1. Group strategy and market opportunities

Schneider Electric, the global specialist in energy management and automation with operations in over 100 countries, brings together its expertise and solutions to make sure that Life is On for its customers and that energy is safe, reliable, efficient, connected and sustainable.

Urbanization, industrialization and digitization enrich our lives but they are also escalating energy and resource consumption worldwide. New technologies enabling distributed and connected energy for the first time, challenge us to redefine the way we live. As the leader in energy management and automation, Schneider Electric helps its customers achieve more with fewer resources in a more connected, distributed and smart world where the need for energy will continue to increase. Schneider Electric provides innovative technologies, solutions and services for its customers to achieve the most efficient and sustainable use of their resources, assets, processes and infrastructures.

1.1 Our mission

At Schneider Electric, our mission is to serve our customers by developing innovative products and solutions that simplify the lives of those who use them. We bring together our expertise and solutions to drive new possibilities for efficiency and savings.

As the global specialist in energy management and automation, we are committed to global improvement in connectivity, sustainability, efficiency, reliability and safety in 5 primary areas: in our homes, in our cities, in our industries, in our buildings, and in the cloud.

Our intent is to make sure that Life is On for everyone, everywhere and at every moment with our technology. We ensure that energy is on for our customers and that it is:

- **safe:** protecting people and assets;
- **reliable:** guaranteeing ultra-secure, ultra-pure and uninterrupted power especially for critical applications;
- **efficient:** delivering solutions adapted to the specific needs of each market that simplify customers' lives and improve their efficiency and productivity;
- **sustainable:** helping customers build a sustainable future by using less of their resources and minimizing the impact on the environment; and
- **connected:** leveraging new opportunities with the convergence of Operational Technology (OT) and Information Technology (IT).

1.2 Megatrends in our environment are creating opportunities

Urbanization, industrialization and digitization continue to shape our lives as new economies are built and established economies are transformed. These three megatrends are creating many new opportunities for Schneider Electric.

Urbanization

Cities today are the home to over 50% of the world's population, consume more than 70% of global energy consumption and give off 75% of greenhouse gas emissions. Cities are growing: by 2040, they will house an additional 1.9 billion people. Cities face urban challenges of unprecedented scale: scarcity of resources such as energy and water, environmental pressure and pollution, aging and overloaded infrastructure, traffic congestion and security concerns.

All over the world, cities need to become smarter: **more efficient, more liveable and more sustainable**. This means:

- improving the efficiency of the city's underlying urban infrastructures, from the electricity grid to water distribution systems, via public transportation systems and services, and exchange of data and information across services;
- becoming a better place to live, work and play;
- reducing its environmental impact – lower carbon footprint, reduce energy consumption and urban regeneration.

So what cities need today are solutions to their most acute pain-points that: deliver the services and savings that inhabitants deserve; provide visible, measurable results that promote attractiveness; and have a low upfront investment, because cities across the world need to balance their budgets.

Schneider Electric delivers urban efficiency as a trusted partner to drive collaboration and buy-in of all stakeholders - local and regional governments, private companies, utilities, real estate developers, and investors. We provide comprehensive urban solutions, which form the foundations of a smart city, by bringing in proven technology. We enable a connected and unified approach to decision-making by integrating controls with operation and information systems. Schneider Electric already works with more than 250 cities across the world, and helps provide visible benefits to cities and their inhabitants:

- up to **30%** energy savings;
- up to **15%** reduction in water losses; and
- environmental, social and economic benefits.

Industrialization

Manufacturing activities rise as new economies develop. In 2016, new economies represented 39% of world GDP – and this should reach close to 52% by 2030. Industrialization in these economies will continue in the medium term. Population growth in new economies is also driving increased needs for manufactured goods, with 1.8 billion people entering the global consuming class by 2025. Capex in new economies will also continue to increase in the medium term, from 51% of world Capex in 2016 to close to 57% by 2030. At the same time energy needs will increase accordingly. The share of global energy demand of non-OECD countries will continue to rise – from 59% in 2014 to close to 65% by 2030 – due to increasing demographics growth, industrialization, urbanization and affluence.

In many mature countries, where companies are looking for efficiency gains and modernizing their infrastructure; services, innovation and digital transformation are of increasing importance and key factors for growth. Industries account for one-third of the total world energy consumption. This global industrial energy use is projected to double by 2050 in the absence of any new environmental measures. The International Energy Agency estimates that the Industry could half the increase in energy consumption through increased electrification and energy efficiency action.

The growing trend of increasing industrialization promises business growth and expansion opportunities. Schneider Electric will continue its focus on innovative solutions and to identify opportunities for further services development, in order to contribute towards efficiency and sustainability improvements in these markets. For long-term sustainable development in new economies, Schneider Electric will continue to focus on combining its global value chain with local partnerships to contribute toward the economic development through job creation and poverty reduction, in addition to investments in production capacity and physical & technological infrastructure to meet the growing demands for standardized and cost efficient offerings.

Digitization

In the past 20 years, the Internet has connected 3.5 billion people together. In the coming ten years, this number will grow by over 70%. Additionally, the Internet will connect 30 billion devices by 2020. The increase in connectivity and access to real-time information is changing our personal and professional lives. Companies are digitizing their operations and expect a complete digital experience from their suppliers, from ordering to customer service. Employees are increasingly using online platforms and tools to collaborate more efficiently across different countries and time zones. Digitization is changing the way we work and creating opportunities for new services.

In energy management, operational technology (OT), i.e.,the world of physical equipment control, is converging with information technology (IT), i.e., the world of information processing. Products are now connected and can be remotely controlled to optimize operations. This results in the feasibility of implementing active energy efficiency, which creates new business models and new opportunities in smart products, systems and services – such as smart grid and smart factories.

A smart energy grid combines smarter supply (the efficient integration of renewable and distributed energy sources and flexible distribution), smarter demand (energy-efficient sites and homes, connected to the grid), and demand response to balance the two. Schneider Electric is active in five key domains which form a smart grid: flexible distribution, renewable energy integration, efficient buildings, electric vehicle charging infrastructure and demand-response. Microgrids, distributed energy resources (DER) and energy storage allow consumers to produce their own energy and shift to a greener energy mix. Renewable energy sources will account for 60% of all new power generation capacity to 2040 according to the International Energy Agency. These changes in the energy mix will further increase the need for smart grid management.

The smart manufacturing enterprise is made up of smart machines, plants and operations with higher levels of embedded intelligence. Connectivity based on open and standard internet protocols and cloud technologies with integrated cybersecurity enables the use of advanced analytics and mobile technology to unlock higher efficiency and profitability, as well as improved security. For example, real time data analytics allow for predictive maintenance and improved Asset Performance Management, while Augmented Reality helps maintenance operators improve productivity and minimize downtime. Together with OT sensors and control devices, industrial software is the core of smart factories. Schneider Electric has significantly strengthened its industrial software offering, especially in operations management, for process management as well as industrial automation applications.

In addition to continuously innovating and digitizing our offerings, Schneider Electric aims to provide the best-in-class digital experience to our customers and partners, such as a 24x7 dynamic sales & marketing channel and a tailored customer service experience. Digitization is at the core of the Group's strategy and Schneider Electric is committed to supporting the digital transformation of its customers and its partners.

Urbanization, industrialization and digitization are creating many new opportunities for Schneider Electric, from growing needs in terms of automation and connectivity to the massive need for energy efficiency that requires optimized use of resources. Schneider Electric will continue to play a leading role in the movement toward a more efficient, sustainable, and connected world.

1.3 Group strategy

As a leader in energy management and automation, Schneider Electric is at the forefront to capture these megatrends with an extensive energy management and automation offer that it delivers globally through complementary business models and access channels. We have a unique set of energy and efficiency technologies, strategically positioned on the demand side of the energy landscape.

Leveraging the world's new energy challenges

The quest for economic growth and development is straining our planet's resources. The world is facing many energy challenges: scarcity of natural resources, CO_2 emissions reduction requirements, integration of unpredictable and intermittent renewable sources of energy, higher in peaks of consumption, and others. In its World Energy Outlook, the International Energy Agency (IEA) estimates that improved energy efficiency slows the growth of total final energy consumption, mainly thanks to efficiency gains in industry. However, 70% of the world's energy is used without any efficiency performance requirements. For new buildings, two-thirds of the energy consumption has no applicable codes or standards.

According to the IEA the improvement in energy efficiency in the major energy-consuming sectors (industry, buildings and residential) could help reduce energy use by 15% to 25%, providing a very attractive business case in both mature and new economies. Schneider Electric has developed a wide range of products and solutions that will provide homeowners and managers of industrial plants, data centers, infrastructure and buildings with significant levels of energy efficiency and savings.

Our automation solutions can save up to 30% of a building's energy needs, significantly improving a company's carbon footprint, while delivering savings on its charges, with limited upfront investment.

Our smart grid solutions help electricity producers and distributors to improve the efficiency of their assets and to offer a better service to their customers. This also contributes to the improvement in the operation of the grid and the reduction in investment in new generation capacity.

Our industrial automation solutions can also enable massive energy savings. 30% of global electricity consumption in industries is consumed by electric motor systems, which the IEA estimates can be reduced by more than 15%. Our Variable Speed Drives can significantly improve the efficiency of an electric motor system and are a main contributor in IEA estimations.

Serving our customers' increasing need for automation in key market segments

The rapid industrialization taking place in new economies and the need to modernize existing industrial facilities in mature economies are creating significant opportunities for growth. Coupled with this, large corporations are looking to improve operational efficiency across the whole enterprise, while at the same time improving security and safety for operators and the environment. By implementing advanced automation and more flexible production techniques manufacturers could boost their productivity by as much as 30% (source: Accenture). Schneider Electric enjoys a strong position both in discrete and process automation and is well-placed to address these challenges. We leverage the Group's extensive software capabilities to help customers in key industries, such as mining, oil & gas, food-processing or cement plants, improve their productivity and operational efficiency, reduce their energy consumption and optimize their use of resources.

Schneider Electric also helps machine manufacturers in markets such as materials handling or packaging develop reliable, fast, precise and efficient machines. Our application design engineers optimize the machine's performance and reduce the length of the design cycle, shortening the machine builder's time-to-market.

Supporting the digital transformation of customers and partners

The convergence of operational technology (OT) and information technology (IT) creates many new opportunities for customers. It makes their life easier, increases productivity, creates new business models that provides new value propositions for their own customers. Digitization is at the heart of their future growth. Through continuous innovation, Schneider Electric engineers products and solutions that help them unlock this potential.

Schneider Electric builds native and secured connectivity into its product offerings, delivers a full range of digital services to help customers extract value from their data and provides the best customer experience to its customers and partners. All our offers are built on open and interoperable system architectures and are available in our EcoStruxure™ framework.

Leveraging the opportunity from new economies

Countries in Asia (excluding Japan), Latin America (including Mexico), the Middle East, Africa and Eastern Europe (including Russia), which the Goup refers to collectively as "new economies" will continue to experience accelerated development in the medium-term as they catch up with more mature economies. As a result of the industrialization, urbanization, digitization and development processes that these countries are experiencing, Schneider Electric expects the markets of these economies to continue to have a medium-term need for the products and solutions that the Group provides. The goal is to leverage this opportunity by expanding the Group's geographical coverage in these markets, by increasing its presence in new cities, and further penetrating these markets, with mid-market segment offerings that are supported by strong brands with wide local coverage. The Group has made a long-term commitment to, and investment in, these economies.

As of December 31, 2016, the Group had over 78,009 employees in new economies and, during 2016, our new economies-based purchasing and manufacturing costs accounted for approximately 52% of our industrial costs. Schneider Electric is well positioned to support the medium-term needs of new economies in Asia, Africa, the Middle East, Latin America, Eastern Europe and Russia. The decision to split our Executive Committee across multiple management hubs, a pioneering management decision, allows us to be close to our customers in all markets – remaining local while being global. Our long-term commitment helps us build an intimate knowledge of these markets and we believe that the strength of our brands, our competitive local supply chain and the development of local marketing and R&D capabilities are our competitive advantages in these economies.

Building two complementary business models: Products and Solutions

The businesses in each of our four business segments offer both products and solutions. Solutions are comprised of systems, such as highly customized products or combinations of our products, software and services. Our Products and Solutions businesses have different revenue growth and profitability profiles, with our Solutions business complementing our Products business. Solutions are also an important platform to develop our presence in Services, where we can deliver higher added value, more frequently and with lower capital requirements.

Products business model

The Group believes its products, representing 56% of the sales, offer best-in-class technology, strong channel access to markets and optimal quality and cost, which allows the Group to achieve scale and pricing advantages in markets where the Group operates. Schneider Electric markets and sells products principally through distributors and direct partners, such as contractors, system integrators and electricians, who provide the ability to reach large numbers of small and medium-sized customers. In order to reinforce its leadership position and continue to grow, the Group leverages technology to offer connected, market leading products and to create new opportunities for distributors and direct partners in a win-win relationship.

