key to reducing CO₂ emissions, and Industry 4.0 trends offer additional efficiency gains.

Catalyzed by accelerated digitization in a more electric world, these trends create opportunities that define Schneider Electric’s strategic priorities while also underlining our long-term sustainability commitments. We share the responsibility to act on the climate emergency collectively.

Megatrends, outlook & perspectives

1. All electric world
At Schneider Electric we estimate that despite continuous energy efficiency improvements, the global demand for electricity is set to continue to increase. Several factors are driving this acceleration:

• The continuous deployment of IT-related loads, such as data centers.
• Increased electrification in residential and commercial buildings driven by urbanization, particularly in new economies, and the increasing electrification of heating, cooking, lighting and cooling.
• The electrification of industrial processes currently powered by gas.
• The rapid electrification of transportation: 25% of today’s transportation related to oil consumption will shift to electrical power.

2. All digital world
Today’s digital economy is driving transformational disruption across every sector. By 2022, more than 60% of global GDP will be digitized. And everyone is re-imagining ways to design, build, and deliver products and services to customers while leveraging new business models to achieve sustainable progress. The increase in connectivity is complemented by access to real-time information through enhanced and computing capabilities, on the cloud or at the edge. This will further drive innovation closer to users and operations as companies are able to bring intelligence to augment traditional automation and improve customer and employee experiences.

3. A multi-local world
In a world driven by local electrical standards and installation practices, regulatory frameworks for connectivity, cybersecurity, and data privacy will also be defined at local or regional level.

4. Decentralized world
The shift towards electricity and more competitive decentralized generation is driving prosumer growth, as consumers look to solar panels, batteries, and microgrids as alternatives. Already, in Australia and India distributed renewable power is 30-50% cheaper than the grid.

5. Net-zero world
In 2019, the UN Environmental Program confirmed carbon emissions continue to rise by 1.5% per year which will require countries to increase their emission-cutting ambitions fivefold to limit the global temperature rise to 1.5°C. Schneider Electric is a committed role model in the fight against climate change, by delivering services and solutions that allow customers to reduce CO₂ emissions and by decarbonizing its own operations. We share the responsibility and take action to facilitate progress for all and build a sustainable future for our planet.

2. Source: IEA & Schneider Electric analysis.
As electrification intensifies in line with energy transition, Schneider recognizes the resulting growth opportunities in our key end markets: buildings, infrastructures, industries, and data centers. These four make up the majority of the global future electricity demand, with buildings representing the highest share at approximately 60%.

More important, buildings also represent the biggest share of untapped potential for energy efficiency, as stringent regulations are enforced. Schneider Electric facilitates effective energy efficiency, alongside occupant comfort in buildings, to reduce energy costs by up to 30%. The same energy efficiency technologies can be applied to all industrial processes for visibility and control of energy consumption, delivering productivity and energy efficiency synergies though automation, power solutions and services.

Digital transformation is a key driving force in our markets, enabling more data analytics and insights into operations for improved Energy Management and Process Efficiency. Digital transformation will enable more agility within these fast-changing environments.

As we innovate to improve our customers’ digital experience, our software capabilities also offer energy, resource, manufacturing, and construction efficiencies, while delivering significant reliability, safety, and sustainability benefits.

Schneider Electric prides itself as the most local of global companies. We have a balanced cost base across our global operational organization. Our diverse teams ensure the highest level of local expertise and support for our customers’ specific needs. We have set up three regional headquarter hubs in Europe, North America and Asia Pacific providing opportunities for our people to grow across a global organization. Our global R&D footprint strengthens our innovation strategy.

With the rise of distributed generation adding to the complex mix of evolving electrical loads, we must dare to disrupt. Future innovation in software technology and Artificial Intelligence are key for effective real-time energy operation and optimization of loads wherever they are generated. We drive value creation from open and connected innovation; from technology projects with leading universities and research labs; from venture investments and incubating companies; and from partnerships with startups.

By decarbonizing energy sources and increasing energy efficiency, we strive to reduce carbon emissions. We are driving sustainable innovation and prioritizing circular economy-based product development. The increasing complexity in energy and resource management requires taking a holistic approach to buying and using energy, using carbon and clean energy procurement strategies and for organizations to maximize their investments and build operations that can withstand global challenges. Beyond the positive environmental, social and governance impact, forward-thinking companies are rewarded with long-term economic gain and competitive advantage. Renewable energy also enables simpler solutions to provide access to electricity to all.

At Schneider, we empower all to do more with less, ensuring Life Is On everywhere, for everyone, at every moment.
We provide energy and automation digital solutions for efficiency and sustainability

1 Combining energy and automation

Our solutions bring together the worlds of energy and automation to achieve greater efficiency by designing and operating both systems together. We can achieve this thanks to energy and resource efficiencies built on real-time operational insights delivering both visibility and control of energy consumption for continuous improvement and energy savings as well as equipment and production efficiencies. This is relevant for all types of building and business and manufacturing processes from discrete to hybrid industries, and even electro-intensive operations.

2 A secure end-point to cloud ecosystem

A secure end-point to cloud ecosystem is made possible through the convergence of the Internet of Things, big data, and Artificial Intelligence from sensor to the cloud. This offers total digital transparency with the same information available to operators on the shop floor and for the C-suite. Data that is generated at the sensor level flows through installed assets, to machines, across production lines and enables manufacturers to improve operational productivity.

3 Full lifecycle management

Full lifecycle management from design and build to operate and maintain via the power of end-to-end software, the same data model is put to work for long-term operational performance and reduced costs and to improve manufacturing and construction efficiency.

4 Shift from site by site management to integrated company management

The ability to shift from site by site to integrated company management to consolidate energy and resource usage across organization or enterprise and bring a new level of competitiveness and efficiency. By sharing and comparing real-time consumption, data resources can be benchmarked and reduced.
Combining energy and automation for efficiency and sustainability

ABUS Crane Systems, one of Europe’s leading crane system manufacturers and exporters, is leveraging the power of digital and the Industrial Internet of Things to design ABUCtrl, their intelligent modular crane control system based on EcoStruxure™ Plant & Machine.

Energy savings up to

40%
The Challenge

- Build highly complex and customized crane systems with different designs, size and functionality.
- Standardize crane modules to achieve shortest production time possible.
- Operate quickly and independently of time zones and location.

The Solution

- ABUControl, an intelligent modular crane control system based on EcoStruxure™ Machine, covering all functions from simple to complex crane architectures for different cranes and hoists.
- EcoStruxure™ Machine, the foundation to further develop IoT potential for ABUS’ cranes.
- Hoisting application expertise from concept development with new functionalities and features, to programming, testing and validation.

Benefits

- Increased productivity by implementing all crane functionalities in two standard modules.
- Simple to use and improved operational safety.
- Reduced downtime.
- Up to 40% energy savings.
- Digital data processing for preventive maintenance and repairs.
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

3. Our business

From end point to cloud for efficiency and sustainability

When BASF built a new electrical substation, they implemented EcoStruxure™ Asset Advisor for increased visibility into operations. The largest chemical company in the world now has a digital dashboard and the expert support needed to monitor critical-asset status.

The Challenge

• Build a state-of-the-art power distribution substation.
• Maximize plant uptime and productivity.
• Increase visibility on the health of the critical electrical distribution assets solution.

The Solution

• EcoStruxure™ Asset Advisor.
• Power Monitoring Expert.
• TeSys™ motor control systems.
• Gutor™ UPS.
• Low and Medium Voltage switchgear.
• Variable frequency drives.
• DC batteries.

Benefits

• Avoid expensive production stoppages and downtime due to unplanned maintenance or outage.
• Remote and continuous monitoring of 63 prime electrical distribution assets.
• +100 variables measured and computed to provide reliable condition-monitoring.
• 24/7 access to asset-health dashboard.
• Personalized assistance and recommendations from technical experts without local intervention to promptly prevent failures and optimize maintenance activities.
EcoStruxure™ Asset Advisor is helping to prevent catastrophic failures, by using the right data at the right time. And in the end, data is value.”

Lee Perry, Electrical Design Engineer, BASF
Full lifecycle management for efficiency and sustainability

Wilmar, Australia’s largest sugar and biomass energy producer, upgraded its control system with a robust and reliable software system providing real-time control and visibility, and improved safety procedures in order to keep the Invicta Mill operating 24/7.

The Challenge

- Modernize aging boiler control system and equipment at the Invicta Mill in Queensland to cope with continuous operating conditions during intensive production runs.
- Improve productivity.
- Reduce safety risks and inefficiencies.

The Solution

- Wilmar chose Schneider’s EcoStruxure™ Plant architecture built on Modicon M580 Safety PLCs and AVEVA’s Citect SCADA software to simplify disparate systems and provide a complete view in one easy-to-use interface.
- Embedded safety procedures in the software.

Benefits

- Improved safety, efficiency and productivity.
- Increased factory automation, driving improved operational performance.
- Optimized maintenance thanks to simple alerts, preventative maintenance and reduced spare part inventories.
- Remote access allowing operators to log on in the event of a fault and reduce downtime.
- Less direct human contact with machines protecting maintenance staff.

“EcoStruxure™ Plant provides us with a more thorough picture of our infrastructure. We have been able to combine our automation, connectivity and software into one system which allows us real-time control and visibility.”

Russell Brown, General Manager for Asset Management, Wilmar Sugar Australia
3. Our business

From site-by-site management to integrated company management for efficiency and sustainability

Saint Gobain has saved millions by focusing on buying energy smarter and using it more efficiently across its US operational facilities.

<table>
<thead>
<tr>
<th>The Challenge</th>
<th>The Solution</th>
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<tbody>
<tr>
<td>• Reduce energy consumption and costs across Saint Gobain’s energy intensive production facilities.</td>
<td>• Optimize operations and costs through centralized and streamlined energy procurement expertise, including strategic sourcing, risk management, tariff analysis, and invoice auditing.</td>
</tr>
<tr>
<td>• Cut carbon emissions by 20% by 2025 by tackling plant-level efficiency to reduce environmental footprint.</td>
<td>• Consumption and spend tracking using EcoStruxure™ Resource Advisor to provide one view of energy and sustainability data, and savings opportunities across 140+ sites.</td>
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<tr>
<th>Benefits</th>
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<tr>
<td>• Facilities can reduce utility costs by 14%.</td>
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<tr>
<td>• Plant operators are able to follow and modulate energy use based on the time of day, and adjust consumption when utility prices peak.</td>
</tr>
<tr>
<td>• Saint Gobain is on track to meet its 2025 sustainability goals.</td>
</tr>
</tbody>
</table>
“By outsourcing our energy procurement, we have made savings worth millions of dollars and fueled innovation at Saint Gobain.”

Richard Brunel,
VP Purchasing, Saint Gobain North America
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

4. Our growth journey

The foundation of our performance

From its beginning in steel during the Industrial Revolution in the 1830s, strengthened by long-term electrical distribution expertise and built upon a series of strategic acquisitions since 2003, Schneider Electric is today a global leader providing energy and automation digital solutions for efficiency and sustainability. The Group is ideally positioned for the energy transition and Industry 4.0.

Core expertise in electrical distribution
Built on the market-leading Merlin Gerin and Square D brands, the acquisitions of Clipsal in 2003, OVA, Merten and GET in 2006 and Marisio and Wessen in 2008 have strengthened our low voltage portfolio globally. We grew our presence in new economies with the acquisition of a stake in Delixi in China in 2006, Conzerv (2009), Luminous Power Technologies (2011-2017) in India, and Steck Group in Brazil (2011). In 2019, the combination of Schneider Electric India’s Low Voltage and Industrial Automation Product business and Larsen and Toubro’s electrical and automation business was approved by the Competition Commission of India. Upon closing of the transaction, the Group will affirm India as Schneider Electric’s third largest country in terms of revenues, with a key global innovation and manufacturing hub located in Bangalore.

Critical power technologies became core to the Group since gaining majority control of MGE UPS in 2004, followed by the acquisition of American Power Conversion (APC) in 2007 and becoming world leader. We expanded operations to new economies with the acquisition of UPS manufacturer Microsol Tecnologia in Brazil in 2009 and APW in India in 2011. In 2011, we broadened our portfolio with cooling offers from Uniflair, data center services from Lee Technologies and backup power storage from Luminous. We enhanced our position in critical power with Asco Power Technologies and its leading Automatic Transfer Switch technology in 2017.

With the acquisition of AREVA T&D’s medium voltage distribution division in June 2010, we became world leader in medium voltage and grid automation. In 2010, the Group acquired 50% of Electroshield-T Samara in Russia and then acquired full ownership in 2013, transforming Russia into a key market for the Group. With the acquisition of Telvent in 2011, a Spanish software company with a strong presence in North America, we became global leader in Advanced Distribution Management System software to manage large electrical networks and grids.

Global leader in industrial automation and control
As a prominent leader in discrete automation, based on the strong reputation of the Telemecanique brand, the Group further reinforced its industrial automation technologies through the acquisitions of Citect in 2006, RAM Industries in 2008, Cimac and SCADA group in 2010, and Leader & Harvest in 2011. In January 2014, the acquisition of Invensys plc. reinforced the Group’s position in process automation and electro-intensive industries. In September 2017, Schneider Electric’s industrial software business combined with AVEVA to create a global leader in engineering and industrial software.

Digital building technologies and processes for efficiency and sustainability
As the result of the acquisitions of TAC in 2003, Andover Controls in 2004, and Invensys Building Systems in 2005, the Group also became a major player in building automation. This was reinforced through the acquisition of Vizelia and D5X in 2010. The acquisitions of Summit Energy (2011) and M&C Energy group (2012) increased our expertise in energy procurement services.