Solutions business model

Solutions, representing 44% of our sales, include Equipment, Projects, Software and Services, and allow the Group to generate additional growth and profits, lower capital intensity and help reduce cyclicality. They provide significant opportunities to develop greater customer intimacy and stickiness through dialogue with final end-users, which in turn helps inform the Group's quest for continuous innovation. Through the EcoStruxure™ framework, Schneider Electric uses reference architectures in each of our solutions in order to facilitate the integration of its products and speed up project design, while its software offers address the efficiency needs of companies and allow complete but simple control and management of their operations. Schneider Electric also supports the productivity and peace of mind of its customers with an extensive range of digital services and maintenance services delivered by a network of over 37,000 qualified technicians.

Investing in profitable and responsible growth while driving efficiency

We believe in the high long-term growth potential of our business and Schneider Electric continuously invests to drive that growth. This investment is focused on sustained spending on research and development, as well as on growing our commercial presence and skills, especially in the fields of high value-added technologies and services.

In addition to our commitment to organic growth, the Group has invested in companies, joint ventures, strategic alliances and mergers that have reinforced our global leadership, provided skills in energy management and automation, or related to local businesses in new economies.

In addition to the investments we make to foster growth, driving efficiency at all levels of our Company is an equally important focus for the Group. We continuously seek to generate savings from purchasing and manufacturing and through improving operational efficiency by reducing selling, general and administrative expenses, while maintaining best-in-class standards in environmental sustainability and social responsibility.

1.4 Group competitive strengths

Schneider Electric is a leader in technology innovation and adapts to changing ecosystems and customer needs.

Technological leadership in energy management and automation

We are developing best-in-class technology in energy management and automation to meet growing customer needs and challenges. We estimate that nearly 80% of our revenue is derived from sales in businesses where Schneider Electric enjoy a number 1 or 2 market position: low voltage distribution, medium voltage distribution and grid automation, discrete industrial automation and control, critical power and cooling. We design products and solutions that we believe offer the best levels of safety, reliability and efficiency in our markets. This is achieved through significant investment in research and development, which supports our innovative product offerings and our ability to offer our customers market-leading solutions that seamlessly integrate the different technologies in our portfolio. As a result, our products and solutions meet the needs of our customers for simplicity, connectivity, flexibility, productivity and efficiency. Additionally, through an ongoing dialogue with our customers, we are able to maintain our very high standards of quality and to anticipate the innovation that will help drive our future growth. Thanks to this technological leadership, the Group's major brands are among the most recognized in our industry.

Multiple access channels to a broad and diffuse user base

We work with many types of partners, such as distributors, system integrators, contractors, panel builders, electricians, machine manufacturers and others, as well as with our end customers. The Group has developed the widest network of distribution and direct partners in its industry. This provides us with many access channels to a market comprised of a broad and diffuse user base. These diverse market access channels, which support our model with limited capital investment, help to ensure that we are not dependent on a limited number of large customers.

Success in this industry requires strong, long-term relationships with our distribution partners and end customers and the Group is therefore constantly seeking to enhance the value that we add. For example, we provide training for our partners and participate in industry efforts to improve applicable regulations and safety certifications. These efforts and relationships also help to reinforce our reputation as a trusted partner and allow us to benefit from solid pricing power.

Global reach with a unique local presence

We have operations in more than 100 countries, providing a balanced geographical exposure on a global basis. Due to our large footprint, we are one of the few partners of multinational companies that look for the highest standards of technology and quality for their energy management equipment in all their operations around the world. This allows us to provide an optimal service to our global customers. In addition, we have deep-rooted local presence and strong partnerships in all countries to serve our highly-dispersed customer base. Lastly, with 41% of our revenues in new economies in 2016, the Group believes it is positioned to capture the higher growth potential of these markets. Our presence in many diverse markets ensures that we understand local needs, which assists us in serving our customers in each country with dedicated products and solutions adapted to local requirements.

Scale through our Integrated and Global Supply Chain

Our Global Supply Chain integrates over 200 factories and more than 90 distribution centers in 45 countries, managing 500,000 references and processing 130,000 orders/day. With a strong focus on customer satisfaction and operational efficiency our Global Supply Chain continues to make significant progress in both areas and in 2016 Schneider Electric was included in Gartner's Supply Chain Top 25 Ranking for the first time, as a clear sign of our achievements.

2. Businesses, end-markets and customer channels

Schneider Electric is organized into four businesses – Building, IT, Industry and Infrastructure – and operates in four principal markets: non-residential & residential buildings, utilities & infrastructure, industry & machine manufacturers, and data centers & networks.

The Group manages multiple market access channels built on strong partnerships.

2.1 Leadership positions in our businesses

Schneider Electric operations are organized in four businesses: Building, IT, Industry and Infrastructure.

The Building business: Number 1 Worldwide in Low Voltage and Building Automation

Low Voltage ("LV") electrical distribution products and solutions address the needs of all end-markets from residential to commercial buildings, spanning across industries, infrastructures and data centers. The offer portfolio is extensive and includes: protection functions (such as circuit breakers), power monitoring and control, power meters, electrical enclosures, busways, cable management systems, power factor correction, products for living spaces (such as wiring devices, network connectivity, home automation and building controls), as well as renewable energy conversion and connection equipment and electric vehicle charging infrastructures.

Building Automation facilitates comfort and energy efficiency in non-residential buildings through automation and security systems, including Heating, Ventilation & Air-Conditioning ("HVAC") controllers, sensors, valves and actuators, programmable regulators, centralized building management systems, space optimization solutions, access control, video cameras and security monitoring equipment.

The IT business: Number 1 Worldwide in Critical Power and Cooling

The IT Business specializes in critical power products and solutions for data centers and other applications where power continuity and quality is essential. The portfolio includes single-phase and three-phase Uninterruptable Power Supplies ("UPS"), plug-in surge protection, IT enclosures, power distribution units, security and cooling systems, services and software management.

The Industry business: Number 1 Worldwide, in Process Safety Systems, Number 2 in Discrete Industrial Automation and Number 4 in Discrete and Process Automation

The Industry business scope includes both Process and Discrete Automation, providing comprehensive products and solutions for the automation and control of machines, manufacturing plants and industrial sites. It includes hardware, such as distributed control systems, safety shut down systems, field controllers, motion controllers, variable speed drives, motor starters and contactors, human-machine interface ("HMI") operator panels, programmable logic controllers ("PLC"), push buttons and signaling devices and discrete sensors, as well as software for operations management and supervisory control systems. The Industry business has a strong installed base in: Distributed Control Systems and Instrumentation, notably under the Foxboro brand, Safety Systems (Triconex), Drives (Altivar), Sensors (Telemecanique) and PLC's (Modicon), as well as a strong industrial software offer for manufacturing operations management (Wonderware), modeling/simulation (SimSci) and asset management (Avantis).

The Infrastructure business: Number 1 Worldwide in Medium Voltage & Grid Automation

The Infrastructure business provides our customers with the answer to the complex equation of the energy transition. Historically, the Infrastructure scope encompasses primary and secondary medium voltage switchgear, transformers, electrical network protection and automation, remote control systems, and MV/LV substations. With IoT reaching power products, the Infrastructure business is now further articulated around connected products and software

for the integrated management of mission-critical infrastructure and Advanced Grid Solutions. Our software suite includes, for example, Distribution Management Software (DMS), Operation Management Software (OMS), Supervisory Control And Data Acquisition (SCADA) software and pipeline management software.

Our products, software, solutions and associated services can be delivered directly to our end-users or indirectly through different channels under various models, ranging from transactional sales to end-to-end project delivery.

2.2 Serving four attractive end-markets

Schneider Electric serves customers in four principal markets:

- Non-residential & Residential Buildings;
- Utilities and Infrastructures;
- Industries and Machine Manufacturers;
- Data Centers and Networks.

Non-residential and residential buildings

The non-residential buildings market includes public, commercial and industrial buildings such as offices, hotels, hospitals, shopping malls, schools, sports and cultural centers. Because this sector is energy intensive, energy efficiency is key and is subject to new and demanding regulations. Specific requirements have to be met in terms of occupant comfort, safety and environmental friendliness, as do the needs of owners and building managers seeking to reduce investment costs and optimize maintenance and operating costs. Schneider Electric's non-residential customers include end-users, property developers, design firms, systems integrators, panel builders and installers, electrical equipment distributors and building management companies.

In the context of single-family homes and apartment buildings, Schneider Electric's market is driven both by renovation and refurbishment needs, particularly in mature economies, as well as by construction, particularly in new economies. Whether for renovation or construction, the underlying challenge is to reconcile technical constraints, local standards and regulations with consumer preferences. They not only desire comfort and aesthetics, but increasingly, energy efficiency, connectivity, security and monitoring services as well. Residential customers include mainly electricians, architects and decorators, those involved in the home automation industry, lighting and security firms, construction firms, contractors, electrical equipment distributors and large do-it-yourself ("DIY") stores, as well as end-users and home owners.

Utilities and infrastructures

Current global challenges in the utilities and infrastructure market include increasing energy demand, the need for increased energy efficiency to reduce environmental impact, and the development of renewable energy sources on the grid causing more stability concerns. This market also faces changes in regulations, particularly those regarding demand response, and the growing need for security, reliability, and real-time control to ensure efficiency & stability. We believe these challenges provide long-term growth prospects for Schneider Electric. Our main customers in this market include energy operators, water utilities, the owners and operators of transportation and oil & gas infrastructure and municipalities.

Industries and machine manufacturers

Our energy and automation solutions enable us to serve almost all segments of the industries and machine manufacturers market, including the refining, petrochemical and oil & gas industries, mines, cement plants, water & waste water industry, the food-processing industry and material handling and packaging machines. Energy and operational efficiency is at the heart of the challenges facing these industries, which include the reduction of production costs, compliance with new regulations, and the reduction of the environmental impact of industrial activity. In addition, both the rapid industrialization taking place in new economies and the need to modernize existing industrial facilities in mature economies create significant opportunities for growth. Our customers include end-users and professional intermediaries, engineering firms, systems integrators, OEMs, electro-intensive industries, panel builders and electrical distributors.

Data centers and networks

Data centers are secure, precision-cooled sites containing Information Technology (IT) equipment that processes and stores very large quantities of digital data. These sites are the nerve centers of businesses and the public sector. The expansion of data centers requires a significant increase in electricity to accommodate the IT equipment's operation and cooling, as the amount of energy needed to cool these rooms has become comparable to the amount of energy needed to operate the equipment itself.

Schneider Electric believes that data centers and networks are a high-potential market due to the growing digitization of professional and personal activities. With the development of internet giants and cloud computing, the physical infrastructure of data centers tends to be increasingly the business of dedicated players with high performance expectations.

2.3 Multiple accesses to markets

Customer satisfaction

Customer satisfaction is an integral part of Schneider Electric's growth strategy. Every contact with Schneider Electric should be a positive experience that makes all customers, no matter who they are or where they are located, feel understood and satisfied. This commitment is an important differentiating factor, and customer satisfaction surveys are regularly carried out in all countries in which the Group operates, and employees attend related training programs.

Customers also have access to online diagnostics and support services (an e-catalogue, downloadable software and online information and training).

A large portion of Group revenues is made through intermediaries such as distributors, systems integrators, installers and purchasing advisors, who all bring their own added value and know-how, allowing the Group to access a number of different markets.

Distributors & retailers

Distributors account for approximately 45% of the Group's total revenues through an extensive network in 190 countries all over the world.

Schneider Electric works with many different types of distributors: local distributors, electrical wholesalers and generalist distributors such as Graybar, CED Edmunson, Zhongyeda Electric, large international groups such as Rexel, Sonepar, groups of independent wholesalers like Imelco, Idee and Fegime, and IT specialists such as Tech Data and Ingram Micro. In the residential renovation sector, Schneider Electric also sells products through large home improvement chains such as Home Depot and Lowes in the US, Kingfisher in the UK and Saint-Gobain Distribution in France. In addition, the Group uses specialized distribution channels for highly technical products such as automation solutions and industrial software, access control and security products.

Schneider Electric assists its distributors in advising their customers and helping them to benefit from technical innovations. To maintain a high performance network, the Group works hand in hand with distributors on supply chain improvements, technical training and joint marketing actions. Internet tools now occupy a dominant position for sales, and above all, provide up-to-date information. Through the e-Shop, distributors can link Schneider Electric's product database to their e-commerce sites so that customers have reliable 24/7 access to information.