Schneider Electric strengthened its electrical design and engineering software capabilities following the 2018 acquisition of IGE+XAO, a market leader in Computer Aided Design, Product Life-cycle Management and simulation software. In 2019, the European leader in calculation software for electrical installations, ALPI, joined Schneider Electric, strengthening prospects for international development.
2003 – 2013
Build
Synergetic portfolio of energy management, automation and software.

2008 – 2018
Integrate
Strong digital capabilities with EcoStruxure™ IoT-enabled platform boosted by cloud and digital services.

2020 onwards
Focus and Scale
Organic revenue growth
+3% – 6%
Continued portfolio optimization
€1.5 – 2bn by 2021
Adjusted EBITA margin
+200 bps by 2021
5. Our customer focus

Strengthening our unrivalled global coverage with our network of partners

A significant share of Group revenues is through intermediary partners who bring their own added-value and expertise to extend our market coverage. As such, we access different markets and segments efficiently, with a keen understanding of local market needs. We continue to focus on empowering our partners with digital innovation to seize new market values. Partners are categorized and rewarded according to their specialized expertise and according to business coverage. Schneider’s partners receive training and certification to develop technical, logistical, digital, and marketing skills and ensure expert service delivery to their own customers.

Distributors and retailers
We are preparing our distributor partners for the future and offering new tools to enable them to succeed in their own digital transformation. Innovating with chatbots for customer support and implementing AI-based product selectors and e-design tools on partner websites drive more e-commerce sales, currently growing at +30% year-on-year.

E-commerce is changing the world of electrical distributors and retailers fast. For example, in Switzerland, the Netherlands, and Denmark, in just five years, more than 50% of business is online.

Our omnichannel distribution strategy is based on three models – diffused coverage, project-based, and through specialists – and it meets different residential, commercial, industrial, and IT buyers’ expectations. Our products are easily accessible through a seamless online-to-offline experience. The different distributor models now represent ~45% of total Group turnover, with sustained growth.

The Group’s main distributor partners are:
- Electrical distributors (both global and regional players) such as Rexel, Sonepar, CED Edmunson, Graybar, Imelco, Idee, and Fegime buying groups with both online and offline presence.
- Specialists in IT, telecom, and data center applications for critical infrastructures, such as Tech Data and Ingram Micro.
- DIY retailers, such as Home Depot and Lowe’s in the US, Saint Gobain Distribution in France and Brazil, and Adeo Group and Kingfisher in Europe and Russia, to ensure strong presence in home improvement and renovation markets.
- Online marketplaces and e-tailers, such as RS Components, T-Mall, and Grainger for specific applications and according to regional presence.
- Specialist technical distributors for automation and industrial software solutions, access control and security products.

Panel builders
As industry trends highlight a more digital and more electric energy landscape, a collaborative partner strategy fosters co-innovation with panel builders, who build and sell electrical distribution or control/monitoring switchboards.

Panel builders buy low and medium voltage devices and, through the digital transformation of our extensive network of 35,000-40,000 companies, these partners are incentivized as specialists, connected power system experts who can manage and maintain electrical assets after installation and throughout its entire operational lifetime.

Contractors
To design solutions tailored to end-users’ specific needs, Schneider Electric works closely with contractors, small specialists or generalist electricians, and large companies that specialize in installation equipment and systems. In order to strengthen a relationship based on mutual trust and added value, Schneider Electric partners actively with contractors, providing technical training and support. To maximize impact, we have a multichannel partner model increasingly focusing on digital interaction thanks to our Partner Relationship Management (PRM) platform.

System integrators
System integrators design, integrate, and support automation to meet their customers’ needs for the performance, reliability, precision, and efficiency of their operations. Schneider Electric gives system integrators access to all areas of automation from field control to Manufacturing Execution Systems and Building Automation Systems.

Specifiers/consulting engineers
To meet their customers’ specific demands for safety, comfort, or operational and energy efficiency, specialist engineers, architects, and design firms are prescribing more efficient and integrated energy management solutions, as well as for critical power, security, and building automation. They are essential partners for Schneider Electric and through collaboration receive application-focused design information and tools, such as installation guides, design software, and training methods.
Electricians

Electricians design and implement electrical installations, primarily in residential and small non-residential buildings. They are key customers, and we have one of the most comprehensive networks of electricians worldwide. Schneider Electric enables electricians to operate more efficiently through a suite of training, technical support, and digital tools, such as “My Schneider Electric” app and more than 400,000 electricians are registered on such digital platforms. Schneider Electric strengthens its relationship with electricians by increasing their visibility to end-users through different tools including online “installer locators.”

Original equipment manufacturers

Schneider Electric works closely with more than 15,000 Original Equipment Manufacturers (OEMs) to improve machine price/performance and reduce time-to-market for packaging, conveyor, material handling, hoisting, and HVAC applications. We nurture strong OEM partnerships through a program for multi-site and/or global OEMs to enhance their capacity to deliver internationally.

EcoXpert: the implementation arms of EcoStruxure and Wiser

Unique in our industry, Schneider Electric’s EcoXpert™ Partner Program is the only cross-expertise ecosystem serving our customers. Trained and certified by Schneider Electric, the EcoXpert network spans the globe offering local expertise in building automation, power solutions, and energy efficiency across several commercial verticals such as healthcare, hotels, commercial real estate, data centers, and retail – as well as in the residential market. Its mission is to connect expertise, ignite growth, and enable success for EcoXpert partner companies so they can better serve our valued customers.

Our Innovation World Tour brought together over 3500 customers in Barcelona in October 2019
5. Our customer focus

Strategic customers and end-market segments

Schneider Electric works with large end-users in a number of strategic segments including:

**Discrete manufacturing**
- **Mobility**, where the Group serves large automotive equipment manufacturers, electric car battery manufacturers, and electric car infrastructure providers, to enable digitization and address the transformation and electrification of individual and collective transportation (cars, railways, airports, last-mile delivery, etc.).

**Hybrid manufacturing**
- **Consumer Packaged Goods**, in which the Group is enabling digital transformation at every step of the value chain for improved sustainability, efficiency, and traceability for Food & Beverages, FMCG (Fast Moving Consumer Goods), and Life Sciences companies.
- **Mining, Minerals & Metals**, which includes customers in mining, cement, metals, and other bulk materials, where the Group is helping customers to achieve greater energy and production efficiency for manufacturing operations with IoT-enabled solutions.

**Process manufacturing**
- **Water & Wastewater**, which includes customers across the entire water cycle, from water resources to water distribution, sewerage, and treatment. The Group is empowering customers to enhance key processes and applications across the smart water cycle by leveraging innovative solutions.
- **Oil & Gas & Petrochemicals**, in which the Group provides integrated digital solutions and high-performance systems, software, and services to oil companies, petrochemical companies, and EPCs (Engineering Procurement & Construction), from production to processing and supply chain operations.

**Critical buildings**
- **Cloud & service providers**, in which the Group provides secure digital solutions to increase efficiency, lower costs, reduce cycle time, and manage risks for customers including internet giants, as well as in co-location and network solutions.
- **Healthcare**, where the Group serves hospitals, clinics, labs, and life sciences manufacturing to improve safety, patients’ satisfaction, and operational efficiency with IoT solution architectures for digital hospitals.

**Non-critical buildings**
- **Real estate**, where the Group offers intelligent building technologies that maximize operational efficiency, ensure maximum energy savings, and lower overall OPEX costs while ensuring physical security as well as cybersecurity.
- **Hotels**, where the Group serves hospitality companies that manage hotels and related lodging facilities to improve financial performance, reduce carbon emissions and energy costs, and reinvest savings into the hotel guest experience.
Other energy-intensive companies

Electricity companies, where the Group serves companies producing, delivering, and/or selling electricity to reduce carbon footprint, digitize networks, connect customers to smart grids, overcome evolving challenges, and meet future needs.

Schneider Electric also addresses the following end-markets globally

Semiconductors: assisting companies engaged in the manufacture of semiconductor devices to sustain the highest level of performance and availability for mission-critical clean room environments in a safe manner.

Transportation: the Group ensures reliable power for safe, stable, and efficient operations for airport, rail, subway, port, and tunnel infrastructure – ensuring reliable power for safety, stability, and efficiency.

Schneider Electric operates an integrated sales model across all these segments, generating revenues either directly from end-user sales or indirectly through distributors, integrators, and machine builders (OEMs). For this, Schneider Electric has deployed one unique Customer Relationship Management system across the Group and is currently running a global program to further transform its key account management practices at all levels, toward higher effectiveness and efficiency.

Schneider Electric serves its global “strategic account” customers through a dedicated organization, aimed at developing privileged relationships and a value proposition that meets the key business and digital transformation challenges.

This organization is based on short lines of communication and decision-making, rapid mobilization of Group resources throughout the world, and dedicated teams in which management is directly involved.

Schneider Electric serves ~75 global customers including Apple, BHP Billiton, ExxonMobil, Nestlé, and Veolia as well as 99 customers for which we developed a multi-country centralized approach, (e.g. TechnipFMC, Danone, Coca-Cola).
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

6. Our open ecosystem: Schneider Electric Exchange

We are committed to unleashing the infinite possibilities of an open, connected, innovative community.

Registered users
+53,000

Hosted offers
+300
A digital ecosystem to create, collaborate and scale business growth

Business as usual simply won’t work in the Industry 4.0 economy. The hyper-connected world is too fast. In April 2019, Schneider Electric announced a new approach to digital innovation – one that promises speed, agility, and the ability to see and address customer problems in a better way.

Schneider Electric Exchange is the world’s first cross-industry open ecosystem dedicated to solving real-world sustainability and efficiency challenges. This business platform empowers a diverse community to create and scale business solutions and seize new market value. With Schneider Electric Exchange, individuals gain entry to a vast network of technical tools and resources to develop, share, and sell digital and IoT innovations to drive worldwide economies of scale.

At the nexus of old and new

The Group is committed to unleashing the infinite possibilities and bold ideas of this open, global, innovative community. The robust platform brings forward a new way to work by fundamentally shifting the mindset from single companies building technology to a diverse crowd focused on quickly solving real-world efficiency and sustainability challenges, by looking at them from multiple vantage points in a collaborative way.

Digitization continues to revolutionize the way we work and behave. The world can no longer work in independent silos; the need for better integration and collaboration has unearthed new opportunities and solutions. Schneider Electric Exchange brings together a diverse ecosystem of digital innovators and experts, enabling the co-creation of solutions and enriching learning and speed through collective intelligence.

Schneider Electric Exchange draws on the Group’s ecosystem of digital partners to accelerate and scale innovation – and provide companies with the tools needed to operationalize Artificial Intelligence for real-world problems. For instance, Accenture, a global management consulting and professional services firm, brings the ability to create customized solutions and develop digital business models. Schneider Electric Exchange represents an evolution of Schneider Electric’s long history of networking with partners.

In the ecosystem, for example, the industrial software startup Senseye publishes its predictive maintenance SaaS solutions in the Schneider Electric Exchange Digital Marketplace. Senseye gains customers and builds out new use cases that enable Senseye to further improve its predictive maintenance solutions, while their customers – typically traditional, legacy enterprises – can use Senseye’s data-driven solutions to better maintain and utilize their manufacturing equipment.

Also part of the Schneider Electric Exchange community, Capgemini (a global leader in consulting, technology services and digital transformation) offers expertise in Smart Leakage Management, which integrates innovative algorithms and multiple datasets on a versatile, open, and reusable platform. This capability allows water companies to detect and pinpoint leaks faster and from a mobile device.

Looking at problems through new lenses

There is power in having multiple perspectives. What differentiates Schneider Electric Exchange is that it brings together people across industries and practice areas that share a passion for sustainability and efficiency, enabling collaboration and interaction across ecosystems. Schneider Electric Exchange amplifies the Group’s ability and innovative stance for addressing existing energy and process efficiency problems through not just a new lens but actually a number of lenses (data, software, services). Doing so allows Schneider Electric to devise Industry 4.0 solutions in innovative, better, and more competitive ways.

“While all applications, software, datasets, analytics, and tools are available to everyone, we focus on the specific needs and expectations of each community engaged in Schneider Electric Exchange.”

Hervé Coureil, Chief Digital Officer, Schneider Electric
7. Our People Vision

Great people make Schneider Electric a great company

As the changes to our world accelerate and transform our industry, we regard our company culture as a key business differentiator to achieve profitable growth through innovation and outpace the market.

The energy transition requires Schneider Electric to work closely in our different markets and to develop a shared vision with our customers, supported by faster innovation, technology and deep insights. As such, we need to empower our people and shape our organizational culture to meet this challenge. Digitization is also changing the way we work, and creating new opportunities for customers, suppliers, and our teams. We believe this change is a great catalyst for employee engagement and enables us to articulate a meaningful purpose that motivates us all. We are passionate about efficiency and sustainability and we believe that innovation has a positive impact on our planet; a rare opportunity to reconcile the paradox between progress for all, and a sustainable future.

Globalization allows Schneider Electric to welcome more diverse teams and to ensure our local presence best supports our customers’ specific needs. We prioritize how we develop and retain our employees to create an inclusive workplace that offers long-term career and development prospects, and learning pathways. We are the most local of global companies, built across three headquarters (Paris, Hong Kong and Boston) providing opportunities to grow within our organization. And, we are continuously championing diversity and inclusion to make a bigger impact on society.

The very nature of the workforce and the job market is evolving. There are up to five generations working side by side, and each generation has a varied set of expectations of their employer. This in turn is leading to a shift towards a highly-personalized employee experience. We aim to empower our people and shape our organizational culture to create an engaging environment for employees.

All this change influences how we work together, and how we ultimately create value for our customers. We updated our people vision to accelerate our business performance and transform our culture and leadership. At Schneider Electric, we are building for the future, in sync with the changes happening in our markets and with our customers.