Other intermediaries & partners

Panel builders

Panel builders build and sell electrical distribution or control/monitoring switchboards, primarily for the buildings, energy and electricity infrastructure markets and industry. Their main customers are contractors. Panel builders mostly buy low and medium voltage devices, such as circuit breakers and contactors, and increasingly, prefabricated systems. There are more than 35,000 panel-builders throughout the world.

Contractors

To design solutions tailored to end-users' specific needs, Schneider Electric works closely with contractors, small specialists or generalist electricians, large companies that specialize in the installation equipment and systems and designers.

Electricians & DIY stores

Electricians design and perform electrical installations, primarily in residential and small non-residential buildings. Schneider Electric supports electricians to operate more efficiently through a suite of digital tools and technical support. Schneider Electric strengthens its relationship with electricians by increasing their visibility to end-users through different marketing actions including "installer locators" on Schneider Electric's website. Schneider Electric has one of the most comprehensive network of electricians worldwide.

DIY stores are a key channel to bring visibility of Schneider Electric's offers to consumers as well as electricians. Schneider Electric ensures that it assists them in marketing programs digitally on their e-commerce sites as well as in their physical stores.

All of the partners mentioned above contribute their own added value to end-customers, first by advising them on the choice of solutions added that best suit their needs and then by installing efficient systems thanks to a suite of web-based digital tools called "Building Life Management". The main objective for Schneider Electric is to support them in the rapid development of solutions and technologies for the residential market: lighting, temperature and door/window management systems, recharging equipment for electric vehicles and renewable energy solutions.

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 our business impact, we have a multichannel communication model through personal and digital means, thanks to our Partner Relationship Management (PRM) platform.

In this regard, the EcoXpert program aims to secure special partnerships with certain specialized contractors, with whom Schneider Electric shares all its expertise on renewable energy and energy efficiency solutions and services. The EcoXpert network is being developed in many countries throughout the world.

Systems integrators

System integrators design, develop and support automation systems to meet their customers' needs for the performance, reliability, precision and efficiency of their operations. By providing global coverage and local contacts, they offer their clients a high degree of flexibility.

Schneider Electric has considerably expanded its automation line-up, giving systems integrators access to a powerful platform covering all areas of automation, from field control to Manufacturing Execution Systems (MES).

Specialists

To meet their customers' growing demand for comfort, ergonomics and design, specialists (engineers, architects and design firms) are constantly looking for more efficient and better integrated solutions for energy management, as well as for access control, security, and building automation.

They are therefore essential partners for Schneider Electric's growth, notably in the high-potential buildings and residential markets, which include the construction and renovation of single-family homes and apartment buildings.

Schneider Electric provides information and training tools for specialists, such as dedicated showrooms, electrical installation guides, installation design software and training methods.

End-users

Original Equipment Manufacturers

Original Equipment Manufacturers (OEMs) continuously seek to improve machine price/performance and time-to-market in segments ranging from packaging to textiles, conveyors, materials handling, hoisting and HVAC. Schneider Electric is one of the market leader in these segments, and works closely with over 15,000 OEMs. The Group leverages its expertise and know-how to nurture these special partnerships. This is mainly achieved through:

- an extensive knowledge of OEM applications;
- a continuous R&D effort to develop innovative, high-performance and cost-effective offers and solutions;
- dedicated centers of excellence that offer the most competitive solutions for new machines, in particular, pre-tested, pre-developed and personalized solutions;
- international customer support to deliver high-performance after-sales service worldwide;
- a dedicated program for multi-site and/or global OEMs that enhances their ability to offer superior solutions on an international scale.

Other large end-users and strategic accounts

Schneider Electric also addresses customers directly in a number of end-markets, including in particular:

- Automotive, where the Group serves large automotive equipment manufacturers;
- Cloud & Finance, in which the Group provides comprehensive solutions for customers including internet giants, as well as in telecoms, co-location, and finance sub-segments;

- in Healthcare, the Group serves hospitals, clinics, labs, and life sciences manufacturing;
- Food & Beverage, in which the Group serves customers in various types of food processing industries;
- Mining, Minerals & Metals, which includes customers in mining, cement, metals, and other bulk materials;
- Oil & Gas, in which the Group provides integrated solutions and high performance systems, software and services to oil companies and EPCs, from production to processing and supply chain;
- in Utilities, the Group serves companies producing, delivering, and/or selling electricity to customers;
- Water & Waste Water includes customers across the entire water cycle, from water resources to water distribution, sewerage and treatment.

Schneider Electric has established a dedicated organization for global customers, "strategic accounts", with the purpose of developing privileged relationships with them. To meet these customer expectations, the Group offers "preferred supplier contracts" and dedicated customer support to ensure that they receive the highest quality services.

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 89 global customers including Apple, BHP Billiton, EDF, ExxonMobil, Nestlé and Veolia Environnement.

2.4 Competitive landscape

The main global competitors of Schneider Electric, by technology, are:

- **low-voltage and building automation:** ABB, Siemens, Eaton, Legrand, Johnson Controls;
- **medium-voltage distribution & grid automation:** ABB, Siemens, Eaton, GE;
- **discrete and process automation:** Siemens, Rockwell Automation, ABB, Emerson, Honeywell, Yokogawa;
- **critical power & cooling for IT and non-IT applications:** Vertiv, Eaton.

Other regional and emerging market competitors include: Chint, Weg, Larsen & Toubro and Delta Electronics.

3. Ambitious long-term financial targets for attractive shareholder returns

Schneider Electric's opportunities, strategy and business positioning have led its management to define ambitious long-term targets for the company. Over the long term, the key priorities remain focused on profitable growth, cash conversion and capital efficiency.

Two sets of targets have been defined: business performance targets and capital efficiency targets.

Across the economic cycle[1] performance targets:

- **Average organic revenue growth:** 3 to 6% across the cycle;
- **Adjusted EBITA:** margin between 13% and 17% of revenues;
- **Cash conversion:** c.100% of net profit converted into free cash flow.

Across the business cycle capital efficiency targets:

- **ROCE[2]:** between 11% and 15%;
- **Dividend:** payout c.50% of net income;
- **Capital structure:** retain a strong investment grade credit rating.

At its Investor Day in October 2016, the company also highlighted its growth initiatives, near term business focus and indicated the following financial objectives for 2017-2019:

1. **revenue organic growth:**
   - targeting average organic growth of around 3% over the next 3 years, excluding Infrastructure, with a gradual ramp-up through the years. Infrastructure focus is on profitability enhancement;
2. **improve profitability and deliver organic growth in adjusted EBITA:**
   - a targeted +20bps-50bps average organic improvement in adjusted EBITA margin over the next 3 years driven by organic top line growth, improvement in mix and systems profitability, positive net pricing, industrial productivity and Support Function Costs efficiency,
   - the Infrastructure business is focusing on improving its profitability and its "Rebound" plan is aimed at bringing the adjusted EBITA margin of the division to a "10% to mid-teen" level across the economic cycle,
   - based on the targeted organic growth and the adjusted margin improvement, the Group targets a yearly average +4% to +7% organic growth in adjusted EBITA over the next 3 years,
   - the Group is targeting strong growth in underlying EPS over the next 3 years due to solid organic growth in adjusted EBITA, lower cost of financing, and its share buyback program.

(1) Schneider Electric defines a business cycle as a period including a slowdown and an expansion, or a period in between. This concept allows investors to estimate the Group's long-term growth potential across a business cycle. The length of a business cycle can vary and cannot be forecasted.

(2) ROCE is defined as: adjusted EBITA after tax/Average capital employed. Capital employed is defined as: Shareholders' equity + Net financial debt + Adjustment for associates and financial assets.

4. Company history and development

4.1 History

From its beginnings in steel during the Industrial Revolution 180 years ago, to electricity and, more recently, to energy management, the Group has undertaken significant changes in its operations throughout its history.

1836-1980: a Family Business becomes a Major Player

1836: Brothers Adolphe and Joseph-Eugene Schneider have taken over an abandoned foundry in Le Creusot, France and, two years later, create Schneider & Cie, focusing primarily on the steel industry. Schneider & Cie has grown rapidly, specializing in the production of heavy machinery and transportation equipment, and eventually has become the Schneider Group, a diversified conglomerate.

1975: the Schneider Group acquired an interest in Merlin Gerin, one of the top manufacturers of electrical distribution equipment in France that has been involved in the electricity sector since 1920.

1981-2001: the Schneider Group refocuses on the Electricity Sector

1981-1997: Schneider Group refocused on the electrical industry by divesting its non-strategic assets, such as its public works company, Spie Batignolles. Schneider Group undertook a series of strategic acquisitions: Telemecanique in 1988, Square D in 1991 and Merlin Gerin in 1992.

1999: Schneider Group acquired Lexel, one the largest Europe's suppliers of installation systems and control solutions. In May 1999 the Group has been renamed Schneider Electric, to clearly emphasize its expertise in the electrical field.

Since 2002: a Strategic Transformation

At the turn of the **2000s**, Schneider Electric radically rethought its growth strategy, setting itself three goals:

- ensuring a more balanced exposure to its strategic end-markets;
- enhancing its portfolio of historical operations (electricity distribution, automation and industrial control) with adjacent and synergetic businesses in order to boost its organic growth potential; and
- anticipating the future energy requirements of companies and individuals.

This strategy led Schneider Electric to conduct a number of strategic acquisitions both in mature countries and in new economies targeting companies offering complementary products and solutions.

4.2 From Power & Control to Energy Management and Automation

Strengthening its leadership in Low Voltage Distribution

- We have been a long-time leader through our Merlin Gerin and Square D brands.
- We have reinforced our Wiring Devices and ultra terminal offer with several acquisitions: Clipsal in 2003, OVA, Merten and GET in 2006, Marisio and Wessen in 2008.
- We grew our portfolio in renewables conversion with Xantrex in 2008.
- We grew our presence in new economies with the acquisition of Delixi in China, Conzerv in India (2009) and Steck group in Brazil (2011).

Building a global leader in Medium Voltage & Grid Automation

- We have historically been one of the leading players in medium voltage electrical distribution products and equipment.
- With the acquisition of Areva T&D (Areva'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, a leading medium voltage company in Russia. In 2013, Schneider Electric acquired full ownership of this company, transforming Russia into a key market for the Group and turning Schneider Electric into a key player in the oil, gas and mining industry, as well as to develop energy efficiency and smart grid.
- With the acquisition of Telvent in 2011, a Spanish software company with a strong presence in North America, we became global leader in ADMS (Advanced Distribution Management Systems), supporting the monitoring and management of large electrical distribution networks.

Developing a global leader in Industrial Automation and Control

- We have been a long time leader in discrete automation through our Telemecanique brand.
- We reinforced our Industrial Automation & Control portfolio with the acquisition of Citect in 2006, RAM Industries in 2008, Cimac and SCADA group in 2010 and Leader & Harvest in 2011.
- In January 2014, we closed the acquisition of Invensys plc. This strategic move allows us to enter the process automation world and reinforces our position in integrated industrial automation and electro-intensive segments.

Building a global leader in Critical Power

- We identified Critical Power as a key technology for our portfolio and gained majority control of MGE UPS in 2004.
- We became a world leader with the acquisition of American Power Conversion (APC) in 2007, the US-based world leader in single-phase and three-phase UPS with operations on all continents and USD2.5 billion in revenues.
- We expanded our operations in new economies with the acquisition of UPS manufacturer Microsol Tecnologia in Brazil in 2009 and the acquisition of 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.

Creating a major player in Building Automation & Security

- As the result of several acquisitions, in particular TAC in 2003, Andover Controls in 2004 and Invensys Building Systems in 2005, we became a major player in building automation.
- We entered the video security market in 2007 with the acquisition of Pelco.
- In recent years we have further developed our operations in mature countries, in particular through the acquisition of two pioneering French companies in 2010: Vizelia, a provider of software that monitors the energy consumption of buildings in real time, and D5X, a specialist in solutions optimizing the use of commercial buildings.
- The acquisitions of Summit Energy (2011) and M&C Energy group (2012) increased our expertise in energy procurement services.

4.3 Recent external growth

In 2015 and 2016, Schneider Electric further optimized its offer portfolio to strengthen its focus on core businesses and drive the Group's performance:

- in October 2015, Schneider Electric reached an agreement to sell Juno Lighting to Acuity Brands. Juno is a North American supplier, specialized in recessed and track lighting fixtures, in both residential and commercial sectors. Schneider Electric finalized the sale in December 2015;
- in April 2016, Schneider Electric finalized the sale of its Transportation business to Kapsch TrafficCom AG. The Transportation business targets major cities, highways and infrastructure operators in the world. It offers a large range of solutions and services in the areas of traffic, tolling, tunnel and transit, which make mobility more efficient, safe and sustainable.

4.4 Change management through company programs

"Schneider is On", Schneider Electric's company program (2015-2020)

"Schneider is On", Schneider Electric's company program for the 2015-2020 period, is yielding strong results.

The company program is structured around five initiatives to deliver more value to customers and shareholders:

1. **Do more for the customers to create more opportunities for them, and for Schneider Electric**

   The Group aims in this initiative to bring more value to customers and more business to partners, a better intimacy and an access to specialists, a consistent project execution and a unique and flexible delivery experience.

2. **Simplify the operations for increased efficiency**

   Simplifying work and operations makes the difference to the customers. The Group targets to simplify its management setup to make the company leaner, further increase supply-chain productivity, optimize R&D efficiency and solution execution and increase sales force efficiency. Overall the Group targets to generate by the end of 2017 c. EUR1 billion of industrial productivity and c. EUR 0.7-0.8 billion gross [(1)] SFC savings by 2017.

3. **Digitize for customers, for efficiency and simplicity**

   The Group's offers will be more connected, enabling new services and improving its customers' life. The digital customer experience will be improved to deliver an end-to-end simple and intuitive partner and customer experience.

4. **Innovate to support growth**

   The innovation will focus on delivering the right products and solutions for customers in a focused and short timeframe. In addition, Schneider Electric will continue to be a partner of choice in sustainability in its innovations and its operations and will be measuring its progress through the Planet & Society barometer 2015-2017.

5. **"Step Up" people**

   This initiative is focusing on increasing the competency of Schneider Electric employees through stronger collaboration, enhanced training and a culture of high performance while continuing to have a strong engagement for diversity and workspace satisfaction.

2016 marked the second year of the Group's "Schneider is On" company program, in which the following achievements were disclosed:

Within our Do More initiative:

- c. +1% organic growth for the Group excluding Systems & Transformers;
- Systems Gross Margin up ~+40bps (~+70bps before FX) thanks to grater selectivity and better execution;
- Services are up +5% organically in 2016;
- Global Strategic Account Orders up mid-teen.

Within our Simplify initiative:

- c. €620m Gross Support Function cost reduction plus industrial productivity in 2016 (c. ~€1.3bn since 2015).

Within our Digitize initiative:

- The number of connected assets increased +15% vs. 2015;
- Unique connected customers, +40% since 2015.

Within our Innovate initiative:

- Numerous key launches of products, control platforms and software within EcoStruxure.io;
- Planet & Society Barometer reached 8.48/10.

(1) Before inflation and reinvestment.

5. Research & Development

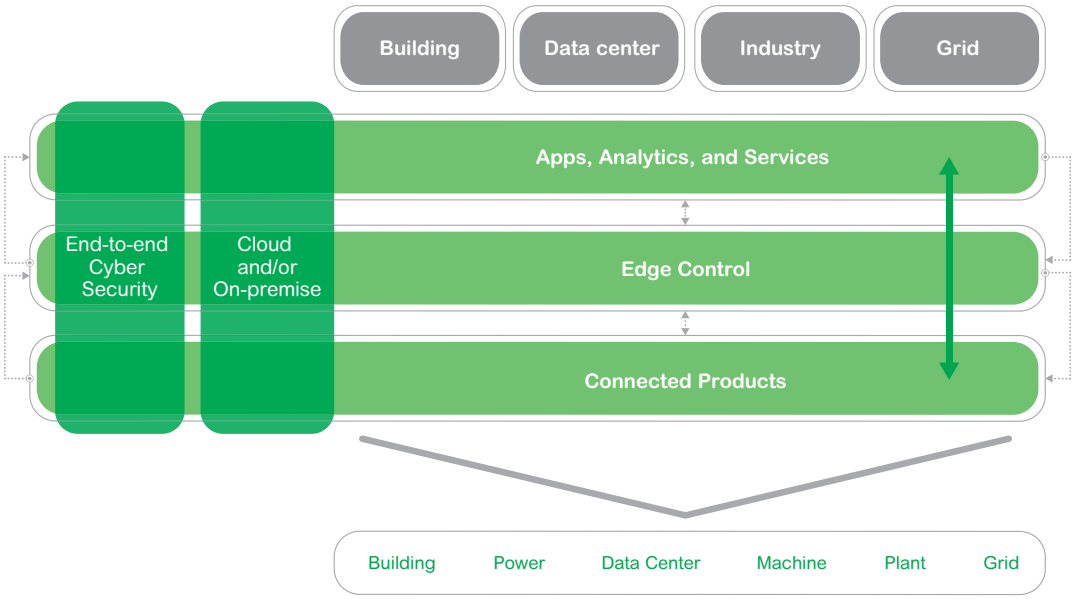
Innovation is the key to our company's growth. Schneider Electric has had a history of innovations over the past 100 years.

Changes in our world are more profound than ever. New technologies, enabling distributed and connected energy for the first time, challenge us to redefine the way we live our lives. Schneider Electric invents technologies that will transform the places where we live, work, and play. As the global specialist in energy management and automation, we create connected technologies that reshape industries, transform cities and enrich lives. At Schneider Electric, we call this Life Is On. Life Is On when life is energized, efficient and connected. And life gets richer and more sustainable when energy gets safer, more reliable, and more efficient. Our promise is to make sure Life Is On for everyone, everywhere and at every moment.

Schneider Electric shares its expertise in energy management, industrial automation, and process efficiency to help people connect to an always-on world. During 2016 we launched EcoStruxure™ which is the Schneider Electric IoT-enabled open and interoperable system architecture and platform delivering enhanced value around safety, reliability, efficiency, sustainability and connectivity for our customers.

By definition, the Internet of Things (IoT) is simply the inter-networking of physical devices to collect and exchange data *via* internet protocol (IP). The true power and applicable value of IoT becomes evident when it is connected with five emerging technology transformations that accelerate our capacity to converge OT and IT systems: mobility, cloud, sensing, analytics and cybersecurity. With EcoStruxure™, we have leveraged these advancements to deliver innovation at every level, from Connected Products to Edge Control to Applications, Analytics and Services. We deliver our innovative solutions through tested and validated future-proof reference architectures that enable the design of end-to-end, open, interoperable and connected systems.

Our EcoStruxure™ platform enables design and operation of connected systems at scale with best-in-class security built around three core capabilities: (1) enabling technologies for embedded connectivity and intelligence, (2) building blocks for smart operations, and (3) the infrastructure for cloud-connected digital services.



During 2016 the Group launched more than 300 innovative offers across its Businesses: Building, IT, Infrastructure and Industry. The 25 most significant launches were highlighted during our first ever Innovation Pulse in Singapore in September 2016, such as MasterPact MTZ, Galaxy VX, Premset, and Wonderware Online.

In 2016 several technology leaders participated in a study of Lessons Learned on R&D Projects about how to innovate faster and better at the core:

1. Improve Customer Intimacy and Insights with evolved Offer Management practices;
2. Improve Accountability through improved Project Management and Governance;
3. Improve R&D Culture and Leverage R&D Competencies to live with the R&D Footprint diversity and complexity;
4. Introduce Lean and Agile methodologies to the traditional Offer Development Waterfall Process;
5. Evolve the current Offer Introduction Process to the Winning Offer Launch Process;
6. Set up Strategic Portfolio Management consistent with Strategic Initiatives and Big Bets;
7. Practice Open Innovation with Startups and Universities;
8. Co-R&D with Partner Companies.

These findings will be used to improve the way we perform R&D at Schneider in the years to come.

In the rest of the chapter we will provide a progress update of our innovations in different areas at Schneider Electric: (1) Legeraving technological advances, (2) Delivering truly innovative solutions, (3) Improving the efficiency of R&D, (4) Grow through Innovation, (5) Financing innovative start-ups.

5.1 Leveraging technological advances

Emerging trends that appeared in the last five years, like the Internet of things ("IoT"), digitization and IT/OT convergence, are now shaping Schneider Electric's R&D strategy and investments. They are impacting the way products and systems are architected, developed, delivered and serviced, with significant value added for our customers.

Digitization and IoT

In addition to beyond personal devices, IoT presents a huge opportunity in industrial systems. It enables significant increase in the number of measure and control points and, as a consequence, allowing for maximum energy efficiency and optimized asset availability and performance. Since 2000, Schneider Electric has invested in research programs to develop ultra-low power, wireless "pervasive sensing" devices, some of which have already reached the industrialization phase, just in time to contribute to such solutions.

Sensors working up to ten years off a button-size battery while transmitting data over wireless "mesh" networks are now available. Their lifetime cost is up to ten times lower than classical wired sensors and will revolutionize the way buildings and factories are monitored and controlled. Other wireless, energy harvesting self-powered sensors measuring both the temperature and the power intensity, and complying with the tough mission profile imposed by the demanding environment of our customers are about to be launched on the market.

All of the smart sensors rely on technology platforms providing proven components whether for the physical measure, data processing, power supply or harvesting and wireless transmission. On the latter topic, long-range radio technologies like LoRa and SigFox have received specific attention over the last 2 years, leading to the first deployments by the end of 2015.

R&D efforts are now focusing on the ease of deploying and running large networks of such sensors and the scalability and security of the infrastructure needed to harness the data coming from these networks. The cloud based Digital Services Platform, was developed by Schneider Electric over the last four years to address these two challenges. Dozens of pilots are underway with business units and external partners, leveraging a library of analytics modules developed in the context of the Operational Intelligence program. Using mobile technology, the insights delivered by these analytics are packaged into simple, yet powerful, "context aware" applications. Thanks to geo-localization, the information can literally find its way to the person needing it most, depending on where he/she is. Once advised, another set of mobile based applications, including augmented reality, further guide the user to transform these insights into action.

By combining three platforms; the Smart Sensor Platform, the Embedded Control Platform and the Digital Services Platform Schneider Electrics provide a consistent and interoperable value chain starting from data acquisition, continuing with data processing and transmission and up to data storage and analytics to present actionable dashboards to our customers.

Optimization and Analytics

Since 2015, major evolutions have occurred in Schneider Electric in the Optimization and Analytics domain: exchanges within the Group enabled a good characterization of the potential for future **connected offers** and related analytics, as well as a complementary view of relevant analytics for non-connected (or less connected) offers; the **Digital Services Platform (DSP)** reached a level of maturity which enables its use in applications managing significant amounts of data and integrating analytics.

Technology anticipation addressed different types of actions:

- **Exploration of analytics for connected offers** in a variety of contexts: homes, senior residences, commercial buildings, and industrial plants. In most cases, the exploration of new use cases builds on the premise that the analytics will be implemented on top of the Digital Services Platform and will enable (i) better understanding of correlations between data and (ii) use of understanding to improve operational and/or investment decisions. In some cases, this exploration led to a prototype of a brick that could be reused for other applications. External collaborations have been important, *e.g.,* the Tribute European project, a PhD partnership with the University of Grenoble Alpes, on machine learning for virtual sensors, and joint work with Duke University on the use of a machine learning algorithm to optimize temperature control;
- **Investigation of condition monitoring and diagnosis analytics** for asset performance management, often but not necessarily, in the context of a connected offer. Both data-oriented (machine learning) models and explicit (more or less complex) physical models can be used for this purpose, inducing very different constraints on the data requirements and global solution architecture. The analytics are used to improve the reliability, availability, maintainability and safety of devices and systems. Important partners in 2015 included Uppsala University (IT Business), and the University of Grenoble Alpes;
- **Analytics for planning and control** for electrical networks (Infrastructure Business), HVAC in buildings and data centers (Building and IT Businesses) or industrial systems such as mines, cement plants, water networks, pipelines, refineries, food and beverage plants (Industry Businesses). Following the acquisitions of the previous years, Schneider Electric already has a significant offer in this domain, but the frontiers continuously move as technology progresses and with the increasing availability of more and more data. In particular, progress on energy optimization in residential districts and in manufacturing plants has been enabled in the context of the Ambassador, Hyllie Smart Grid, and Arrowhead European cooperative projects, as well as with two PhD partnerships with the GIPSA and LIRMM laboratories. For electrical networks, our partnership with Mines ParisTech has been complemented by a new PhD collaboration with G2ELab and INRIA.

Modeling and Simulation

Regarding lifetime cost, the design phase of industrial projects plays a critical role in reducing both time and cost of system deployment. Invensys, acquired by Schneider Electric in January 2014, is a leader in the simulation of complex continuous processes, such as refineries or chemical plants. During the design phase, the plant can be simulated to optimize its design, validate its performance and start operator training before it is even built. The IT Division has developed a similar set of tools for data centers, including 3D thermal simulations to validate the design of the cooling system.

R&D teams are working to generalize this offering to any kind of industrial system, including large and complex buildings like hospitals, in partnership with the leading CAD/CAE suppliers in these domains. Filling the gap between design and operational systems will not only decrease design-and-build costs but also those linked to maintaining and developing systems over the 30+ years' life expectancy that is common in some industries.

Within five years, one can expect that industrial systems will be developed like modern software, starting from a model of the process, followed by a simulation based on this model, developed and tested "against" the model and finally deployed on totally standardized hardware.