Our People Vision consists of the following

Our Employee Value Proposition (EVP) is our commitment to engage existing and future talent. It’s the reason why people join, stay and remain engaged and shows how we differentiate ourselves as an employer.

Our Core Values determine who we are and what we do, and they define the way we work together and deliver on our EVP promise. Our values guide our choices and illustrate the behaviors we expect our employees to demonstrate.

Our Leadership Expectations show how we expect Leaders to drive the Group for the future. They emphasize how our leaders will transform Schneider Electric by stepping up both individually and collectively.
I am deeply honored, as one of the first winners of the #SEGreatPeople Ambassador Program, to pioneer such a great initiative. Making your voice heard is above and beyond anything imagined; it gives you the courage and faith to achieve what you have in mind. Today, my small win for Papua Next Genz community got greater and I am extremely happy for that. Looking forward to seeing them be the future #SEGreatPeople!

Florence Tuhumury
Winner of the #SEGreatPeople Ambassador Program

#SEGreatPeople

Since launching our People Vision in the fourth quarter of 2018, our efforts in 2019 have focused on executing our vision through our day-to-day interaction. We regularly survey our teams to measure employee awareness and to gather and address their feedback. Our behaviors have been incorporated progressively in all our people rituals such as recruitment (behavioral interviewing), performance evaluation, recognition and promotion of leaders (based on our defined behaviors). We also implemented policies to foster better work-life integration and developed frameworks to help our employees manage their own situation. The initiatives we have launched, and the ones we’re continuing to build on, reflect our goal to be the best place to work, so the best people choose us and then stay with us.

In 2019 our employees and leaders expressed in their own words what the Schneider Electric core values and leadership expectations meant to them. As ambassadors for their chosen value, #SEGreatPeople videos were published through internal communication channels and on Schneider’s social media accounts.
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

8. Our expertise

Innovation is key to fulfilling growth ambitions

For today’s market incumbents, true innovation is about balancing the old with the new. It’s about innovating at the core to grow market share today while simultaneously exploring the digital transitions that will grow tomorrow. In parallel, entire industries are undergoing rapid changes fueled by artificial intelligence, autonomous technologies, mixed reality systems, electrification, and distributed renewables.

The answer lies in dynamic collaboration that can truly push forward the digital transformation of energy management and industrial automation, new business models, and solutions for sustainable progress. Business as usual simply won’t work in the Industry 4.0 economy. We need new approaches, that promise speed, agility, and the ability to see and address customer problems differently.

We believe innovation is how we will be market leaders in the new electric world. While we dare to disrupt, we also recognize we cannot do it alone. We partner with small and large companies that complement our core business to co-innovate the future.

We not only help our customers on their sustainability and digital transformation journey; we are transforming alongside them.

At the heart of the digital transformation of our industry, EcoStruxure™ is our open, interoperable, IoT-enabled system architecture and platform, delivering enhanced safety, reliability, efficiency, sustainability, and connectivity. EcoStruxure is deployed across six domains – Building, Power, IT, Machine, Plant, and Grid in more than 480,000 installations, with the support of over 20,000 system integrators, connecting more than 1 billion devices.

Culture of change
Our businesses continue to transform our R&D practices to faster and improved innovation. Key pillars to this strategy are to:

- Ensure customer intimacy and insights are a part of the R&D culture through frequent customer interaction during offer creation;
- Improve accountability through effective project management and governance;
- Define R&D footprint principles to make the best use of our global technical resources;
- Define specific technical career paths for better career planning with reward and recognition programs for experts;
- Extend the use of lean and Agile methodologies during the Offer Creation Process to develop new offers faster and launch them to the market effectively;
- Elevate our Winning Launches program to operationalize systematically the launch process, orchestrate EcoStruxure system launches, and innovate with more digital offers; and
- Ensure consistency with respect to data, in all EcoStruxure domain architectures.

In 2019, the Group launched innovative offers across its businesses, energy management and industrial automation:

- TeSys island
- Modicon M262
- ComPact NSXm
- Micrologic Vigi
- Easergy P5
- EcoStruxure Power Advisor
- EcoStruxure IT Advisor
- EcoStruxure Workplace Advisor

Schneider Electric Universal Registration Document 2019
Q: Can you explain the importance of launching this new technology in 2019?
A: Following Schneider’s COP21 commitments to reduce carbon emissions by eliminating sulphur hexafluoride (SF₆) gas, we have been working on viable alternative technologies for electrical switchgear. We’ve replaced the SF₆ gas with pure air in our latest range of MV switchgear while still bringing the right level of insulation and breaking performance to quench arcs as well as meeting customers’ floor space requirements. Our Shunt Vacuum Interruption (SVI) technology is protected by 50 patents and allows us to use pure air as insulation. By integrating this differentiating technology in our roadmap, we will totally eliminate SF₆ from our 12 product ranges, as committed.

Q: Did you test new innovation methods when developing this technology?
A: As a recognized Technical Master Expert, I worked with my innovation community colleagues across our global specialized hubs from design, engineering, industrialization and marketing to secure a step-by-step development process thanks to monthly sprint reviews. We exchanged with customers from the very early stages, taking into account their open feedback and to ensure this innovation answers all their needs. Using agile management methods means that our roadmap is clearly defined and on track to replace all our SF₆ product ranges by 2025. Thanks to our multi-hub model, we are able to leverage our global innovation power while adapting the deployment to evolving markets in both Europe and China.

Q: How did our customers and other industry stakeholders react to this disruptive innovation?
A: For some time now, I have been meeting, exchanging and convincing the broad community of international experts as well as customers that this alternative is reliable and can substitute SF₆. I have presented papers on this in Europe and China and with different electrical equipment manufacturing associations to shape the future technology of MV switchgear. Through many discussions with customers, who welcome this environmentally-friendly alternative, we are, today, installing pre-series SF₆-free switchgear in France, Sweden, Germany and China.
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

8. Our expertise

Step change in innovative behavior

Accelerating and improving our new offer development practices is key to the Group's innovation strategy, as our market-leading position and brand reputation is built on our core electrical and automation technology.

Safeguarding our expert knowledge is vital, but equally transforming how we advance the technology to support the digitization of our end markets is key to our future growth. To be successful in this change, we not only need to transform our innovation methodologies and process but also change the way our teams behave and the speed at which they work, through a more entrepreneurial and collaborative mindset. Since integrating automation and software technologies into our industrial automation portfolio, more technology teams across both our global businesses are adopting “Design Thinking and Lean Start Up” methodologies.

In 2019, the Group deployed new training courses and coaching sessions to skill up teams and ensure more Agile principals in their product development, to improve performance, or to add new features to an existing offer. Thanks to a heightened understanding of customers’ activities, new ideas and concepts are generated to solve detected pain points and ranked in terms of competitive advantage. Through demos and sharing 3D prototypes and mock-ups with customers, only those early-stage designs and Minimum Viable Products that offer genuine differentiated value qualify for further development and field tests. Innovation Boot Camps in Europe, the US, and China, trained teams to apply those new methodologies on real projects and transform our product expertise for the digital world.

In parallel, new methodologies in process innovation promote the implementation of new or improved development and methods to deliver value to customers, as well as reduce time-to-market and costs through effective planning, collaboration, and risk management.

The Group’s business units have been deploying Lean Models of product development since 2014, with all Industrial Automation product lines using Lean Agile practices for Industrial Internet of Things and Digital Plant solutions and as Incubators for new technologies. This is deployed through a network of Coaches and Lean Agile change agents across multiple awareness, training and coaching sessions. The Lean Agile Transformation has been successful in changing our mindset, behaviors and culture. This initiative will continue to scale to cover all product and process innovation in 2020.

To help customers reach their efficiency goals and enable optimal operational performance, the Group’s technical communities are consolidating its end-to-end systems expertise through a defined approach and data models alongside specific methods and tools to deliver successful and replicable systems. These practices break down whole EcoStruxure systems into parts according to required system functionalities. To achieve this, the process takes into account customer needs and targeted user experience while ensuring interoperability and consistency throughout the system lifecycle. Comprehensive systems-thinking defines technical specifications and functional architectures per use case before integration, verification testing and validation so that the end-to-end system delivers in terms of safety, reliability and cybersecurity features.
The Group strategy aims at uniting and strengthening its R&D engineering resources and competencies to serve global and local markets from technology hubs in North America, Europe, India and China. As such, Schneider Electric systems are built on solid and scalable designs which can easily evolve to address future requirements.

As an example, in 2019 the Group developed new EcoStruxure systems architectures for Retail Chains incorporating innovative system designs for electrical distribution and building management including HVAC and lighting as well as specific refrigeration functionalities which retail groups can leverage across multiple sites.

Key process innovation practices implemented include:

- Retrospection/learning cycles, iterative and incremental development, short interval management/daily standup meetings, visual workflow management, design reviews, design-to-Cost, test driven development, automation, continuous integration and testing, root cause analysis, and problem solving.
- Theory of constraint methodology, Scrum Framework/Kanban.
- Scaled Agile Framework for systems thinking.

Building an intrapreneurship mindset

In 2019, the Impact League program experimented with new innovation methods. Cross-functional teams pooled diverse skills from across the Group to foster new ideas, fast-track development and transform our innovation practices from the inside!

This initiative was a great opportunity to apply lean start-up and design thinking methods through digital ideation, to collaborate with a diverse set of colleagues, each bringing their own business strengths to cover all aspects of an innovation project. In less than three months our idea was documented, tested with Schneider experts and successfully shortlisted as the most promising project. The next phase will confirm if we pitch our Circular Economy idea well enough to become a real business opportunity.”

Mireia Miralles,
from Impact League France’s winning team
Innovation in our core business is essential to drive revenue growth and market penetration, which is why the Group invests 5% of revenues in R&D to ensure we have market leading products, software and services. To build future growth engines, innovation based on collaboration with external partners is needed to take risks with new business models and technologies, without disrupting the core activities. The Group’s Innovation at the Edge program facilitates investments, incubations, partnerships, and joint ventures with external companies.

**SE Ventures**
SE Ventures includes our team of investment professionals, based in Silicon Valley, who are actively investing in global businesses from early to late stage with a EUR 500 million fund. Key focus areas include future buildings and industry technologies, AI & IoT, software, cybersecurity, electromobility, and distributed energy resources. In 2019, notable investments included AutoGrid, Claroty, Volta Charging, and Sense.

**Incubations**
The incubations part of the program assesses and nurtures internally and externally sourced ideas for incubation, building new companies that operate independently to remain agile. Companies are incubated internally or through one of four global incubation partners such as Powerhouse or Greentown Labs. Entrepreneurs are mentored and supported on their journey to grow their businesses. In 2019, both eIQ, an electric fleet management company, and Clipsal Solar, which provides residential solar solutions, were launched.

**Partnerships**
By matchmaking startups to our core businesses, we are able to test new technologies or business models, run pilots, and create market traction together. This program enables entrepreneurs to grow and bring fresh external innovation to our core business. For example, our partnership with Tuya in 2019 allowed us to develop an energy management app in record time.

**Joint ventures**
Some new business ideas are best built with other large companies to leverage the strengths of both. In 2019, together with the Carlyle Group, we launched AlphaStruxure to deliver energy-as-a-service for infrastructure. Such joint ventures enable access to the specific resources within the parent companies but continue to operate with agility.

Innovating at the edge of our business means transforming bold ideas into future businesses to disrupt markets and drive long-term growth. At Schneider we prioritize partners, and we are not afraid of long-term partnerships. Our global footprint facilitates access to new markets, and we provide more than just capital. Our technical expertise and market knowledge empower companies to grow.
A closer relationship with Schneider Electric as an investor, partner and board member creates a path toward our common goal of creating a more sustainable energy future.”

Sila Kiliccote,  
CEO and Founder eIQ Mobility

As an investor and partner, Schneider Electric gives us access to its massive scale and its deep expertise in buildings.”

Mike Phillips,  
Founder and CEO Sense

Schneider Electric’s incubation program gave me the independence necessary to be agile and innovative while supporting me with the depth of resources the company has to offer.”

Amit Narayan,  
Founder and CEO AutoGrid

Companies in incubation  
18

Direct investments  
11

Start ups in partnership pipeline  
+200
9. Our integrated supply chain

Manufacturing and supply chain: meeting global, efficiency and sustainability objectives

Schneider Electric has 191 plants and 97 distribution centers around the world. Customer satisfaction is its top priority.

While working constantly to improve occupational health and safety and environmental protection, Schneider Electric’s manufacturing policy aims to fulfill four key objectives, in order of priority:

• To achieve a level of quality and service that meets or exceeds customer expectations;
• To obtain cost-competitive products while continuing to deliver strong and consistent productivity;
• To develop system speed and efficiency and limit production sites’ risk exposure (currency parity, geopolitical risks and changes in cost factors);
• To optimize cash and capital employed in manufacturing operations.

A significant number of the production facilities and distribution centers are dedicated to the global market. The other units are located as close as possible to their end-markets. Although design and/or aesthetic features may be adapted to meet local requirements, Schneider Electric standardizes key components as much as possible. This global/local approach helps Schneider Electric maximize economies of scale and optimize profitability and service quality.

Drawing on its global scope, Schneider Electric is constantly re-balancing and optimizing its manufacturing and supply chain resources.

Continuous improvement on a global scale

At the same time, an industrial excellence program called Schneider Performance System (SPS) has been rolled out in all plants to substantially and continuously improve service quality and productivity. The program also considers our environmental and staff health and safety criteria. Based on a lean manufacturing approach, SPS is supported by the extension of Six Sigma and Quality and Value Analysis programs across the Group. By deploying these optimization methods globally and sharing best practices, the Group intends to raise the operational performance of all its plants to the same high standard.

Schneider Electric’s sites and products meet the applicable regulatory requirements relating to the environment. A continuous assessment system to ensure compliance with regulations is in place, relying mainly on internal and external auditors. On a regular basis, these norms and standards are exceeded by the specific requirements we set ourselves, for instance by replacing certain materials and substances used for our products before regulations require us to do so.

Our plants and logistics centers with more than 50 employees are ISO 14001 (environment) certified, and almost half of these sites have also achieved ISO 50001 (energy efficiency) certification. We implement an integrated management system that also covers Quality (ISO 9001) and Health and Safety (OHSAS 18001). In 2016, Schneider Electric continued implementing its Environmental and Health & Safety strategies for the 2015-2020 period, focusing efforts on EcoDesign, CO2 emission reduction, circular economy goals for our products and the resources used to develop them as well as energy efficiency objectives. We strive to constantly boost our customers’ ability to objectively assess the environmental added value provided by our solutions. We consider customer expectations concerning our products’ environmental profile, information transparency and access, and even end-of-life product management.

In terms of Health and Safety, a range of programs are in progress to boost the “Safety Culture” of each of our sites and each of our employees, in particular through safety visits, training and recognition of good practice. We conduct Health and Safety audits on each of our sites in order to assess practices, performance, governance and culture. Monthly and quarterly steering committees are held with the Group’s top management in order to track progress and make the necessary decisions for continuous improvement.

These safety programs cover our entire value chain, including R&D, purchasing, manufacturing, logistics, marketing, sales, and field services. Schneider Electric has implemented a policy to systematically identify and reduce its industrial risk in order to secure maximum service to its customers and to minimize any impact of disaster, whether it is internal in nature (fire) or external (natural disasters). This policy relies on local actions to remove the identified risks following audits led by an external firm recognized by insurers, as well as an action plan for the continuity of production. If, after corrective actions, the risk remains too high, then the activity is repeated at another Schneider Electric site. Since 2014, this process has been extended to single source suppliers in order to reduce the risk level in five areas (financial, geopolitical, industrial, quality and dependence on Schneider Electric activity), in addition to identifying the action plan in the event of a supply disruption.
The digitization of the supply chain
Since 2013, Schneider Electric put emphasis on digitization to accelerate and intensify its transformation, and in 2017, Global Supply Chain launched Tailored Sustainable and Connected supply chain 4.0, adding six digital accelerators to the previous program, to speed up our transformation thanks to increasing digitization.

Source, Make, Deliver, Plan, Care and Innovate are the six digital transformations just launched to target a full end-to-end digital supply chain, to optimize our efficiency at the same time as bringing more value to our customers.

Supply chain optimization will benefit from the flow model, combined with the integration of the IT systems of our logistics partners with cloud technology. Similarly, a partnership with Kinaxis will enable the digitization of industrial planning and extend its scope. This technology facilitates interaction loops between the different functions and improves our responsiveness to customers while also significantly reducing the value of fixed assets in inventory. Finally, the development of new features tailored to each customer segment on our targeted supply chain computer systems is supported by a strengthened IT convergence plan.

This digitization of the supply chain uses our EcoStruxure™ solutions and Schneider Electric will have about 100 of industrial sites by 2020 to show case EcoStruxure™ as one of the best in class solutions to optimize Process and Energy Efficiency, but also Asset reliability.

TSC 4.0 fully meets the priorities of the Group’s industrial strategy by targeting customer satisfaction first and foremost, reducing costs for increasing responsiveness and reducing capital employed.

This digitization is accompanied by a reinforcement of cybersecurity in the supply chain to ensure the digital security of our products and of our production process.

Recognized for supply chain innovation in manufacturing and sustainability
All these efforts to improve the supply chain have been recognized outside the Company. Gartner, the leading IT research and advisory firm, ranked Schneider Electric’s supply chain third in Europe in 2019 and 11th worldwide, a continuous improvement since 2014 of 18 and 55 places respectively.

The Group also won the 2019 Industrial Manufacturing Supply Chainnovator Award in Gartner’s 2019 Supply Chainnovator Awards which “recognizes unconventional, innovative and high-impact supply chain initiatives in the industrial manufacturing sector.”

The World Economic Forum has designated four of our Smart Factories as Fourth Industrial Revolution “Lighthouses”. Lighthouses are those that have comprehensively deployed a wide range of Fourth Industrial Revolution technologies and use cases at scale, while keeping people and sustainability at the heart of their innovation strategies. Our smart factories in Le Vaudreuil, France and in Batam, Indonesia are recognised as Advanced Lighthouses and those in Wuhan, China and in Monterrey, Mexico are recognised as Developing Lighthouses.

The Group’s smart factories showcase how digitization drives end-to-end efficiency for customers in industrial environments, leveraging:

- Agile Management – shop floor agility: bringing control to the enterprise level;
- Process Efficiency – better closed-loop measurement and control for faster processing;
- Asset Performance Management – optimized asset use for improved profitability;
- Empowered Operators – for effective decision making on the factory floor;
- Reliability – securing plant, process, and asset uptime;
- Energy Efficiency – visibility, control, and optimization of power consumption and costs.

We continue to fully digitize our interactions with partners with our Tailored Sustainable and Connected 4.0 end-to-end supply chain to deliver best-in-class quality, customer service and competitiveness for sustainable growth”.

Mourad Tamoud,
Executive Vice-President, Global Supply Chain
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

9. Our integrated supply chain
A personalized response to customer needs

Since 2012, Schneider Electric has operated the Tailored Supply Chain program with the aim to better align the supply chain set-up with the needs and behaviors of each customer profile (distributors, panel builders, etc.). This approach has required the implementation of a more dynamic industrial strategy to restructure customer service practices, and the configuration of products, equipment, delivery methods and services offered to Group customers. In parallel, the Group has had to simplify its working approaches and focus on creating value for its customers by streamlining its decision-making processes and its organizational structure.

Today our organization is well aligned with operations, covering four geographical zones (Europe, China, NAM and International) and one vertically-integrated division Equipment and Transformers. Each zone has one supply chain leader and each business division has one supply chain strategy leader. Lastly, our central functions support the transformational initiatives globally. Within each of these zones, all the Group’s industrial activities are combined. This has led to the verticalization of procurement activities in a process of simplification and unification of contact with suppliers.

In the period 2015 to 2020, nine initiatives are being implemented to transform the supply chain at every stage from suppliers through to end customers:

- reduce the release time to customers;
- basic logistics offering, customized according to type of channel;
- industrial planning customized according to customer segment;
- development of the services offering, in line with our customers’ installed base;
- improvement of the overall performance of the equipment supply chain;
- involvement of preferred suppliers in all aspects of this transformation approach;
- continued optimization of the entire industrial system to offer customized customer service;
- focus on excellence of the supply chain for growth activities;
- management of the release of new product offerings.

The aim is to make the Group’s supply chain a positive differentiating factor for our customers and, in turn, to gain a competitive advantage over our competitors.

Procurement: driving ethical business and environmental commitments

Procurement corresponds to around 50% of revenue and plays a crucial role in the Group’s technical and business performance.

To optimize procurement, the Group has accelerated its strategic transformation plan to concentrate its supplier base, source purchases from top-performing suppliers (strategic suppliers) and to increase sourcing from new economies. In addition, the Group is rolling out the “Purchasing Excellence System” with a view to involving suppliers, as a component in the ‘End-to-end Supply Chain’, in achieving our customer satisfaction performance objectives.

Schneider Electric primarily purchases prefabricated components, raw materials (silver, copper, aluminum, steel and plastics), electronic and electrical products and services. The diverse supplier list includes multinationals as well as small, medium and intermediate sized companies.

Suppliers are selected for the quality of their products and services, their adherence to delivery deadlines, their competitiveness, their innovative capacity and their commitment to corporate social responsibility. As a participant of the UN Global Compact, Schneider Electric encourages its main suppliers to contribute to its sustainable development initiative according to the guidelines of standard ISO 26000, through ongoing improvement to reach and pass a required level which is permanently upgraded. In 2019 this was reinforced by the Group’s commitments, made during UN Climate Week to work with suppliers towards building a net-zero supply chain by 2050.

Moreover, Schneider Electric is committed to its latest Principles of Responsibility to systematically investigate, check and prevent the risk of unethical practices from suppliers, which includes performing targeted on-site audits.

Read more in Chapter 2 on page 84

Customer first

Ensuring customer satisfaction in terms of quality and experience is fundamental to the Group’s growth strategy and putting customers first is an important value for all teams. Everywhere, we focus on improving customers’ end-to-end Schneider Electric experience, as today this is the priority driver for satisfaction, often exceeding product features and price. Through digital Customer Voice surveys, we regularly monitor feedback to measure our current performance and also gather information to anticipate future needs. By surveying both end-user customers and partners, we capture feedback at the critical touch points with automatic transaction-based digital surveys, to better understand their specific business needs and personalize their future experience.

This process covers six touchpoints when customers instantaneously rate their satisfaction having completed an action and allowing us to collect feedback at the freshest point of interaction. The data from these digital surveys is processed as such to allow prompt incident management when customer issues arise. These insights allow us to define and propose the most effective and corrective actions for all types of customers wherever they are operating.

By establishing the optimal moment to ask for feedback based on customer journey analytics, we get more reliable data about our customers’ buying experience.

Committing to carbon neutrality across our supply chain is a challenging undertaking that requires increased collaboration with suppliers, partners and customers.”
10. How we manage risks

10.1 Definition and objectives of internal control and risk management

Definition and objectives
The Group's internal control procedures are designed to ensure:

- compliance with laws and regulations;
- application of instructions and guidelines issued by Group Senior Management;
- the proper functioning of the Company's internal processes;
- the reliability of financial reporting; and
- more generally, internal control helps the Group manage its businesses, run efficient operations and use its resources efficiently.

Internal control aims to prevent and manage risks related to the Group's business. These include accounting and financial risks, as well as operating, fraud and compliance risks. However, no system of internal control is capable of providing absolute assurance that these risks will be managed completely.

Scope of this report
The system is designed to cover the Group, defined as the Schneider Electric SE parent company and the subsidiaries over which it exercises exclusive control.

Jointly controlled subsidiaries are subject to all of the controls described below, with the exception of self-assessments of the implementation of Key Internal Controls (see "Operating Units" below), page 60.

Internal control reference documents
The Group's internal control system complies with the legal obligations applicable to companies listed on the Paris stock exchange. It is consistent with the reference framework laid down by the Autorité des Marchés Financiers (French Financial Markets Authority – AMF) on internal control and risk management.

The Group's internal control process is evolving; procedures are adapted to reflect changes in the AMF recommendations and the business and regulatory environment, as well as in the Group's organization and operations.

Information used to prepare this report
This report was prepared using contributions from the Group's Internal Audit and Internal Control Departments, as well as the various participants in internal control. It was reviewed by the Audit Committee.
10.2 Organization and management: internal control key participants

The Group’s corporate governance bodies supervise the development of internal control and risk management systems. The Audit Committee has particular responsibility for following up on the efficiency of internal control and risk management systems and reports to the Board of Directors thereon (see committees of the board, chapter 4 section 4, page 247).

Each manager is responsible for monitoring internal control in his or her area, at the different levels of the organization, as are all key internal control participants, in accordance with the tasks described hereafter.

**The Board**

The Board is informed about the efficiency of the internal control and risk management systems.

**Senior Management**

Responsible for designing and leading the overall internal control system including the oversight, identification and assessment and mitigation of risk at Group level as well as Business Unit level and across key Group functional areas.

**Internal Audit**

Annual internal audits. Embedding risk and control concerns. Monitoring implementation of recommendations.

**Internal Control**

Organising and monitoring self-assessment campaigns, internal control missions and the implementation of set action plans.

**Operating divisions and business units**

Within each business unit, the management team organizes control of operations, ensures that appropriate strategies are deployed to achieve objectives, and tracks unit performance.

**Group Functions**

Decision-making and risk management at corporate level. Issue, adapt and distribute policies, target procedures and instructions to units and individuals assigned to handle specific duties.

**Audit Committee**

Follows-up on the efficiency of internal control and risk management systems and reports to the board thereon (see committees of the board, chapter 4 section 4, page 247).

**Finance and Control – Legal Affairs Department**

Organizing control and ensuring compliance with procedures.
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

10. How we manage risks

Senior Management
Senior Management is responsible for designing and leading the overall internal control system, with support from all key participants, in particular the Group Internal Audit and Internal Control Departments.

It also monitors the Group’s performance, during business reviews with the Operating Divisions and Global Functions. These reviews cover business trends, action plans, current results and forecasts for the quarters ahead.

Similar reviews are carried out at different levels of the Group prior to Senior Management’s review.

Internal Audit Department
The Internal Audit Department reports to Senior Management. It had an average headcount of 21 auditors and 25 regional internal controllers in 2019. The internal auditors are responsible for ensuring that, at the level of each unit:

- the identification and control of risks is performed;
- significant financial, management and operating information is accurate and reliable;
- compliance with laws and regulations and with the Group’s policies, standards and procedures is ensured;
- compliance with the instructions of the Head of the Group is ensured;
- acquisition of resources is carried out at a competitive cost, and their protection is ensured;
- expenses are properly engaged and monitored;
- correct integration and control of acquisitions are ensured.

Annual internal audit and internal control plans are drawn up based on a combination of a risk based and audit universe coverage based approach. The risk based dimension is embedding risk and control concerns identified by Senior Management, taking into account the results of past audits, the results of Key Internal Control self- assessments returned by the units and other indicators such as Corruption Perception Index and COFACE Country Index. When necessary, the audit plan is adjusted during the year to include special requests from Senior Management. The internal audit process is described in the section “Control procedures” below.