This vision connects to the next generation EcoStruxure™ announced on November 2016. Its three layers of technology innovation are concerned by the leading edge competencies of Schneider-Electric on Modeling and Simulation. The first layer, addressing the Connected Products, takes benefit of the Modeling and Simulation at the heart of the design by providing an extended capability of integration, verification and validation. The two next layers, respectively the Edge Control layer, and "Apps, Analytics and Service", will differentiate their offer thanks to the Digital Twins and Surrogate models. In 2016 Schneider-Electric has reinforced its advanced skillset on these two new uses of the models.

Beyond the Digital Twin is the concept of Cyber-Physical Systems…the embodiment of Industry 4.0. When a physical system is connected in a symbiotic relationship with its virtual representation, the resulting interconnected system becomes a single "cyber-physical system". At the Internet of Things Solutions World Congress in Barcelona, in 2016, Schneider Electric provided an interactive experience in which users could view health and status data from a set of orientable solar panels, receive training in installation and field maintenance procedures, and even control the physical orientation of the array.

The cyber-physical system is innovative and distinguished from existing solutions in the augmented reality space because its bi-directional communication truly blends the virtual and physical worlds, not just pixels. It is made possible by synching a system model (or any of its submodels) to the model-based system it represents, such that any state change in the model is reflected in real-time in the system and *vice versa*. During the design process, data elements within the system model that influence system state are identified. These key data points are modified to accept external input that overrides simulation input. Similarly, sensors and actuators are placed on corresponding real-world interfaces and are set to accept simulation stimulus as override.

5.2 Delivering truly innovative solutions

The advances mentioned above generate innovation across market segments, all the way from residential to smart cities, as illustrated in these few examples.

Buildings

Residential

Moving towards embedded, metering everywhere in the electrical panel, we introduced Powertag, an innovative offer able to measure any power consumption, to within 1% precision. This is available for retrofit as the form factor is compatible with all circuit breakers whether one phase or three phase. This is embracing the IoT world where measure is the core and where connectivity and cloud services will bring more added value to customers. The core technology of this sensing offer is protected by numerous patents.

Arc Fault Detection devices are rapidity becoming more widespread, driven by theUS market. These provide is a way to reduce electrical fires. Mandatory in the US and soon the IEC world this will lead to electrical safety in every home for a increased peace of mind.

Non-Residential

Facility Hero and Facility Insight are 2 software offers that are bringing facility managers a new way to monitor their assets. This cloud based software available on mobile devices allows measurement, monitoring and alerts, allowing the facility manager to get the best out of the assets and ensuring a better quality of services.

The opening of the Edge building in the Netherlands is the best illustration of advanced building technology. It manages to combine shows element of electric distribution, energy storage and advanced control in the profitable energy solutions for apartment building and the workplace.

Utilities & Infrastructures

Low voltage electrical distribution panels, in addition to ensuring the safety of the assets they power, collect a large amount of data that can be used to optimize their performance. For example, analyzing the frequency of a motor's electrical feedback can allow detection of wear and the potential failure of its bearings or the equipment powers. Thanks again to the low cost of the IoT platform, every distribution panel shipped by Schneider Electric or its partners is now connected to the cloud. Data and process experts collaborate to analyze the patterns in the data coming from the panels to come up with novel ways of optimizing their performance. Once developed in the cloud, the corresponding algorithms will be optimized and implemented in the smart meters and breakers built into the panel, thus making it smarter and smarter. The remote connection of distribution panels to the platform enables services such as demand response, allowing the aggregation of multiple buildings and/or factories into significant capacity units that utilities can call upon at peak times.

Medium voltage products are becoming smarter, for instance with the new generation of wireless thermal sensor contributing to the predictive maintenance of switchgear panels. Pilot projects in asset performance management have been executed in different applications segments relying on multiple condition monitoring algorithms for circuit breakers and transformers. The latest cyber-security standards developed for substation environments are being integrated at product and system level and type tested with customers. Security of operation is being further developed through the usage of mobile technologies. Innovative services are being tested with utilities in order to improve grid performances. Electro-technical architectures have been optimized for data centers where power distribution increasingly uses medium voltage.

Industries & Machine Manufactures

As End Users and OEMs re-examine their automation and operation management strategies to take advantage of the Industrial IoT, enable operational excellence and improve overall business performance, EcoStruxure™ architectures for Machines and Plants play a key role in managing convergence between informational technology and operational technology through connected products, edge control and applications, analytics services while ensuring cyber-security.

Eliwell by Schneider Electric is the first on the market to offer a plug & play remote monitoring solution for cold refrigeration. Televisblue offer takes the best of IoT to connect controllers and to monitor small and medium supermarkets through a web interface: overall monitoring of multiple installations from one place, at any time available within a few minutes of installation thanks to its pre-activated starter kit.

Eurotherm by Schneider Electric introduced the groundbreaking Eurotherm Online Services. Offering real-time compliance status access and certificates from anywhere, anytime. EOS Advisor allows you to manage your equipment and staff more efficiently with one integrated system that meets all your compliance requirements and the EOS tablet application for calibration (eCAT™) improves the consistency of your calibration process.

The Maintenance Response Center is new software within the Foxboro Evo™ Process Automation system that provides decision support to maintenance supervisors and their teams. It offers plant-wide insight into the health and performance of physical assets and the context to understand how to take the best course of action. The Maintenance Response Center offers a single window of easy access to the most up-to-date information on plant-wide asset conditions. Maintenance teams are notably provided with early visibility and insight into asset condition to drive a proactive maintenance approach that maximizes operational efficiency.

Vijeo 360, our innovative augmented reality software application for mobile devices uses the device's camera to recognize cabinets and machines and then superimpose real-time data and virtual objects onto them, giving operators and technicians immediate access to relevant information and guidance to reduce downtime and improve maintenance efficiency.

Cybersecurity concerns continue to expand in the Industrial sector, with directed attacks creating losses for companies and disruptions for general citizens, with undirected or semi-directed attacks such as ransomware moving into industrial control rooms and with a general raising of the level of risk awareness in boardrooms.

In response, Industry Business continues to increase the security and differentiation of its offers, with certification of 2 additional products to IEC 62443, an expansion of security on specific offers such as PLC certification for use in the Chinese power sector and an expansion of specific product features to create market leading devices (drives, PLC's, signed software) while also ensuring security of the IIoT space with secure cloud and remote access offers.

Our strategy of combining improved offer security with best-in-class offers from partners continues with McAfee and Observable networks being added as cybersecurity partners within the Collaborative Automation Partner Program as well as some work starting with other start-up or small companies.

Data Centers & Networks

Large (> 2MW) data center builds are seeing the highest growth in this segment as Internet Service Providers continue to add capacity to support "Big Data" workloads and enterprise digital transformation efforts. These include centralized public cloud data centers, as well as regional public clouds that are housed in colocation facilities in urban areas. Schneider Electric specializes in power, cooling, rack and infrastructure and building management solutions that optimize energy and operating costs for data center operators that also demand reliable systems that can easily scale as their workloads increase. Riding the wave of data center builds in this range, next generation versions of industry leading Air Economizer cooling and 3-Phase Galaxy UPS offers arrive to the market this year, providing unique energy efficiency and power scalability features. Large UPS lifecycle costs and physical footprint is further minimized as more and more offers become available with Lithium-ion batteries.

To meet the rapid deployment challenges of our hyperscale web services and colocation customers, Schneider Electric is making investments in its prefabricated data center solutions business with new, dedicated manufacturing sites to greatly reduce lead times and to increase its ability to customize solutions to user requirements. Further, a next generation infrastructure innovation called HyperPod will launch to provide a fully contained and secure architecture for rack-based IT deployments, providing fast installation and flexibility to scale.

While data storage and performance processing applications are handled by cloud-based services, requirements for low latency, regional computing at the "edge" is an emerging trend. Such edge IT deployments support real-time control and deterministic data handling where data security and sovereignty are required. Schneider Electric will expand its range of packaged micro data centers that can be populated with computing equipment and shipped to the site as a turn-key solution. The latest version of these micro data centers, developed in partnership with Hewlett Packard Enterprise for edge applications, was announced this year earlier.

Data center operations services continue to be a growing need for the Group customers and Schneider Electric has taken major steps in expanding service offers to provide the benefit of reduced response time through automation of systems.

5.3 Improving the efficiency of R&D

While the deployment of technology platforms has allowed reductions in both cost and lead time of bringing new products to market, this new complexity requires an upgrade of development methods and tools. Schneider Electric's NextGen PLM program optimizes its Information Systems with a redefined architecture, data model, and tools for an end-to-end data flow. This will also reduce the risk of aging and obsolete Product Information Management Systems. The Group's pragmatic building block approach to PLM will be driven by building a strong data IT platform followed by incremental improvements based upon the identification of key capabilities; the choice of suitable solutions; and setting a feasible path to deliver the maximum impact on performance and costs in the shortest time.

The Group is also building a Model Based Systems Engineering (MBSE) framework including processes, tools and data models for Schneider Electric. This MBSE framework enables the application of advanced modeling techniques throughout systems engineering stages to represent and test dynamic and static properties of a system. Starting with customer requirements expressed by marketing, a model of the product and/or system is developed. This model can be used to generate mockups that can be validated and can evolve with customers before any R&D is committed.

The validated model then becomes the reference from which the mechanics, electronics and software design team can work in parallel. From the model, engineers can query libraries of reusable components, developed on the technology platforms now common to all businesses, thus accelerating projects while reducing risks. Successive versions are tested against the model, and again with customers, ensuring that final integration and testing will go smoothly.

Initial proofs of concept have confirmed the potential of MBSE by demonstrating complete traceability from Stakeholder Needs to Code as well as demonstrating advanced verification techniques for correctness and coherency of system models. In 2017, pilots are under way that will finalize the systems engineering platform that will enable world class systems design and test capabilities for all of Schneider Electric.

In order to support the Digitization of Schneider Electric, the IT function is adapting its operating model to be more flexible and business value driven. On this journey, Schneider Electric is implementing end to end IT services aligned with identified business capabilities required for new products, solutions and services development. End-to-end IT services directly support one or more business capabilities by providing all the IT platforms, technologies, processes, information, and IT support required. IT – Business collaboration is evolving due to greater business partner diversity and digital maturity, a wider range of IT activities beyond technology delivery and a broader range of business opportunities in all functions. Ensuring better alignment of IT services with business priorities will improve global R&D efficiency.

5.4 Growth through Innovation

The Growth through Innovation program, which started in 2015, to accelerate innovation and time to market, to make selective, focused R&D investments, and to out-innovate our competition has accelerated the transformation in 2016 through 5 main streams:

1. we finalized the transformation of Offer innovation practices to boost Innovation in Core & Adjacent offers (Voice of Customer and Lean Innovation methods);
2. we sought to speed up open Innovation with our Eco-System (universities, start-up companies, suppliers, and partners) and identified 20 Open Innovation projects in 2016;
3. we started introducing lean practices in Product Offer Development and finalized the agile deployment in Software Offer Development;
4. we designed a tailored Launch process for hero Offers and started the transformation of the Offer LAUNCH practices from a "Time to Market" to a "Time to Profit" approach;
5. we deployed new practices in Projects portfolio Management to rebalance between horizons 1, 2 and 3, and be selective, focusing on the best growth opportunities.

To support this transformation, we started a change management plan to educate the Offer Creation actors and managers in the innovation culture:

- project Managers empower, train and hold teams accountable;
- all functions of Offer Creation projects (offer marketing, engineering, industrialization, etc.) practice the best-in-class innovation methods (ideation with crowd sourcing, experimentation with Design Thinking, 3D proof of concept and lean start-up).

5.5 Financing innovative start-up

In 2000, Schneider Electric created an investment structure called Schneider Electric Ventures to invest in high-tech start-ups whose innovations fit with the Group's future development. In 2010, Schneider Electric Ventures became Aster Capital Partners with the launch of a new capital investment fund to finance innovative start-ups operating within the areas of energy, new materials and the environment. This second fund received a capital subscription of EUR105 million, from Schneider Electric (EUR40 million), Alstom (EUR30 million), Solvay (EUR15 million) and in 2012 from the European Investment Fund (EUR20 million), a benchmark financial partner in Europe.

Managing a portfolio of partnership opportunities

The mission of Aster is to purchase minority interests in innovative start-ups in the fields of energy and the environment based in Europe, Israel, North America and Asia. The scouting activities constitute a source of particularly productive partnerships and forge contacts with about 1,700 small and mid-sized businesses around the world each year. In 2016, five new investments have been realized, joining the first 14 companies already in the portfolio, including Lucibel (FR), Iceotope (UK) and Digital Lumens (US).