After each internal audit, a report is issued setting out the auditors’ findings and recommendations for the units or function audited. The management of audited entities or audited domains is requested to define for each recommendation an action plan aiming at implementing corrective actions. Measures are taken to monitor implementation of recommendations and specific follow up audits are conducted if necessary.

Audit reports and the implementation of their recommendations are distributed to Senior Management. An executive summary is sent to the President of the Audit Committee. A synthesis of the main takeaways and conclusions from audit missions is presented to the Audit Committee for each committee session (five times per year).

These reports are subject to regular exchange with the Group’s auditors.

The Head of the Internal Audit and Internal Control has direct access to the President of the Audit Committee and meets her on a regular basis over the year.
The unit drafts and updates:

- a glossary of terms used by the Reporting and Consolidation unit, including a definition of each term;
- the chart of accounts for reporting;
- a Group statutory and management accounting standards manual, which includes details of debit/credit pairings;
- a Group reporting procedures manual and a system user’s guide;
- a manual describing the procedures to be followed to integrate newly acquired businesses in the Group reporting process;
- an intercompany reconciliation procedures manual; and
- account closing schedules and instructions.

The Reporting and Consolidation unit monitors the reliability of data from subsidiaries and conducts monthly reviews of the various units’ primary operations and performance.

Within the Finance, Control & Legal Affairs Department, the Tax and Legal teams oversee tax and legal affairs, to provide comprehensive management of these risks.

Within the Finance, Control & Legal Affairs Department, the Finance and Treasury Department is responsible for:

- centralized management of cash and long-term Group financing;
- centralized management of currency risk and non-ferrous metals risk;
- monitoring of Group trade accounts receivable risk and the definition of the credit policy to be implemented;
- the distribution of rules for financial risk management and the security of payments:
  - define guidelines and contribute to the definition of Key Internal Control indicators relating to treasury and credit management,
  - review the related risks of complex projects as a subject matter expert,
  - select Group Tools for Credit, Trade and Cash Management; and
- the annual review of financial structures – balance-sheet changes and financial risks – facing the Group’s companies during formal financial review meetings.

Procedures for managing financial risk are described in “Risk Factors” (chapter 1, section 11.1).

Global Functions and Division (Human Resources, Supply Chain, Information Systems, etc.)

In addition to specific processes or bodies such as the Group Acquisitions Committee (see “Risk Factors” chapter 1, section 11.1) for making and implementing strategic decisions and centralization of certain functions within the Finance, Control & Legal Affairs Department (see above), Schneider Electric centralizes certain matters through dedicated Global Functions thus combining decision-making and risk management at the corporate level.

A Technology Council, namely the Chief Technology Officers (CTO) community, grouping all Divisional and Business Chief Technology Officers as well as key Corporate Technology Functions involved in Offer Creation & Research, meets on a regular basis to ensure cross-divisional coordination in setting the strategic direction for innovation and driving end to end architectures, defining next generation platforms and systems. Additionally, this community partners closely with the senior business leaders. This has been done to ensure a simple structure so that technology can be close to business and to maintain consistency across all divisions of Schneider Electric.

The Human Resources Department is responsible for deploying and ensuring the application of procedures concerning employee development, promoting diversity and well-being. The department is also responsible for establishing guidelines on rewards and compensation, hiring, on and off boarding, learning, amongst other Human Resources related duties.

The Procurement Department within Supply Chain is responsible for establishing guidelines concerning the procurement organization and procedures; relationships between buyers and vendors; and procedures governing product quality, level of service, and compliance with environmental standards and Group Principles of Responsibility.

Global Functions and Division also issue, adapt and distribute policies, target procedures and instructions to units and individuals assigned to handle their specific duties. Global Functions have correspondents who work with the Internal Control Department to establish and update the Key Internal Controls deployed across the Group.

Operating Divisions and business units

The Operating Division management teams play a critical role in effective internal control.

All Group units report hierarchically to one of the Operating Divisions, which are led or supervised by an Executive Vice-President, supported by a SVP Finance.

The Executive Vice-Presidents leading or supervising the Operating Divisions sit on the Executive Committee, which is chaired by the Chairman and CEO of the Group.

Within each business unit, the management team organizes control of operations, ensures that appropriate strategies are deployed to achieve objectives, and tracks unit performance.
10. How we manage risks

10.3 Distributing information: benchmarks and guidelines

The main internal control benchmarks are available to all employees, including in the Group’s employee portal. Global Functions send updates of these reference documents to the appropriate units and individuals through their networks of correspondents.

In some cases, dedicated e-mails are sent out or messages are posted on the employee portal or Schneider Electric collaboration tools to inform users about publications or updates.

Whenever possible, the distribution network leverages the managerial/functional organization to distribute standards and guidelines.

Principles of Responsibility
See “Ethics & compliance” (chapter 2, page 115).

Compliance code governing stock market ethics
The compliance code sets out the rules to be followed by management and employees to prevent insider trading. All employees who have access to sensitive information are bound by a strict duty of confidentiality. It also sets restrictions on purchases and sales of Schneider Electric SE securities by persons who have regular or occasional access to sensitive information in the course of their duties (see “Organizational and operating procedures of the board of directors”, chapter 4 section 2 on page 239). Such persons are prohibited from trading in the Company’s securities at any time if they are in possession of price-sensitive information which has not been made public and during specified periods prior to (and until the day of) release of the Group’s financial statements and quarterly information on sales.

International Internal Auditing Standards
The Internal Audit Department is committed to complying with the international standards published by the Institute of Internal Auditors (IIA) and other bodies.

International Financial Reporting Standards (IFRS)
The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS), in compliance with European Union regulation no.1606/2002.

The Group applies IFRS standards as adopted by the European Union as of December 31, 2019.

The Group’s accounting principles reflect the underlying assumptions and qualitative characteristics identified in the IFRS accounting framework: accrual accounting, business continuity, true and fair view, rule of substance over form, neutrality, completeness, comparability, relevance and intelligibility.

The Group statutory and management accounting standards manual explains how IFRS principles are applied within the Group, taking into account the specific characteristics of the Group’s activities.

The application of Group accounting principles and methods is mandatory for all Group units, for management reporting and statutory consolidation. The Group statutory and management accounting standards manual and the IFRS principles are available via the employee portal.

Approval limits
Under current management practice, the Group has set approval limits for Senior Management for certain decisions. Local management will define the local approval matrix for relevant decisions within the approval limits set by the Group. Within this framework, business segment executives, functional, operational and local management is therefore able to approve certain decisions depending on the nature and threshold.

In addition, all transactions which by their size or nature could affect the Group’s fundamental interests, must be authorized in advance by the board of directors, i.e., decisions relating to the acquisition or disposal of holdings or assets for amounts greater than EUR250 million; decisions relating to strategic partnerships and major changes of course in the strategy, and decisions relating to the issuance of off-balance sheet commitments that exceed the limits prescribed by the board.

Statutory and management reporting principles
An integrated reporting and consolidation system applicable to all Group companies and their management units is in place. Statutory and management reporting principles and support tools are available on the Group employee portal.

The subsidiaries record their transactions in accordance with Group standards. Data are then adjusted, where necessary, to produce local statutory and tax accounts.

The reporting system includes consistency controls, a comparison of the opening and closing balance sheets and items required to analyze management results.
Key Internal Controls

A list of Key Internal Controls that was drawn up is reviewed annually. They cover:

- the Control Environment (including the Responsibility and Ethics program, chart of authority, segregation of duties, business continuity plan, retention of records and business agents);
- operating processes (Procurement, Sales, Logistics, etc.);
- accounting and financial related cycles;
- Human Resources and Information Systems cycles.

The Key Internal Controls are available to all units in the Group employee portal and shared depository, along with appendices with more detailed information, links to policy descriptions, an explanation of the risks covered by each Key Internal Control and a self-assessment guide. For each cycle, the Key Internal Controls cover compliance, reliability, risk prevention and management and process performance. Operating units fill out self-assessment questionnaires concerning the Key Internal Controls using a digitized tool.

For new acquisitions, the acquired entities may continue with their existing controls in transition before deploying the Key Internal Controls.
10. How we manage risks

10.4 Risk identification and management

General risks at the Group level
The Internal Audit Department conducts interviews to update the list of general risks at Group level each year. In 2019, around 100 of the Group’s top managers were interviewed, in addition to external views such as financial analysts, board members and a sample of strategic customers. Since 2016 individualized risk matrices by Operation or by Business have been created.

The risks identified through these interviews are ranked by a risk score (comprising impact and likelihood of occurrence) and level of mitigation.

Risk factors related to the Company’s business, as well as procedures for managing and reducing those risks, are described in “Risk Factors”, chapter 1, section 11.1. These procedures are an integral part of the internal control system.

The risk matrix and the analysis of changes from one year to the next contribute to the development of an internal audit plan for the following year. 72% of the risk categories identified in the Group’s risk matrix are audited by the Internal Audit Department over a period of five to six years to assess action plans for managing and reducing these risks.

Local risks related to the Company’s business at the unit level
Local risks related to the Company’s business are managed first and foremost by the units in liaison with the Operating Divisions, based on Group guidelines (particularly via the Key Internal Controls). Each subsidiary is responsible for implementing procedures that provide an adequate level of internal control.

The divisions implement cross-functional action plans for risk factors related to the Company’s business identified as being recurrent in the units or as having a material impact at the Group level, as appropriate.

The internal control system is adjusted to account for these risks.

Risks related to Solutions
The Solutions Risk Management Department defines and implements principles and tools designed to manage the contractual (such as limitation of liabilities), technical (such as technical discrepancy versus customer specifications) and financial risks (such as margin slippage at solution execution phase).

The network of Solution Risk Managers assesses the risks of all major projects in conjunction with the Subject Matter Experts and Tender Managers during the preparation of offers. Solution Risk Manager then provides a comprehensive, 360 degree view on project risk and mitigations to support the opportunity approval process.

Risk management by the Risk and Insurance Department
The Risk and Insurance Department contributes to the internal control system by defining and deploying a Group-wide insurance strategy, as defined in “Insure strategy”, chapter 1, section 11.2. The insurance strategy includes the identification and quantification of the main insurable risks, the determination of levels of retention and the cost benefit analysis of the transfer options. The Risk and Insurance Department also defines, proposes and implements action plans to prevent these risks and protect assets.

Risk management by the Security Department
The Group’s Security Department defines corporate governance with regard to loss prevention in the area of wilful acts against property and people.

To be more powerful and more balanced, a Global Security Group Committee was created in 2017, gathering together the Zone Security Leaders (eight managers in total). Some of these leaders report directly to the Global Security Department (Central & South America, South East Europe, East Asia & Japan, Africa & Middle East) and some to local management with functional reporting to Global Security Department (North America, Greater India, CIS, France). In this respect and in close cooperation with the Risk and Insurance Department, it is directly involved in assessing the nature of such risk as well as defining adequate prevention and protection measures.

The Security Department publishes internally a table of “Country Risks” for use in security procedures that are mandatory for people traveling, expatriates and local employees. On request, it provides support to local teams for any security issues (site audit, expatriates or local employee security, security on assignments, etc.). It provides daily coordination with the Group’s worldwide partner in the field of medical and security assistance (International SOS & Controls Risks – start of contract in January 2011) as well as in the field of psychological support that is necessary to organize in some crisis context (Eutelmed – start of contract in April 2015).

It brings its methodology to develop emergency plans (evacuation plans, crisis management plans, etc.) and coordinates the corporate crisis team (SEECC – Schneider Electric Emergency Coordination Center, created in 2009) each time that it is activated.
The Security Department co-chairs the Group Compliance Committee (previously named Fraud Committee) alongside the Internal Audit Department and the Legal Department and is directly involved in combating internal fraud (managing and carrying out internal investigations). The Security Department created a Schneider Electric-Bureau of Investigation (SEBI) in 2013 responsible for investigations (internal and external fraud) within the Security Department itself and in charge of supporting internal investigators as well as contributing to the Group’s methodology and procedures to conduct investigations properly (in accordance with the law and to be efficient in gathering evidence effectively).

The Security Function also participates in crisis management, in managing the corporate crisis cell and in supporting local entities (to limit the consequences of the occurrence of certain risks such as civil war, weather events, pandemics, attacks on people, terrorism, etc.). In addition, it regularly organizes Security Audits (R&D centers, head offices, sensitive plants, etc.).

Management of Cybersecurity and Cyber risks across Schneider Electric

The Digital Security Function inside the Schneider Digital organization defines Schneider Electric’s strategy and approach. This department is accountable for protecting the Digital assets and offers for Schneider Electric and subsidiaries; managing the Cyber Risk Register; driving Cybersecurity awareness across the Company; owning the creation, maintenance and enforcement mechanisms of Digital Security policies; ensuring the execution of Cybersecurity initiatives across Schneider Digital practices and managing the Cybersecurity Incident Prevention, Detection and Response process.
10.5 Control procedures

In addition to the general missions already described, this section describes specific measures taken in 2019 to improve the Group’s control system.

Operating units
For internal control to be effective, everyone involved must understand and continuously implement the Group’s general guidelines and the Key Internal Controls.

Training in Key Internal Controls continued in 2019 for those involved for the first time in the annual self-assessment process: newly promoted managers and units recently integrated. Operational units undertook self-assessment of compliance with the Key Internal Controls governing their scope of operations.

The self-assessments conducted during the 2019 campaign covered more than 90% of consolidated sales and made it possible to define improvement plans in operating units, when necessary. The ultimate goal is that these evaluations should cover at least 90% of consolidated sales each year.

The self-assessments are conducted in the units by each process owner. Practices corresponding to the Key Internal Controls are described and the entity is either compliant or not compliant with a particular control.

If a particular unit is non-compliant with any of the controls, an action plan is defined and implemented to achieve compliance. These action plans are listed in the self-assessment report.

The unit’s financial manager conducts a critical review of the self-assessments by process and certifies the quality of the overall results. The self-evaluation is then also certified by the person in charge of the unit.

The regional internal controllers carry out controls on site to assess the reliability of self-assessments and conduct diagnostic missions as requested by management.

Global Functions
In 2019, the Global Functions continued to set guidelines, issue instructions and provide support.

For example:

- the Security Department fully updated the Global Security Directive on Crisis Management and provided support to the Cybersecurity department in organizing three crisis management exercises based on cyber-attack scenarios;
- Global Security created a “Travel Policy – Group Committee” composed of Human Resources representatives and travel managers from the ten first countries representing more than 80% of the total travel spent. This Committee is to ease the deployment of the new version of the Global Travel Policy in countries and to share best practices;
- a new dedicated Security position was created for the Europe zone. This new position is to provide more support to local management in assessing risks and in defining relevant security setups, means and procedures specifically in the area of “site security”;
- the Solutions Risks Management team continued to develop supports to streamline the analysis, mitigation, and approval of liability related issues, resulting in gains in internal efficiency (reduced cycle time) as well as customer responsiveness;
- the Solutions Risks Management team participated in an update of the Customer Project Process as well as approval matrix for the Systems business (simplification and standardization across all Divisions); and
- the Treasury launched a new Treasury management system that will provide an extended coverage of Treasury flows throughout the Group. The new tool has been launched along with new processes allowing the automation of Treasury operations, automatic postings and will also strengthen the security of Treasury flows.
Internal Control Department

The Internal Control Department continued to deploy the Key Internal Controls – training and requests for self-assessments – throughout the units, with the scope extended to cover new units.

In 2019, certain Key Internal Controls that have been identified since 2015 as critical remained a focus and actions were taken to increase their level of awareness and compliance. Led by the IT Internal Audit and Digital team, the IT Internal Controls Framework is being developed.

The list of Key Internal Controls continues to evolve.

The software package for the management of self-assessment questionnaires and follow-up action plans of internal audit and internal control introduced in 2011 continues to be improved.

The local Internal Control team which consists of around 13 members located in various geographies dedicated their efforts to improving internal controls in the local entities.

Internal Audit Department

The Internal Audit Department contributes to the analysis and to strengthening the internal control system by:

- mapping general risks;
- verifying the effective application of Key Internal Controls during audit assignments;
- reviewing the audited unit's Internal Control self-assessment and related action plans.

Audit assignments go beyond Key Internal Controls and include an in-depth review of processes and their effectiveness.

Internal Audit also reviews newly acquired units to assess their level of integration into the Group, the level of internal control and the effectiveness of operational processes, as well as ensuring Group rules and guidelines are properly applied, and more generally compliance with the law.

A summary overview of the department’s audits makes it possible to identify any emerging or recurring risks that require new risk management tools and methodologies or adjustments to existing resources.

In 2019, Internal Audit performed 38 audits, including:

- audits of units;
- audits of a number of risks or operating processes;
- analyses of internal control self-assessments by audited units;
- follow-up audits to ensure recommendations are applied;
- assistance assignments.

The most common findings and observations derived from these audits relate to the following topics: awareness of the Principles of Responsibilities and of the Responsibility & Ethics Dynamic program, segregation of duties and access rights to IT systems, management of price conditions, alignment with the Chart of Approval, solutions and projects bid management and margin control at the execution phase, security of payments, business continuity related aspects, etc.

The Regional Internal Controls team completed more than 106 on-site inspection missions in 2019 to assess the level of internal control and issued the necessary recommendations when needed.

Group Compliance Committee

The Group Compliance Committee defines the process to detect and manages non-compliance of ethical cases with appropriate investigation process. The governance on Ethics & Compliance is reflected in chapter 2 Ethics & Compliance, page 115.
10.6 Internal control procedures governing the production and processing of consolidated and individual Company accounting and financial information

In addition to:

• its regulatory tasks;
• its responsibility for overseeing the close of accounts across the Group;
• its audits of the Group’s results with respect to set targets (see “Internal Control Organization and Management: Finance, Control & Legal Affairs Department”);

The Reporting and Consolidation unit is tasked with overseeing:

• the quality of reporting packages submitted monthly by subsidiaries;
• the results of programmed procedures; and
• the integrity of the consolidation system database.

In addition, the Reporting and Consolidation unit ensures that:

• given that the Group consolidated financial statements are finalized a few weeks after the annual and half-year balance sheet date, subsidiaries perform a hard close at May 31, and November 30, of each year so that most closing adjustments for the period can be calculated in advance;
• the scope of consolidation as well as the Group’s interest and the type of control (exclusive control, joint control, significant influence, etc.) in each subsidiary from which the consolidation method results are determined in cooperation with the Finance, Control & Legal Affairs Department;
• instructions to the units on the closing process, including reporting deadlines, required data and any necessary adjustments are issued;
• the Group’s consolidated financial statements are analyzed in detail, to understand and check the main contributions by subsidiaries, as well as the type of transactions recorded;
• accounting classifications are verified;
• the preparation and approval of the statement of changes in equity and the cash flow statement are the key control points.

The internal controls used to confirm the existence, completeness and value of assets and liabilities are based on:

• each subsidiary’s responsibility for implementing procedures providing an adequate level of internal control;
• defining levels of responsibility for authorizing and checking transactions;
• segregating tasks to help ensure that all transactions are justified;
• the integration of statutory and management reporting systems developed to guarantee the completeness of transaction data recorded in the accounts;
• all of the subsidiaries apply IFRS with regard to recognition principles, measurement and accounting methods, impairment and verification;
• checks and analyses as described above performed by the Reporting and Consolidation unit.
11. Risk factors

11.1 Principal risks

The Group risk inventory is organized in four categories and includes 18 key risk factors identified.

The key risks selected and presented below are the risks considered by the Group as specific to its business and identified as having the potential to affect its activity, its image, its financial situation, its results or the achievement of its objectives. Other risks, not identified or not significant according to the Group, could eventually affect its performance. In each category, risks are ranked on a descending order impacting the Group (the first one being the most likely to affect the Group). This ranking is the result of the process performed as part of the overall risk management described in section 6.4 “Risk identification and management”. It is established on the potential net impact corresponding to the potential impact (financial/legal/reputation), considering the current mitigation and reduction measures, as well as the probability of occurrence of this risk.

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Key to symbols
- High impact
- Medium impact
- Low impact
1. Risks related to the environment in which the Group operates

1.1 World deglobalization and fragmentation

Risk description
Stable trade is beneficial for economic growth. Trends of increased mercantilism is lending towards regionalization of trade around the United States, China, Russia and Europe poles. Nationalized, rather than globally balanced government regulations and policies on, but not limited to, digitization, circularity, carbon, supply chain management and others could handicap offer development efficiency through redundant efforts. These offer development duplication efforts can potentially impact Schneider Electric’s profitability.

Furthermore, this acceleration of national versus global trade policies is increasing the pressure on the supply chains of global companies in the forms of both tariff and non-tariff barriers. As such, trade wars could disrupt Schneider Electric’s operations and global supply chain. The above-mentioned combination of both nationally orientated tariff and non-tariff burden could increase the cost to market and potentially adversely impact the Group profitability.

2019 Specific events
In 2019, trade tensions between United States and respectively China and Mexico led to some negative impacts on sales and profitability.

Risk mitigation
In order to mitigate the risk on supply chain efficiencies and tariffs impacts, Schneider Electric has a multi-hub organization. Indeed, the Group has R&D and supply chain activities, suppliers and commercial networks in the main international hubs, which are North America, EMEA and Asia. In this multi-local context, Schneider Electric can rebalance its activities across geography as per Tailored Supply Chain.

Schneider Electric has also created an internal team focusing on geopolitics that are reshaping the global business landscape with a change of trade paradigm. While the pace of external changes continues at a historically unprecedented scale regionally, these teams are working with internal stakeholders from BUs, R&D, Regional Ops and Global Transversal functions (i.e. Finance, GSC, Legal, Marketing).

Schneider Electric has committed to highly credible industry organizations globally to support stabilization of global trade. These materialize in collective industry positions and responses to public response requests. The Group publicly communicated in support of stable, rules-based trade.

Key to symbols
1. Risks related to the environment in which the Group operates

1.2 New players such as Digital giants, software players and energy majors entering the energy efficiency and renewable energy space

**Risk description**
Schneider Electric operates in the energy market which attracts new players and creates a new competitive landscape. Indeed, the Energy industry is undergoing major transformations and disruptions driven by the following main trends:

- A net-zero world: pressure on climate change and sustainability call for a change in Business practices;
- An all-electrical world: oil majors urged to reduce their impacts on carbon emissions;
- An all-digital world: shifting power to digital giants and software players.

In this context, Schneider Electric’s competition landscape is evolving, and the Group can see now some Digital giants, software players or large companies such as Energy majors positioning themselves as providers of energy efficiency, which can directly compete with the digital services Value Proposition currently developed by the Group.

**Risk mitigation**
The Group is driving competition performance analysis and follow-up of organizational changes, M&A news, reviewing its scope of competitors and key players in its environment.

To anticipate these changes in the competitive landscape, the Group is communicating more widely about its values and positioning on Climate change and sustainability.

Schneider Electric provides a full portfolio of solutions for customers (hardware + software) – as EcoStruxure solutions – and Energy and Automation digital solutions for efficiency and sustainability.

It also implies developing the Group’s network of Partners and reinforcing its Strategic Technology Alliances.
1. Risks related to the environment in which the Group operates

1.3 Export Controls

Risk description
International, Foreign and National Export Control Laws and Regulations govern the transfer of goods, services and technologies within a country or between countries and/or their nationals. Elements that may trigger restrictions and licensing requirements may include but not limited to countries, parties, product and end-uses.

Schneider Electric being a Multi-National Corporation (MNC) with international operations spanning across more than 100 different countries worldwide must constantly ensure full compliance to such laws and regulations by implementing a robust corporate export control compliance program. As any implications may result in a significant impact on the Group's businesses, results, reputation and financial position.

Albeit Schneider Electric product portfolio has only a limited product range that may have dual-use goods features as well as non-dual use goods (e.g. breakers) that may be used in sensitive applications; prohibition, restriction or licensing requirements may apply to these products especially if associated with political sensitive countries and destinations.

Risk mitigation
Schneider Electric has strict mandatory corporate export control due diligence processes in place to address and mitigate the above described risks. To that end, Schneider Electric Group deploys a Corporate Export Control Program led by its Global Export Control Center of Excellence (CoE). The CoE composed of specialists that monitors and enforces the Corporate Export Control Program with the support of the Schneider Electric Export Control Network.

Schneider Electric Corporate Export Control Program includes but not limited to export control due diligence screening processes (e.g. embargo and restricted countries screening, denied party screening, dual-use goods screening and sensitive applications screening); incorporation of Export Control provision in main sales and procurement contractual template; conducting of regular online and classroom awareness and training sessions for all Schneider Electric employees.

Schneider Electric Group continues to enhance and update its Corporate Export Control Program to ensure compliance with all applicable export control laws and regulations, both local and extra-territorial.

In 2019, Schneider Electric incorporated Export Control as a standalone principle in the updated Corporate Principles of Responsibility. A new Export Control Awareness module was also launched on the Corporate Learning Platform to further enhance the efficiency and accessibility of Export Control awareness and training.

Key to symbols
- High impact
- Medium impact
- Low impact
1. Risks related to the environment in which the Group operates

1.4 Corruption linked to B2B and project business

Risk description
The exposure of the Group to corruption risk has been increasing for several years, due to the expansion of the Group’s activities in new economies, especially in Asia and Africa, through organic growth and mergers and acquisitions.

The business model of the Group relies on a large ecosystem of partners, including more than 50,000 suppliers throughout the world representing a procurement volume in excess of EUR 12 billion, but also, resellers, and distributors. This ecosystem may represent a risk for the Group to be accountable for activities performed on its behalf, but also regarding potential conflict of interest or unethical solicitation.

In addition, the Group is participating in complex projects involving a large range of partners in sectors at risk, such as Oil and Gas, and with end-users from the public sector in countries at risk.

Over the past 3 years, the increase of law enforcement by public authorities, higher press coverage of fines imposed on companies and new regulations requiring a strong compliance program have significantly changed the impact of corruption risks.

Risk mitigation
To mitigate this risk, Schneider Electric has built a dedicated Group Compliance Team, composed of corporate compliance counsels and regional compliance officers.

The whistleblowing system of RED line for employees and GREEN line for external stakeholders is also managed to combat this risk. In 2019, 560 and 32 alerts of all natures respectively coming from RED Line and GREEN Line have been received and managed through follow up inquiries.

In addition, Group Principles of Responsibility were updated in April 2019 with reinforcing guidance regarding anti-corruption policy. Then, in August 2019, Business Agents Policy was updated and deployed and in November 2019, the same process was applied for Anticorruption Code of Conduct.

Furthermore, corruption risk mapping was performed in 2019 at regional level, and internal controls and Internal Audit missions were reinforced on compliance risks.

94% of Sales, Procurement and Finance employees have been trained thanks to the Anticorruption e-learning. The content of this e-learning is updated each year.

A system built-in segregation of duties control is in place in main Group’s ERPs.

All compliance related aspects are part of due diligence done by the Group for Mergers and Acquisitions.