After having successfully exited from Solairedirect (acquired by Engie in 2015), Aster's first fund still holds a few equity interests, notably in Agilence (US), Jet Metal Technologies (FR) and Casanova (FR).

Customer Matrix – USD2.0 million investment in January 2016

Customer Matrix and its Cognitive Computing enterprise software solution helps complex organizations to generate more sales opportunities from their own customer base and rapidly generate more revenues. They have already a top tier global set of customers across the US, Europe and Asia and will use the latest round of investment to continue their expansion across the financial sector while exploring new opportunities in the OEM/IOT space. Customer Matrix is headquartered in NYC and has its R&D centre in Paris. The company was founded in 2013.

EnTouch Controls – USD1.5 million investment in February 2016

EnTouch Controls offers a wireless light Building Management System primarily to multi-site Small and Medium Businesses (SMBs). The company has built momentum with successful deployments into thousands of sites with a growing list of national customers and partners. The company was founded in 2008 and is based outside of Dallas in Richardson, TX.

FinalCAD – EUR4.0 million investment in July 2016

FinalCAD has developed a mobile software solution to bring the Building Information Modelling on the ground and help the construction industry turn digital (quality control, defect management, etc.), adding on top of this a prediction and analytics layer. This French company was founded in 2011 and already has about 600 active worksites.

OpenDataSoft – EUR3.5 million investment in October 2016

OpenDataSoft has developed a SaaS solution that solves a key problem for large organizations: collect and share data. Their customer base comprises public administrations and private companies that need to increasingly share data between different departments or with external partners to enable better operations and/or more services. OpenDataSoft is a French company that has been created in 2011 and that sells to customers in Europe and the US.

ekWateur – EUR0.8 million investment in November 2016

ekWateur is a French alternative energy retailer (renewable electricity and natural gas) which provides its customers with green electricity in a collaborative and innovative environment. In the past 12 months, ekWateur has been able to meet all regulatory requirements to become an energy retailer in France, to build a scalable organization and to attract first customers with differentiated marketing.

Identifying emerging trends and technologies and delivering relevant inputs

Aster is in touch with start-ups on a daily basis. This gives Aster a unique perspective on emerging technologies, customer needs and new market segments. The work is shared at three levels:

- by identifying emerging trends and weak signals which may have an impact on markets, customers and/or future Schneider Electric business, and sharing them on a regular basis with the leaders within Schneider Electric;
- by introducing about 300 start-ups each year to Schneider Electric teams within relevant countries, businesses and corporate departments; and
- by publishing market analyses that are presented to Schneider Electric teams. This year once again, more than 20 topics related to the energy and environment sectors have been covered and shared within Schneider Electric.

The Aster teams continuously improve the dedicated web platform that they have made available to all Schneider Electric employees to give them even easier access to all of these resources, information and databases.

6. Organizational simplicity and efficiency

Schneider Electric's profile has undergone an unprecedented transformation in the past decade to become a global specialist in energy management.

Under the One company program (2009-2011), the organization was redesigned to better serve its customers. This transformation continued with the Connect company program (2012-2014) as we refined our organization to improve cohesion, while initiating our digital transformation journey. Now with the current company program, *"Schneider is On"* (2015-2020), we will leverage these organizational simplifications and further empower our team members towards growth.

6.1 A customer-focused organization

Dual orientation – technologies and end-markets

Schneider Electric is organized into four business segments. Each business segment is responsible for specific technologies and addresses targeted end-market segments. The organization was designed in order to support our two business models: products and solutions. Selling products requires clear technological leadership, while selling solutions requires close customer relationships and a deep understanding of end-users' needs.

- **Building** business scope includes low voltage, building automation and renewable technologies.
- **Infrastructure** business scope includes medium voltage and grid automation technologies.
- **Industry** business scope covers industrial automation, control and sensors technologies.
- **IT** business scope covers critical power and cooling technologies for data centers as well as non-IT applications.

Each of these business segments manages its R&D, marketing and sales teams and is responsible for its global results.

A number of back-office functions such as Finance, Human Resources, IT systems and Global Marketing are handled by the Global Functions, which have a governance role and provide services internally.

Rationalization and optimization of synergies

The organization is deployed in accordance with three key concepts: **specialization, mutualization and globalization.** Specialization mainly concerns sales and front-office operations. Mutualization covers local back-office operations at the country and regional level. Globalization concerns the seven support functions, now known as Global Functions:

- Finance;
- Marketing;
- Supply chain;
- Human Resources;
- Strategy;
- Technology;
- Information systems.

A substantial portion of the Global Functions' costs are re-allocated to the businesses using distribution keys or application bases that are generally defined annually:

- **Specialization:** in each country, each business has its own sales force and local leader as soon as it reaches critical mass. It also has a specialized front office in each host country to respond more effectively to customer demand for specific expertise. Each business segment is also responsible for its overall results, both for product sales (in its business lines) and the implementation of solutions (especially for end-market segments within its scope). As solutions can consist of products coming from different business segments and in order to define a single point of contact for customers, each business segment is responsible for solutions in certain defined end-markets. Business efforts have focused on implementing and strengthening existing teams dedicated to meeting the specific needs of these strategic customer segments with a strong focus on the collaboration between the business lines, in order to ensure these customer's needs are met as fully as possible.
- **Mutualization:** the business is organized around Organizational Regions: North America, China, France, Europe and the Rest of World which is comprised of seven international zones (South America, Africa, Middle East, CIS, India, SE Asia-Pacific). Each of these regions have empowered Zone Presidents and Country Presidents, which are appointed in each country to be the custodians of 4 Businesses in their countries: Industry, Infrastructure, Building and IT, including Field Services. In addition, they are responsible for monitoring the full transversal P&L of the country, deploying Schneider Electric's strategy in the country (including all local cross-functional topics such as increasing cross-selling among businesses) and pooling the local back-office resources. These resources are gradually brought together in each country or region under the Country President's supervision and can include multiple local support functions ranging from administration to project execution, depending on the situation. In addition, the Country President

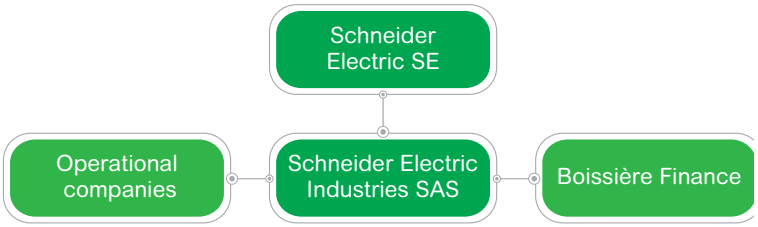
serves as the mutualization driving force and Schneider Electric's main representative in the country, most notably in dealings with employees and local officials.

- **Globalization:** major support functions that are not specific to a given country or business are gradually globalized to increase experience and leverage a significant scale effect around cost and service. Manufacturing and supply chain operations, areas of shared services or expertise (such as finance or Human Resources), information systems, Group Strategy, Technology and global marketing functions are now included within the Group's Global Functions. The global Supply Chain continues to focus on the areas of global productivity, customer differentiation and customer satisfaction.

Geographic dimension and legal structure

The Group's goal is to establish, wherever possible, a single legal structure in each country.

Schneider Electric's simplified legal organization chart is as follows:



The list of consolidated companies is provided in note 32 to the consolidated financial statements. Boissière Finance is the Group's centralized cash-management structure; it also centralizes hedging operations for all subsidiaries.

6.2 Manufacturing and supply chain: global redeployment

Schneider Electric has 210 plants and 95 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:

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

A 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 takes into account 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 its efforts on approximately 10 priority areas. These place increasing importance on eco-design, making it systematic and exhaustive, on our efforts to reduce CO_2 emissions, on our circular economy goals for our offers and for the resources used, and on our ever-increasing energy efficiency objectives. We strive in particular to constantly boost our customers' capacity to objectify the environmental added value our solutions offer them (energy CO_2 efficiency, lifetime and repairability, etc.). We take into account 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 company's top management in order to track progress and make the necessary decisions for continuous improvement.

These programs cover our entire value chain, including R&D, purchasing, manufacturing, logistics, marketing and sales.

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 5 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 segmented response to customer needs

Since 2012, Schneider Electric has launched the Tailored Supply Chain program as part of the company program Connect, with the aim to better align the supply chain set-up with the needs and behaviors of each customer segment (distributors, partners, 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.

This led to the announcement of a new Industrial Organization for 2013, which is structured around 8 regions (Europe, CIS, China, India, Pacific, Asia, North America, South America) and groups all of Schneider Electric's industrial activities together in these regions. In addition, this also led to the verticalization of all Purchasing activities to simplify and unify its contact with suppliers.

In the 2015 to 2020 period, 9 initiatives are under implementation to continue 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.

The digitization of the supply chain

Since 2013, Schneider Electric has put emphasis on digitization as a way to accelerate and intensify its transformation.

For the supply chain, this approach aims to synchronize suppliers and plants through distribution centers and carriers to improve service to customers. Many programs have been launched in order to offer new features and improve responsiveness in relation to market demand supported by new technologies.

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 the 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 computer systems (of the supply chain) is supported by a strengthened IT convergence plan.

This digitization of the supply chain fully meets the priorities of the Group's industrial strategy by targeting customer satisfaction first and foremost while reducing costs for increasing responsiveness and reducing capital employed.

A key competitive advantage for our customers

All of these efforts to improve the supply chain have been recognized well outside the company. In September 2016, Gartner, a leading IT research and advisory firm, ranked Schneider Electric's supply chain 5th in Europe and 18th worldwide, an improvement of 5 and 15 places respectively in 1 year and up 17 and 48 places respectively in two years.

The Group's aim for the next few years is to turn this into a competitive advantage through customer recognition that we offer the best logistics solutions. The new 2015-2020 company program aims to drastically improve the capacity and response speed of the supply chain while strengthening economic and ecological efficiency in order to even better serve our customers by providing them with a customized logistics response that meets their expectations while ensuring sustainability.

6.3 Purchasing: selection and internationalization

Purchasing corresponds to around 50% of revenue and plays a crucial role in the Group's technical and business performance. As part of the new company program to optimize Purchasing, the Group is continuing to pursue its plan, launched several years ago, to seek to source its purchases from the top-performing suppliers ("recommended" suppliers) and aims to increase local sourcing in the new economies to more than 50%. The Group is rolling out the "Purchasing Excellence System" with a view to involving suppliers, as a component in the 'Complete Logistics Chain', in the achievement of our performance objectives focused on customer satisfaction.

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 (CSR). 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 in the level required (to achieve 100% "recommended" suppliers by 2017).

7. Risk Factors

As described in Chapter 3.9 Internal control and risk management, Schneider Electric regularly analyses the risks and threats it faces, which has revealed 6 major risk categories as follows:

- risk factors related to the Group's business, which also include the solutions business, supplier risks and competitive threats;
- industrial and environmental risks that also include risks such as natural catastrophes and political disturbances, etc.;
- information system risks and cyber threats;
- market risks covering currency risks and raw material price fluctuation risks;
- legal risks that also cover intellectual property;
- litigation and related risks.

The Group's main risks and threats are summarized in a chart of overall risks based on their impact and probability.

7.1 Operational risk

Schneider Electric operates worldwide, in competitive and cyclical markets

The worldwide markets for the Group's products are competitive in terms of pricing, quality of products, systems and services, development and introduction time for new offers. Schneider Electric faces strong competitors, some of whom are larger than we are or are developing in certain lower cost countries. The Group is exposed to fluctuations in economic growth cycles and to the respective levels of investments within the different countries in which we operate. The Group's widespread geographic coverage and diversified end-markets enable us to ride out downturns on specific markets.

As 41% of the Group's revenue is generated in emerging countries, we are exposed to the risks associated with those markets.

The Group's wide international presence exposes us to many economic, legal and political risks in the countries in which we operate. These include risks arising from social unrest (particularly strikes and walk-outs), political instability, unforeseen regulatory changes, restrictions on capital transfers and other obstacles to free trade, and local tax laws. All of these risks may have an adverse effect on the Group's operations, results or financial position.

Schneider Electric has implemented procedures designed to protect the Group as far as possible from these risks, which are generally beyond our control, and to manage them as effectively as possible. These procedures include quarterly business reviews in which performance and projections are monitored, in terms of activity, action plans, results to date and forecasts, at all organizational levels of the Group (see section 3.9 Internal control and risk management). The Group also has the necessary competencies to manage these risks, mainly through our central functions (finance, legal, tax and customs).

Nevertheless, these measures implemented by Schneider Electric, might be insufficient to counteract these risks.