For detailed 2019 actions, please refer to sections 2.1.4 and 2.1.5 of the Report.
11. Risk factors

1. Risks related to the environment in which the Group operates

1.5 Strengthening of chemical and resource-related regulations in Electrical and Electronic Equipment space

Risk description
Schneider Electric’s plants and products are subject to strict environmental laws and regulations.

Many countries have increased legal requirements for the use of chemicals and resources, both in manufacturing processes and in the bill of materials of products.

Key Product Environmental regulations were strengthened in 2019, especially those specific to Electric and Electronic Equipment (EEE): RoHS (restriction of hazardous substances in electrical and electronic equipment) and WEEE (waste electrical and electronic equipment). RoHS bans ten chemical substances for many product categories, sold by Schneider Electric: this may require substitutions, and may represent a considerable risk of non-compliance; WEEE concerns the Group Extended Producer Responsibility, and obliges an active role in the framework of products end life, particularly in terms of financing the collection channels.

In addition, as described in Note 21 of Chapter 5 of this Document, provisions of EUR 293M are set aside to cover environmental risks. These provisions are primarily funded to cover clean-up costs (not covering potential penalties). The estimation of the expected future outflows is based on reports from independent experts.

French ‘Duty of Care’ and Country-specific initiatives (e.g. China) have reaffirmed the expectations towards engaging Suppliers in Environmental de-risking efforts.

The Group Mergers & Acquisitions (M&A) activity is opportunistic, and Schneider Electric needs to critically assess Environmental risks of all acquired companies’ product portfolios, to ensure strict environmental compliance of all their products and in every market where they are traded.

Local regulations (Country, Europe, China, etc.) could force a percentage of recycled content in some product categories, where neither the relevant recycled resources may be available, nor the product can be certified or accepted – with recycled content – by IEC, NEMA or any other electrical standards.

Regulations phase out specific chemical substances or resources too quickly, whilst no relevant alternative may have been found in a scalable manner.

Risk mitigation
The Group’s Integrated Management System (IMS), which covers Safety, Energy, Quality, and Environment, continues to be deployed across all Industrial sites and major commercial offices.

Offer Creation Process (OCP) is strict, and each step and deliverable embed ecoDesign ambitions and principles: selection of resources, identification of critical substances, lifecycle assessment, then production of REACh and RoHS report.

The Group’s community of ecoDesign business partners train the R&D teams in all new and coming environmental regulations and assist them with precise guidance.

Environmental and Safety compliance audits, conducted by third-party consultants or internal specialists, take place periodically across countries.

Schneider Electric has been part of task forces on the Circular Economy playing leadership roles in multi-stakeholder dialogues in Europe, China, and the US, to discuss opportunities and hurdles: regulations, environmental impacts, protection of customers’ interests and job creation. Schneider Electric is active in France’s Circular Economy Roadmap and engaged in China with MIT on circular economy. The Group leads GIMELEC, FiEEC, and engage with IGNES, ORGALIME discussions for its sector on circular economy, in various circles.
1. Risks related to the environment in which the Group operates

1.6 Human rights, environmental and safety issues through the value chain

Risk description
Schneider Electric’s procurement volume represents more than EUR 12 billion with more than 50,000 suppliers. As part of the Duty of Vigilance program in the supply chain, Schneider Electric has performed a risk analysis through its network of suppliers, and identified potential risks in the following areas:

- Human Rights
- Environment
- Ethical Business Conduct
- Cybersecurity

The occurrence of these risks with one of the Group’s suppliers may result in the following impacts on Schneider Electric:

Reputation
Schneider Electric’s image may be negatively impacted by suppliers who:

- Do not respect Human Rights, or safety rules for their workers;
- Are responsible for pollution and damage to the environment;
- Are conducting business in a non-compliant or illegal manner.

Disruption of supply chain due to:

- Short term termination of relations with a supplier.
- Events resulting from the lack of safety or insufficient protective measures (fire prevention, etc…) that may affect the supply of components.
- Damage to data exchanged with suppliers, or digital systems (virus, malware).

2019 Specific events
In France, disputes between NGOs and French companies (excluding Schneider Electric) concerning non-compliance with the duty of vigilance have started in 2019. The final decisions will be handed down in 2020 and will allow a better evaluation of the legal risks associated with the Duty of Vigilance program.

Risk mitigation
A sustainable approach to the supply chain starts with the selection of suppliers according to the “Schneider Electric Supplier Quality Management” system, which includes sustainable development criteria weighing 30% of the total evaluation of a supplier.

In 2019, Schneider Electric organized the Global Suppliers Day. During this day, the Principles of Responsibility were introduced to suppliers.

As part of the Group’s 3-year sustainability plan for 2018-2020, strategic suppliers are requested to submit (themselves) to an ISO26000 evaluation. Consistent with a continuous improvement effort, these suppliers are expected to achieve on average a +5.5 points increase in their score by 2020.

Schneider Electric has built a supplier vigilance plan in which risky suppliers are identified using criteria that take into account the geographical location of the supplier, the technologies and processes used. A 3-year audit plan is then built, to perform at least 350 supplier on-site audits. When non-conformances are identified, corrective actions are deployed. The suppliers are then re-audited to verify that the actions have remediated the non-conformances. In 2019, 99.5% of non-conformances from 2018 have been closed. The supplier vigilance plan also includes an internal training program for Schneider Electric Procurement teams and workshops with suppliers.

Key to symbols
- High impact
- Medium impact
- Low impact
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

11. Risk factors

2. Risks related to Operations

2.1 Risk of cyber security on the Schneider Electric infrastructure and its digital ecosystem

**Risk description**
Schneider Electric, like other organizations with a similar global footprint and presence, is exposed to the risk of cyberattacks and data privacy breaches.

As an industrial and technology company, the Group has “traditional” IT and Operational Technology activities spread over more than 25 sites with major R&D activities and more than 200 production and logistic units.

On those sites, Operational Technology systems are converging more and more with IT systems, especially through the use of Internet of Things expanding the attack surface.

Additionally, the move from product-centered business model to service-oriented business model with software (e.g. digital offers like “Advisor” software suites) and augmented data presents the risk of Intellectual Property theft.

**Risk mitigation**
NIST framework (Identify, Protect, Detect, Respond, and Recover) is used with a Cyber Risk register and High-Value Assets (more than 25) program.

Cyber threats are mitigated by implementing capabilities i.e., enforcing mechanisms including a Data protection program.

Events and incidents are monitored through a Security Operations Center driven jointly the Group's partners.

Schneider Electric’s posture is continuously revisited and adapted through Reality Checks, including emergency and improvement plans across the Company.

~100% of connected users and ~37000 factory workers are trained for cybersecurity in 2019.

All cyber risk assessments were completed in 2019 by the Group’s cybersecurity consulting partner.

Furthermore, this year, three major cyber crisis simulation exercises were performed.

Lastly, independent “reality checks” were performed: 3 cross-cutting internal audits and external assessments.
2. Risks related to Operations

2.2 Connected products at Schneider Electric or customer sites used as a gateway to attack Group’s customers and partners

**Risk description**
The Energy industry is becoming more digital and this includes IoT and its major accelerators for mobility, the cloud, pervasive sensing, big data and analytics.

The resulting increased digitalization of products, including native connectivity, is increasing the exposure to cyber security risk, where connected products and digital offers (e.g. 32 “Advisor” type of offers) at Schneider Electric or customers sites could be used as a gateway for malicious cyberattacks.

Schneider Electric is launching an ecosystem collaboration platform called Exchange with 50k+ registered Users, ~300 Apps, more than 150 service providers listed and ~100 communities onboarded.

Those kind of digital offers and platforms, if compromised, could negatively affect service quality, profitability and image reputation of Schneider Electric.

**Risk mitigation**
Product Security Office is reinforced with strong mandate and connection across the business units.

Schneider Electric is developing products and securing the ecosystem (ISA/IEC62443 and ISO2700x) in conformity to Cybersecurity standards. Schneider Electric follows a Secure Development Lifecycle process to build cybersecurity into its products even before the design stage.

IoT Cloud Platform (EcoStruxure Technology Platform) is certified against ISO27001 standard.


In case of cyber incident, a process of response, connecting and debriefing is organized with partners and customers.

In 2019, security and privacy were enhanced by Design with new Secure Development Lifecycle and certified against IEC62443-4-1. Also, all of 32 digital offers (mainly from “Advisor” software suites) were assessed in the framework of Digital security and privacy conformance.
11. Risk factors

2. Risks related to Operations

2.3 Product quality

Risk description
Schneider Electric has more than 260,000 references produced in 191 factories spread in 46 countries around the world.

Product quality and safety is a critical topic for the Group operating in the Energy industry, as product malfunctions or failures could result in Schneider Electric incurring liabilities for tangible, intangible damages or personal injuries. The failure of a product, system or solution may involve costs related to the product recall, result in new development expenditure and consume technical and economic resources.

Schneider Electric’s products are also subject to multiple quality and safety controls and regulations and are governed by both national and supranational standards. New or more stringent standards or regulations could result in capital investment or costs of specific measures for compliance.

The above-mentioned costs could have a significant impact on the profitability and cash equivalent of the Group. The business reputation of Schneider Electric could also be negatively impacted. Indeed, the Group has been impacted by several recalls more or less recently ranging from EUR 10 to 40 M depending on the case.

Risk mitigation
Thanks to analytics the Group is starting to proactively listen for weak signals from internal captures or from customer experiences.

In 2019, the Group launched a specific program called Phoenix to continue to strengthen manufacturing tools and processes. This is to be extended to logistic processes and suppliers.

The Group feeds its new offer design by constant learning, insights from the current offer, and leverage methodologies such as “Agile” to embed quality in each and any design step.
2. Risks related to Operations

2.4 Supply chain flexibility

Risk description
The Group is exposed to fluctuation in economic growth cycles and to the respective level of investment within the different countries in which it operates. Economic ups and downs could impact the footprint of Schneider Electric’s supply chain.

Furthermore, the rise of renewable energy is increasing the tension on some markets such as batteries. This could result in additional costs or possible shortages potentially impacting the Group profitability. Some more or less recent shortages such as electronic components in 2017, or electromechanical ones in 2019, are respectively led to sales losses of EUR 40M and EUR 30M.

Schneider Electric can also be exposed to supply chain dependency and business continuity risk. For instance, one cluster of plants in South East Asia supplies 80% of EUR 1 billion line of business. Any incident or interruption of production (natural disasters, social unrest, and pandemics) on this plant could lead to shortages, compensation costs or top line losses.

Finally, the increase of circular economy regulation could increase the pressure on product traceability. Failure to comply with those regulations could result in fines potentially impacting the Group’s profitability and reputation.

Risk mitigation
The Group requires its sites to have a robust business continuity plan for any large-scale events which can severely impact the business, such as natural disasters, social unrest, and pandemics. Each of Schneider Electric’s sites has an assigned business continuity leader whose role is to manage this process if something occurs and initiate a crisis management command center at a local and, if necessary, global level in Head Quarters, led by the Global Security Officer. This process has a proven track record of success and continues to protect the Group’s people and assets.

Finally, the Group’s supply chain strategy team assesses the supply chain flexibility on an ongoing basis to ensure the right level of flexibility and capacity from one site to another, if there is a need due to interruption. This is well understood by the supply chain leadership. The Group has a network of 191 factories and 97 distribution centers globally and the strategy is building a more regional supply chain, set-up for redundancy purposes but more importantly to give Schneider Electric’s customers peace of mind that the Group is a resilient company and they will receive world class service.
GROUP’S STRATEGY: OPPORTUNITIES AND RISKS

11. Risk factors

2. Risks related to Operations

2.5 Innovation and Research & Development (R&D)

Risk description
The worldwide markets for the Group’s products are competitive in terms of development and introduction time for new offers. In this regard, failure for the Group to renew its offer portfolio through dynamic Research and Development activities could impact the competitiveness of Schneider Electric.

In addition, with the digital transformation, the Group is increasing its share of Digital and Software offers that have a shorter life-cycle compared to the Product offers.

In 2019, 5% of the Group revenue has been invested in R&D of which a significant part is dedicated to digital. Therefore, the Group needs to do the right trade-off between funding the digital development and at the same time, keep in place for the renewal of the core offer. This year, R&D costs increased by 6% in 2019 resulting in an R&D to Sales ratio that increased by +8 bps (organic growth), due to increased investment in digital and in products. The Group strategy includes material investment in R&D, innovation and digital.

Schneider Electric owns more than 18,000 patents and there were more than 850 patents application in 2019.

Risk mitigation
Since the software-based market has faster cycles, the Group is constantly adapting and evolving toward greater customer centricity, in its research and development processes, through the increased use of agile methodologies to shorten the development cycles and by getting closer to the local customer markets.

In 2019 the Group deployed a new multi-hubs strategy in the Group’s main markets, to bring research and development closer to final customers.
2. Risks related to Operations

2.6 Digital evolution and software offers

Risk description
Major transformation in several areas is impacting the markets in which Schneider Electric operates, including the digitization of the Energy industry.

In the age of the IoT, customers expect ever smarter products with open interfaces enabling them to be tightly integrated into more and more complex software-based solutions and benefit from new services leveraging artificial intelligence and advanced algorithms.

The Group is investing in its digital transformation journey and as such is increasing the share of its digital offers. In 2019, software and digital services had a doubled-digit growth, increasing the software offering (double digit growth) and registering a 25% growth in e-commerce sales while connected customers and Assets under Management (AuM) increased respectively by 20% and by 50% versus 2018. As such, Schneider Electric is focusing on offering more digital and services, generating more recurring revenues and creating customer stickiness. In 2019, it represents 25% of Schneider Electric’s revenue.

Also, on February the 13th 2020, the Group announced its intention to launch a voluntary public tender offer for RIB Software SE, a construction software provider, in order to expand capabilities in building life cycle digitalization. This acquisition will continue Schneider Electric’s journey to build a software portfolio and a leadership position in digital and sustainable smart building solutions.