The growth and success of the Group's products depend on its ability to constantly adapt to and leverage new technologies to deliver high value products and solutions

There are major transformations impacting the markets in which Schneider Electric operates. This includes IoT and its major accelerators of mobility, the cloud, pervasive sensing, bit data and analytics. Customers expect ever more intelligent products with open interfaces enabling them to be tightly integrated into more and more complex software-based solutions. The resulting digitization of products, including native web connectivity opens numerous new opportunities, but will also accelerate the convergence of IT and OT technologies, thus making it possible for new players to enter our markets. The widespread usage of mobile devices creates new expectations from customers as far as the general usability of products. Last but not least, the increased connectivity of products increases the risk of cyber-attacks.

To meet these challenges, the Group has increased its investments in the areas of embedded control (hardware and software), and cyber-security. A Group-wide initiative aims at developing common control technologies, leveraging such advances as "controller on a chip", resulting in smart and open products that are "natively" secure. More and more, the development of products goes hand-in-hand with the development of life-cycle services leveraging web connectivity to deliver superior lifetime value to our customers. Such services not only open new recurring revenue opportunities for Schneider Electric, but reinforce the Group's competitive position *versus* potential new entrants.

The increased software content of the Group's solutions has resulted in specific investments in the area of user experience. The standards and techniques developed for software solutions apply readily to smartphones and allow development teams to seamlessly complement products and solutions with state-of-the-art mobile applications.

Regarding cyber-security, a specific investment program has been launched to develop and deploy technology and process capabilities through the development lifecycle. Specialists embedded in the main development teams/centers are involved throughout all phases of the R&D development activities to help make products and solutions more inherently secure. A constant monitoring of emerging threats has been implemented in partnership with specialized firms and specific vulnerability management and incident response processes have been established to support customers of Schneider Electric solutions.

The market for software-based solutions has faster cycles than some of Schneider Electric's hardware markets. As a provider of critical infrastructure management solutions, the Group nevertheless does not compromise its standards of outstanding reliability and security. As a consequence, a program is underway to generalize the latest standards of System Engineering, allowing different teams to work in parallel on complex products or systems, while assuring the highest quality standards. Coupled with techniques such as early prototyping, leveraging 3D printing, and simulation, these efforts contribute to the continued reduction of go-to-market lead times.

To sustainably manage these challenges, the Group needs to constantly invest in the competencies of its 8400 R&D engineers, both to reinforce its traditional domains of expertise and develop new ones. Leveraging Open Innovation through a global network that extends into universities, research centers, partners and start-ups compliments the backbone of Schneider Electric's R&D organization. Each network constantly monitors emerging technologies and competitive trends in its domain, decides the launch of research efforts to position the Group ahead of those trends and ensures the related upgrade of the network's talent pool.

Schneider Electric's strategy involves growth through acquisitions and mergers that are potentially difficult to execute

The Group's strategy involves strengthening its positions through acquisitions, strategic alliances, joint ventures and mergers. Changes in the scope of consolidation during 2016 are described in note 2 to the consolidated financial statements (Chapter 5).

External growth projects are examined in detail by the businesses and corporate functions (strategy, finance, legal affairs, tax and Human Resources) concerned, under a rigorous internal process developed and led at Group level. A launch committee is responsible for initiating the review process to identify the risks and opportunities associated with each external growth project, while a number of validation committees review the results on an ongoing basis. Projects that successfully come through the review process are submitted for approval to the Group Acquisitions Committee made up of the main members of senior management. The largest projects require the prior approval of the Chairman and CEO, who refers to the board of directors, if necessary.

External growth transactions are inherently risky because of the difficulties that may arise in integrating people, operations, technologies and products, and the related acquisition, administrative and other costs.

This is why an integration procedure for new acquisitions has been drawn up. The integration of acquisitions is a process that extends over a period of 6 to 24 months depending on the type and size of the newly acquired company. The integration scenario for each acquisition varies depending on whether the business was acquired to strengthen or extend the Group's existing line-up or enter a new segment. There are a number of different integration scenarios, ranging from total integration to separate organization. An integration plan is drawn up for each acquisition and submitted to the Acquisitions Committee for approval. The plan is implemented by an integration manager who reports to a Steering Committee that initially meets at monthly intervals and then on a quarterly basis.

The unit that presents the acquisition project is accountable to the Group's senior management for meeting clearly defined business plan targets covering future performance and expected synergies. Actual performance is measured against business plan targets during quarterly business reviews and, for the largest acquisitions, by the board of directors.

Value in use is determined by discounting estimated future cash flows that will be generated by the tested assets, generally over a period of not more than 5 years. These future cash flows are based on Group management's economic assumptions and operating forecasts. The discount rate corresponds to Schneider Electric's weighted average cost of capital (WACC) at the valuation date plus a risk premium depending on the region in question (local risk-free rate), the nature of the target's business (appropriate beta), and the structure of the financing (taking into account the debt to equity ratio and risk premium on the debt). The Group's WACC stood at 7.3% at December 31, 2016, stable compared to the 2015 financial year. The perpetuity growth rate was 2%, unchanged on the previous financial year.

Goodwill is allocated to a Cash Generating Unit (CGU) when initially recognized. The CGU allocation is done on the same basis as used by Group management to monitor operations and assess synergies deriving from acquisitions. Impairment tests are performed at the level of the cash generating unit (CGU), *i.e.* the Building, Infrastructure, Industry and IT businesses.

Where the recoverable amount of an asset or CGU is lower than its book value, an impairment loss is recognized. Where the tested CGU comprises goodwill, any impairment losses are firstly deducted therefrom.

The Group's success depends on its ability to attract and retain the best talent, and engaging its workforce to support our Growth ambition for the future

Competition for highly qualified management and technical personnel is intense in the Group's industry, and becomes a bigger challenge as the Group continues on its trajectory of growth. Future continued success depends in part on the Group's ability to attract, hire, onboard and retain the best qualified personnel, especially in the area of technology and energy efficiency solutions. This ability can only result from a strong employee-centric People Strategy and its ability to prepare its workforce for the future through learning and identifying talent within the organization.

The Group's People Strategy is strongly anchored in its Leadership & Culture 2020 vision, ensuring that we have a unique way of leading and working together, establishing a new relation between employees and the company. The cornerstone of this ambition is the experience of the employee throughout his/her journey at Schneider Electric, from joining to leaving. The People Strategy aims to create a culture that is a differentiator for its clients: focused on speed, customer service and easy to do business with. This is achieved thanks to our focus on learning, openness, transparency, and inclusiveness.

In this framework, the Human Resources Function is valued as a backbone of support for the business, bringing efficiency and quality to the employee experience. Our entire People Strategy defines the transformations we want to accomplish, one of them being to increase our diversity and create an inclusive culture. We believe it is instrumental if we want to keep on meeting the expectations of our customers through ongoing innovation. Our multi-polar organization with senior leaders in every continent has been created to facilitate the growth of talents in every part of the world.

The Group's acquisitions and growth ambitions have increased its global presence and internationalized the profile of its workforce. This, plus company reorganizations, highlighted the importance and necessity of offering equal opportunities to everyone, everywhere. Diversity & Inclusion efforts at all levels of the organization are therefore pivotal to create a common Schneider Electric identity. To achieve this ambition, the Group introduced a global Diversity & Inclusion policy in 2014 and in 2015 joined the United Nations Women HeForShe movement as an extension of its commitment with gender diversity.

To nurture an innovative workforce and understanding that all employees are considered "Talent", the Group encourages its people to take ownership of managing their performance and career development. The Talent aspiration of the Group gives managers an enhanced visibility to plan for longer-term career development and succession to critical roles in the organization, while accelerating the development of high potentials. Our culture of systematically reviewing talent at every level of the organization gives fair opportunity to everyone to progress and for the Group to benefit from a circulation of talents. At employee level, we want our people to take ownership for their development and growth at Schneider Electric and for this purpose, they have access to a talent management system and development opportunities.

At Schneider Electric, we are immersing our employees in a culture of learning from the moment they onboard the company. This is a culture where everybody learns constantly and builds new capabilities. Our objective is to cultivate people that are recognized as the best professionals in their industry. As a competitive advantage, our learning culture provides opportunities for everyone in the company to proactively further their personal development while leveraging high tech digital solutions to accelerate their time to knowledge in all places of the organization. As a result, employees understand that learning and teaching is everyone's responsibility.

The Schneider Electric workforce is recognized as a high performing global team that has fun at growing the business of the company and beating the competition. The Group nurtures an environment where employees are receiving ongoing feedback, recognition and coaching. Our culture is distinctive in its speed and agility and its powered by an effective and flatter organization. Our empowered leaders are supported by a strong 'Leadership Academy' and build skills to evaluate and differentiate fairly, strengthening the way we manage performance.

Schneider Electric believes that well-being generates performance and performance generates well-being. For this reason in 2015 it kicked off a company-wide well-being transformation with the ambition of building a company where our people make the most of their energy. Understanding that well-being is a joint responsibility between the Group, its leaders and employees, we have implemented targeted actions under a holistic view that addresses the physical, social, mental and emotional spheres. As a result, we create a safe, secure, healthy, productive and engaging work environment.

Having employee engagement at its heart, the Group has for the past few years regularly sought both blue and white-collar feedback through bi-annual company-wide employee engagement surveys. Listening to our employees and acting upon their feedback is a key pillar of our HR Strategy and actions.

These employee engagement efforts support employer branding initiatives; the Group's Employer Value Proposition (EVP) enables HR professionals and leaders to become talent scouts, building a 'talent mapping' capability and a proactive external pipeline. By actively reaching out to prospective employees through social media platforms and events for targeted groups, it has continued to gain accolades as an "Employer of Choice".

Work continues to be done in these and other areas so that HR is equipped to effectively deliver its employer value proposition and further support the Group in its future endeavours.

7.2 Industrial and environmental risks

Defective products or design flaws may cause bodily harm or property damage and subject us to product liability claims and other adverse effects

Despite its testing and quality procedures, the Group's products might not operate properly or might contain design faults or defects, which could give rise to disputes in respect of our liability as seller or manufacturer, notably in Europe, where liability related to defective products could lead to a loss of revenue, claims under warranty and legal proceedings. Such disputes could reduce demand for our products or harm our reputation for safety and quality. To prevent or limit these risks, Schneider Electric immediately recalls products if there are any doubts whatsoever that a product or one of its components is not 100% safe for people and/or equipment.

As in 2015, no broad product recall was begun in 2016.

Some of the expenses incurred by Schneider Electric in the context of product recalls are covered by the liability insurance program described in the "Insurance" section below.

Provisions for product risk totaled EUR452 million as of December 31, 2016 (see note 23 to the consolidated financial statements).

The Group's plants and products are subject to environmental laws and regulations

Our plants and products are subject to extensive and increasingly stringent environmental laws and regulations in all countries in which we operate.

To limit risks related to the environment, the Group is involved in a process to continuously improve the environmental performance of its plants and industrial activities, as well as in a review and follow up of possible environmental risks. In 1992, Schneider Electric issued a formal environmental policy. This policy is designed to improve production processes, promote eco-design, and integrate customer expectations into our environmental protection approach. This policy also aims to identify, assess and prevent environmental risks, in order to guarantee full compliance with all environmental laws and regulations applicable to the Group's businesses, particularly those in force in the European Union and considered as quite stringent (*e.g.,* those applicable to our Products, such as WEEE, RoHS and REACh Regulations). Regarding industrial activities, the Group decided to deploy ISO 9001, ISO 14001, OHSAS18001 management systems, globally. An Integrated Management System (IMS) is being deployed, bringing together these three management systems and this helping to drive efficiency and effectiveness. Moreover, already more than 90 sites have implemented an ISO 50001 Energy Management System. The Group records environmental provisions when the risks can be reliably measured, or it is likely that clean-up work will have to be performed and related costs can be reasonably estimated. Provisions for environmental risks related to the Group's sites, totaled EUR340 million as of December 31, 2016. If no risk has been identified in a given location, Schneider Electric will not estimate the financial cost of environmental risks. We expect our costs on environmental compliance programs to increase as a result of changes to existing environmental regulations and the introduction of new regulations.

There can be no guarantee that Schneider Electric will not be required to pay significant fines or compensation as a result of past, current or future breaches of environmental laws and regulations by companies that are currently or were previously members of the Group. This exposure exists even if the Group is not responsible for the breaches, in cases where they were committed in the past by companies or businesses that were not part of the Group at the time.

Schneider Electric may also be exposed to the risk of claims for breaches of environmental laws and regulations. Such claims could adversely affect Schneider Electric's financial position and reputation, despite the efforts and investments made to comply at all times with all applicable environmental laws and regulations as they change.

If Schneider Electric fails to conduct its operations in compliance with the applicable environmental laws and regulations, the judicial or regulatory authorities could require the Group to conduct investigations and/or implement costly clean-up measures to deal with the current or past contamination of current or former production facilities or off-site waste disposal facilities, and to scale back or temporarily or permanently close facilities in accordance with the applicable environmental laws and regulations.