The transformation risk will be linked to the monetization of this new digital portfolio in order to generate a steady revenue stream from this mass customers and products connectivity.

Risk mitigation
The Group has launched several initiatives including but not limited to:

- creation of a new organization dedicated to the growth of digital services with a clear ambition to leverage a robust strategy and structured offer portfolio;
- monetizing critical connected assets with advanced Advisor offer through installed base, using Artificial Intelligence and algorithms;
- definition of a consistent connectivity path for partners and direct go-to-market.

Key to symbols
- High impact
- Medium impact
- Low impact
11. Risk factors

2. Risks related to Operations

2.7 Pricing strategy

Risk description
Raw material inflation and foreign exchange rate fluctuation can impact the product cost, with differences across the product lines. Such fluctuations, if not offset by tactical pricing decisions in compliance with national and international laws, can impact negatively the Group’s profitability. As illustration, in 2018, the delayed adjustments to raw material inflation led to EUR 80M sales mis opportunity.

In addition, the current market evolution requires different ways of working as the E-commerce and internet are evolving quickly and the actors are becoming more regional and, in many cases, global.

Risk mitigation
To anticipate negative impact on profitability the Group has reinforced its comprehensive global pricing program with robust compliance, pricing and quotation tools.
2. Risks related to Operations

2.8 Competition laws

Risk description
Schneider Electric’s products are sold in markets worldwide and are subject to national and supra-national competition laws and antitrust regulations.

Some Group entities worldwide including, but not limited to, entities in Pakistan, France and Spain have been directly or indirectly cited in antitrust proceeding or investigated.

In Pakistan, the Group inherited, and subsequently discontinued local operations acquired from Areva. These operations were investigated and sanctioned by the World Bank.

In France, investigations were performed in September 2018 by the French police and antitrust authorities at Schneider Electric’s head office and other premises concerning the electrical distribution activities in France. Schneider Electric is cooperating with the French authorities in their investigations.

For Spain, the local subsidiary was indicted for anti-competitive behavior related to a previously owned subsidiary. The investigation was concluded in February 2020 without any significant consequence for the Group.

Risk mitigation
The whistleblowing system of RED line for employees and GREEN line for external stakeholders such as suppliers is managed to identify any inappropriate practice or behavior with competitors or business partners that may be reported.

Furthermore, internal controls and internal audit missions have been reinforced on compliance risks, including in respect of competition and antitrust risks.

The revised compliance due diligence program for Merger and Acquisitions was issued to strengthen upfront identification of compliance issues with potential acquisition targets.

The Group updated and deployed the revised Group Principles of Responsibility in April 2019 with reinforced guidance regarding competition and antitrust rule as issued various other polices and directive related to competition and anti-corruption.

Key to symbols
- High impact
- Medium impact
- Low impact
11. Risk factors

3. Risks related to Internal Organization

3.1 Talent attractiveness, workforce engagement, sales force upskilling and recruitment of digital competencies

Risk description
The digital transformation comes with the need for specific skills especially in the areas of technologies, energy efficiency solutions and consultative selling. To consult on digitization and to support agile ways of working, the Group must prioritize digital-centric positions. For Schneider Electric, the top areas of focus include: software product owners, software developers, scrum masters, agile coaches, data scientists, data engineers, UX/UI designers, integration architects, cybersecurity specialists, and security engineers. Currently at Group level there are approximately 8,000 digital technologists with largest concentration of employees in India, US, France, and China.

Competition for highly qualified management and technical personnel, particularly business technologist, is intense in the Group’s industry and becomes a bigger challenge as the Group continues its trajectory of growth. In 2019, approximately 17% of global professional hires were in digital-centric roles- doubling the digital hiring composition from year-prior.

Future continued success depends in part on the Group’s ability to attract, hire, onboard, develop and retain the best qualified personnel. In addition to critical skills, workforce diversity especially gender, generation and nationality is a priority. For example, in 2019, ~50% of white collars hiring globally are early-career/fresh graduates (increase of 2% pts) to ensure continued supply of early-career talents. Also, at Group and country levels, more programmatic efforts are in progress to support ‘senior talents’ regarding future skills development, knowledge transfer, and career assignments to leverage their expertise and experience.

Risk mitigation
The Group's People Strategy is strongly anchored in its new people vision, which includes Employee Value Proposition and employer branding.

Schneider Electric’s entire people strategy defines the transformation it wants to accomplish, including increasing diversity and inclusion, pay equity and family leave.

Other examples include the proactive career development and planning that are also underway, and the training plans provided to all new front-line and mid-level managers.

Schneider Electric’s continuous listening strategy ensures the Group listens to the employees throughout their employment lifecycle (onboarding, OneVoice internal survey, exit, etc.), and acts on their feedback to drive engagement.

New training and upskilling program for all Sales representatives and Sales leaders was developed in 2019 for deployment in 2020, and a new certification training program for Key Account Managers.

The Group is also focusing on recruiting young digital talents to sustain the digital transformation.

In 2019, Schneider Electric has launched an Open Talent Market platform to facilitate internal job and project assignments and a new digital employee listening tool to analyze employee engagement.
3. Risks related to Internal Organization

3.2 IT systems management

**Risk description**

The Group operates either directly or through service providers, a wide range of highly complex information systems, including servers, networks, data repositories, applications and databases, on premise and in the cloud, that are essential for the efficiency of its sales and manufacturing processes, as well as platforms to enable Digital Offers such as EcoStruxure®. The Group is deploying various applications aimed at enhancing commercial experience, employee effectiveness and supply chain efficiency as well as enabling digital commercial offers.

In addition to that, for example the Group is managing 80 finance ERP systems inherited from M&A. The Group needs to set up dedicated governance and cost control structures because of projects’ complexity, extensive functionalities and worldwide deployment.

Failure of any of those hardware or software, fulfillment failure by a service provider, new application or software deployment issues could adversely affect the quality of service offered by Schneider Electric.

In addition, the provision of safe and secure foundational Information Systems is critical to the ongoing expansion of digital offers and customer interactions. When the Group is moving towards more Digital offers, service and software then the variety of legacy systems makes it harder and more complex to evolve.

Despite the Group’s policy of establishing governance structures and contingency plans, there can be no assurance that information systems projects will not be subject to technical problems and/or execution delays. While it is difficult to accurately quantify the impact of any such problems, data loss or delays, they could have an adverse effect on inventory levels, service quality and, consequently, on the Group’s financial results.

**Risk mitigation**

The Group regularly examines alternative solutions to protect against those risks, performs regular compliance checks on service provider service level agreements and has developed contingency plans, and incident response capabilities to mitigate the effects of any information system failure.

The Group undergoes constant evolution and planning pertaining to its information systems, which encompasses but is not limited to:

- ERP transformation and the evolution of the Group’s financial systems to prepare for Digital Offers;
- Elimination of legacy IT applications and associated hardware to simplify the landscape and mitigate risks linked to obsolescence;
- Ensure sustainability of IT landscape with ongoing focus on business continuity and disaster recovery planning for hardware and software.

All applications are subject to certification testing attempting to remove system vulnerabilities. These systems are housed either in on premise data centers managed by the Group’s service providers or are cloud-based applications and, as required, conform to the EU General Data Protection Regulation.

In 2019, the Group has reduced legacy IT applications by 40% in a simplification objective and implemented a new Financial and Treasury systems enabling more agility for Digital Offers.

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**Key to symbols**

- 🟢 High impact
- 🟡 Medium impact
- 🟠 Low impact
11. Risk factors

4. Financial risks

4.1 Counterparty risk

Risk description
The Group has a particularly wide international presence (more than 115 countries): the revenue is almost equally spread across the four regions (Asia Pacific, Western Europe, North America, Rest of the World), and 41% of the revenue is generated in new economies.

The Group is therefore facing multiple counterparty risks, as any economic downturn could lead to local liquidity issues with consequences in terms of cash collection and delay of payments from the customers, affecting adversely the Group cash conversion rate.

In 2019, delay of payment was observed in India and in UAE in 2019. Furthermore, the liquidity market is becoming more tense in geographies such as China, India, Italy and UAE. This potential cash shortage could impact the whole value chain in those countries.

As of December 31st, 2019, 13.7% of trade receivables were overdue, of which 1% by more than 4 months, (refer to Note 16 of the financial statements).

2019 Specific events
In 2019, due to the industrial dependence on imported goods, the Turkish lira volatility weighted on the economic dynamics. Customer payment behaviors continued to deteriorate due to high-level of debt and lower cashflows. In Argentina, the skyrocketing interest rates and pressure on exchange rate lead to a default risk increase.

Risk mitigation
Financial transactions are entered into with carefully selected counterparties and adapted terms and conditions are included in contracts with customers.

Banking counterparties are chosen according to the customary criteria, including the credit rating issued by an independent rating agency.

Group policy consists of diversifying counterparty risks and periodic controls are performed to check compliance with the related rules.

In addition, the Group takes out substantial credit insurance and uses other types of guarantees (letters of credit and bank guarantees) to limit the risk of losses on trade accounts receivable.

As of December 31st, 2019, the amount of the provision for receivables impairment is EUR 459M as described in Chapter 5.
4. Financial risks

4.2 Currency exchange risk

Risk description
The Group’s international operations and the particularly wide international presence expose it to the risk of fluctuation of exchange rates.

Fluctuations in exchange rates between the reporting currencies of the Group entities and the currencies of transactions can have an impact on the Group’s results and distort year-on-year performance comparisons. The same applies to the fluctuations between euro and the reporting currencies, in a more significant proportion.

The main exposure of the Group in terms of currency exchange risks is related to the US dollar, Chinese Yuan and currencies linked to the US dollar.

In 2019, revenue in foreign currencies amounted to EUR 21.6 billion, including around EUR 7.2 billion in US dollars and EUR 3.6 billion in Chinese yuan.

The Group estimates that in the current structure of its operations, a 5% appreciation of the euro compared to the US dollar would have a translation effect of around minus EUR 50 million on EBITA.

The result of exchange gains and losses of 2019 amounts to EUR 49M as described in Chapter 5.

Risk mitigation
The Group manages its exposure to transactional currency risk to reduce the sensitivity of earnings to changes in exchange rates. Receivables and payables of the Group’s subsidiaries denominated in currency other than their functional currency are hedged primarily by means of rebalancing assets and liabilities per currency (natural hedge).

More than 20 currencies are involved, with the US dollar, Chinese yuan, Singapore dollar, Australian dollar, British pound, the Hungarian forint and Russian rubles representing the most significant sources of those risks.

Depending on market conditions, risks in the main currencies may be hedged based on cash-flow forecasting using contracts that expire in 12 months or less.

The financial instruments used to hedge exposure to fluctuations in exchange rates are described in note 23 of the consolidated financial statements for the year ended December 31, 2019 (Chapter 5).
11.2 Insurance strategy

Why we think this is important
Schneider Electric’s general policy for managing insurable risks is designed to defend the interests of employees and customers and to protect the Company’s assets, the environment and its shareholders’ investment.

How we are mitigating the risks:
• We identify and analyze the impact of our main risks.
• In order to prevent the risks of damage and protect our production capacity, we define protection standards (including for the sites managed by third parties), organize audits of our main sites by an independent loss prevention company and roll-out of a self-assessment questionnaire for the other Group sites.
• We draw up business continuity plans, in particular, for the Group’s main sites and critical suppliers.
• We implement crisis management tools with the Group’s Security Department.
• We carry out hazard and vulnerability studies and safety management for people and equipment.
• We negotiate global insurance programs at Group level for all subsidiaries with insurers meeting appropriate minimum credit ratings.
• We implement these global programs in countries where the Group operates in compliance with local regulations through a network of international brokers.
• We optimize financing for high-frequency/low-severity risks through retentions managed either directly (deductibles) or through captive insurance companies.

Liability insurance
The insurance program renewed on January 1, 2017 for a period of three years was continued in 2019. This program, deployed in more than 75 countries, provides coverage and limits in line with the current size of the Group and its evolving risks and commitments.

Certain specific risks, such as aeronautical, nuclear and environmental, are covered by specific insurance programs.

Property damage and business interruption insurance
A new insurance program has been put in place as of July 1, 2019 for two years. This is an “all risks” policy which covers events that could affect Schneider Electric’s property (including fire, explosion, natural disaster, machinery breakdown) as well as business interruption resulting from those risks.

Assets are insured at replacement value.

Transport insurance
Risks of loss or damage to goods while in transit, including intragroup shipments are covered by a global insurance program renewed on January 1, 2019.

Erection all risk insurance
The erection all risk insurance program providing cover for damage to work and equipment for projects taking place at our clients’ premises was continued in 2019.

Other risks
In addition, Schneider Electric has taken out specific cover in response to certain local conditions, regulations or the requirements of certain risks, projects and businesses.

Self-insurance
To optimize costs, Schneider Electric self-insures certain high-frequency/low-severity risks through two captive insurance companies:
• a captive company based in Luxembourg provides mainly Property Damage and Transport reinsurance worldwide as well as Liability reinsurance outside the US and Canada. The total amount retained for these risks is capped at EUR20.2 million per year;
• for the entities located in the US and Canada, a captive insurance company based in Vermont (USA) is used to standardize deductibles for general/products/professional liability, workers’ compensation and automobile liability. These retentions range from USD1 million to USD5 million per claim, depending on the risk. An actuary validates the reserves recorded by the captive company each year.

The cost of self-insured claims is not material at the Group level.

Cost of insurance programs
The cost (including tax) of the Group’s main global insurance programs, excluding premiums paid to captives, totaled around EUR19 million in 2019.