Finally, the Group may be exposed to new risks related to recent acquisitions. In application of IFRS rules, these risks are assessed in the framework of the allocation of the purchase price, as specified in note 2 to the consolidated financial statements.

By way of illustration of the above statements:

On April 1 2016 Schneider Electric UK was prosecuted by the Environmental Agency in Basildon Magistrates Court and fined circa. EUR26 K in relation to an Environmental incident that occurred in 2013. The incident, which occurred on June 10, 2013 and the resultant prosecution are related to an uncontrolled release of 15.38 kg of Sulphur Hexafluoride gas (SF_6) that occurred during the installation of Gas Insulated Switchgear, on the London Gateway Project.

As part of a Pennsylvania settlement with the US Justice Department, EPA and the Department of Environmental Protection, Schneider Electric USA, as the current landowner, agreed to pay a USD 6,8 million penalty as a result of alleged failures between 2008 and 2012 in operating a groundwater pump "and treat" system installed at Rodale Manufacturing Superfund Site (Emmaus, Pa.) USA, resulting in uncontrolled emissions of air pollutants during clean-up operations at this site due to historical industrial pollutions since 1930. The facility was acquired by Square D Company in 1975, which was, in turn, acquired by Schneider Electric Group in 1991.

Schneider Electric USA addressed the problem in 2013 by replacing the groundwater treatment system, which, now performs to the satisfaction of the Environmental Protection Authorities.

7.3 Information systems risks

The Group operates, either directly or through service providers, a wide range of highly complex information systems, including servers, networks, applications and databases, on premise and in the cloud, that are essential to the efficiency of our sales and manufacturing processes. Failure of any of these hardware or software systems, a fulfilment failure by a service provider, human errors or computer viruses could adversely affect the quality of service offered by the Group.

The Group regularly examines alternative solutions to protect against this type of risk and has developed contingency plans, and incident response capabilities to mitigate the effects of any information system failure. Dedicated governance structures have been set up to manage relations with service providers responsible for outsourced IT systems operations.

Problems may also be encountered during the deployment of new applications or software. In particular, in the last few years, the Group has developed ERPs systems under SAP, which it started to roll out in 2008. This roll-out process has been carried out fully or partially in a number of countries since 2008, and is continuing in France, the United States and other countries.

In addition to the deployment of ERP systems, the Group is deploying various applications aimed at enhancing commercial, employee and supply chain efficiency.

In view of these projects' complexity, extensive functionalities and their worldwide deployment, the Group has set up dedicated governance and cost control structures to manage these issues and limit the related risks.

However, 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 or delays, they could have an adverse effect on inventory levels, service quality and, consequently, on our financial results.

7.4 Market risks

Interest rate risk

The Group is exposed to risks associated with the effect of changing interest rates in different countries. Interest rate risk on borrowings is managed at the Group level, based on consolidated debt and taking into consideration market conditions in order to optimize overall borrowing costs. Most bond debt is fixed rate. At December 31, 2016, 91% of the Group's gross debt was fixed rate.

Maturities of financial liabilities are presented in note 24.1 to the consolidated financial statements.

A 1% increase in interest rates would have a positive impact of around EUR22 million on the Group's net financial expense.

The financial instruments used to hedge the exposure of the Group to fluctuations in interest rates are described in note 26 to the consolidated financial statements for the year ended December 31, 2016.

Exposure to currency exchange risk

The Group's international operations expose it to the risk of fluctuation of exchange rates. If the Group is not able to hedge these risks, fluctuations in exchange rates between the euro and these currencies can have a significant impact on our results and distort year-on-year performance comparisons.

We manage our exposure to currency risk to reduce the sensitivity of earnings to changes in exchange rates through hedging programs relating to receivables, payables and cash flows, which are primarily hedged by means of forward purchases and sales.

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.

Schneider Electric's currency hedging policy is to protect our subsidiaries against risks on transactions denominated in a currency other than their functional currency. 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. The financial instruments used to hedge our exposure to fluctuations in exchange rates are described in note 26 to the consolidated financial statements for the year ended December 31, 2016 (Chapter 5).

In 2016, revenue in foreign currencies amounted to EUR19.3 billion, including around EUR6.6 billion in US dollars and 2.8 billion in Chinese yuan.

The main exposure of the Group in terms of currency exchange risk is related to the US dollar, the Chinese yuan and to currencies linked to the US dollar. 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 negligible impact on operating margin (a translation effect of minus EUR48 million on EBITA).

Equity risk

Exposure to equity risk primarily relates to treasury shares but remains limited. The Group does not use any financial instruments to hedge these positions.

An increase in raw material prices could have negative consequences

The Group is exposed to fluctuations in energy and raw material prices, in particular steel, copper, aluminum, silver, lead, nickel, zinc and plastics. If we are not able to hedge, compensate for or pass on to customers any such increased costs, this could have an adverse impact on our financial results.

The Group has, however, implemented certain procedures to limit exposure to rising non-ferrous and precious raw material prices. The purchasing departments of the operating units report their purchasing forecasts to the Corporate Finance and Treasury Department. Purchase commitments are hedged using forward contracts, swaps and, to a lesser extent, options.

The financial instruments used to hedge our exposure to fluctuations in raw material prices are described in note 26 to the consolidated financial statements for the year ended December 31, 2016.

In 2016, purchases of raw materials totaled around EUR1.6 billion, including around EUR700 million for non-ferrous and precious metals, of which roughly 43% was for copper. The Group enters into swap and options agreements intended to hedge all or part of its non-ferrous and precious metals purchases in order to limit the impact of price volatility of these raw materials on our results. At December 31, 2016, the Group had hedged positions with a nominal value of EUR159 million on these transactions.

Counterparty risk

Financial transactions are entered into with carefully selected counterparties. 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 to limit the risk of losses on trade accounts receivable.

Liquidity risk

Liquidity is provided by the Group's cash and cash equivalents and undrawn confirmed lines of credit. As of December 31, 2016, the Group had access to cash and cash equivalents totaling EUR2.8 billion. As of December 31, 2016, the Group had EUR2.7 billion in undrawn confirmed lines of credit, of which EUR2.6 billion matures after December 2017.

The Group's credit rating enables it to raise significant long-term financing and attract a diverse investor base. The Group currently has an A- credit rating from Standard & Poor's and an A3 credit rating (under negative outlook) from Moody's. The Group's liabilities and their terms and conditions are described in note 24 of Chapter 5.

In line with the Group's overall policy of conservatively managing liquidity risk and protecting our financial position, when negotiating new liquidity facilities the Group avoids the inclusion of clauses that would have the effect of restricting the availability of credit lines, such as covenants requiring compliance with certain financial ratios. As of December 31, 2016, Schneider Electric SE had no financing or confirmed lines of credit that were subject to covenants requiring compliance with financial ratios.

The loan agreements or lines of credit for some of our liquidity facilities include cross-default clauses. If we were to default on any of our liquidity facilities, beyond a threshold we could be required to repay the sums due on some of these facilities.

Moreover, anticipated reimbursement provisions exist for certain financing and lines of credit in case of change of control. Under these provisions, the debt holders may demand repayment if a shareholder or shareholders acting together hold more than 50% of the company's shares, and for the majority of contracts, this event triggers a downgrading of the company's rating. As of December 31, 2016, EUR4.9 billion of the Group's financing and lines of credit had these types of provisions.

7.5 Legal risks

Our products are subject to varying national and international standards and regulations

Our products, which are sold in national markets worldwide, are subject to regulations in each of those markets, as well as to various supranational regulations (sales restrictions, customs tariffs, tax laws, security standards, etc.). Changes to any of these regulations or standards or their applicability to the Group's business could lead to lower sales or increased operating costs, which would result in lower earnings and profitability.

Our products are also subject to multiple quality and safety controls and regulations, and are governed by both national and supranational standards. The majority of our products comply with world-recognized International Electrotechnical Commission (IEC) standards as well as with the applicable rules in the European Union, and in particular the REACH and RoHS rules. Any necessary capital investments or costs of specific measures for compliance with new or more stringent standards and regulations could have a negative impact on Group operations.

In addition, in the majority of the markets on which its products are sold, Schneider Electric is subject to national and supranational regulations governing competition. If the Group is implicated in these areas, this could have a significant impact on the Group's businesses, results and financial position. However, to mitigate these risks, the Group completed its *Principles of Responsibility* by implementing a global competition law policy that has been widely rolled out within the Group, together with a training program set up by the Legal Affairs Department.

Risks related to products sold

In addition, in case of malfunction or failure of one of its products, systems or solutions, Schneider Electric could incur liability arising from any resulting tangible or intangible damages, or personal injury. Similarly, the Group could incur liability based on errors in the design of a product, system or solution or because of a malfunction related to the interface with other products or systems. The failure of a product, system or solution may involve costs related to the product recall, result in new development expenditures, and consume technical and economic resources. Such costs could have a significant impact on the profitability and cash and cash equivalents of the Group. The business reputation of Schneider Electric could also be negatively impacted.

To prevent these risks, Schneider Electric has implemented quality procedures at the level of design, development and production of its products, systems and solutions. In case of product returns, the type and source of the failures are analyzed and corrective actions are implemented. The Group has also put in place insurance coverage to cover its civil liability and the risk of product recalls (see section 1.7 Risk factors on Insurance policy).

The development and success of the Group's products depends on its ability to protect its intellectual property rights

The future success of Schneider Electric depends to a significant extent on the development and protection of patents, knowledge and trademarks ("intellectual property rights"). Third parties may also infringe its intellectual property rights, and the Group may have to expend significant resources monitoring, protecting and enforcing its rights. If we fail to protect or enforce our intellectual property rights, our competitive position could suffer, which could have a material adverse effect on our business. In addition, the unauthorized use of intellectual property rights remains difficult to control, particularly in foreign countries, whose laws do not always effectively ensure the protection of these rights. They could be counterfeited or used without the consent of Schneider Electric, which could have a material adverse effect on our reputation and operating profit.

To mitigate this risk, the patents developed or purchased by the Group are tracked by the Industrial Property team within the Finance and Control - Legal Affairs Department. All intellectual property queries are centralized and managed by this team for the whole Group, and in coordination with the other Finance - Control - Legal Affairs Departments, which ensure that the Group's interests are defended throughout the world. The same approach and organization applies for the Group's brands portfolio.

7.6 Disputes

Following public offers launched in 1993 by SPEP (the holding company of the Group at the time) for its Belgian subsidiaries Cofibel and Cofimines, proceedings were initiated against former Schneider Electric executives in connection with the former Empain-Schneider Group's management of its Belgian subsidiaries, notably the Tramico sub-group. At the end of March 2006, a criminal court in Brussels, Belgium, ruled that some of those executives were responsible for certain of the alleged offenses and that some of the plaintiffs' claims were admissible. It also held that Schneider Electric and its Belgian subsidiaries Cofibel and Cofimines were civilly liable for the actions of those executives who were found liable. The plaintiffs claimed damages representing losses of EUR5.3 million stemming from alleged management decisions that reduced the value of or undervalued assets presented in the prospectus used in conjunction with the offering, as well as losses of EUR4.9 million in relation to transactions carried out by PB Finance, a company in which Cofibel and Cofimines then held minority interests. In its ruling, the court also appointed an expert to assess the loss suffered by those plaintiffs whose claims were ruled admissible. The expert's report was submitted in 2008. The defendants and the companies held civilly liable contest the amounts provided by the expert in their entirety on the basis of a counter-analysis drawn up by Deloitte. Schneider Electric is paying the legal expenses not covered by the insurance of the former executives involved. A settlement

agreement was signed with a group of plaintiffs and some of the remaining plaintiffs have appealed (i) parts of the March 2006 ruling and (ii) a ruling made in 2011 by the Court of First Instance denying the admissibility of some of the plaintiffs' claims. Pleadings were held in September 2016 and a decision is expected in March 2017.

In connection with the disposal of Spie Batignolles, Schneider Electric booked provisions to cover the risks associated with certain major contracts and projects. Most of the risks were closed during 1997. Provisions were booked for the remaining risks, based on management's best estimate of the potential financial impact. One of the main issues was concerning a litigation in France with SNCF before the administrative court. However, the Group has been discussing the issue with SNCF and the dispute has been settled amicably in 2016 at no cost for Schneider Electric beyond its own legal costs.

Subsequent to the January 24, 2007 *decision made by the EU Commission with regard to the GIS matter in the high voltage sector*, on May 21, 2010, the British company Power Networks (LPN – formerly EDF Energy UK) launched a claim against the companies, involved in this GIS case including Schneider Electric, for damages of GBP15 million in the High Court in London, England. Since there were no significant judicial developments in 2015, the defendants (including Schneider Electric SE) held discussions with LPN and the dispute was settled amicably in 2016 at no cost for Schneider Electric beyond its own legal costs.

In addition, some Group entities worldwide, including in Brazil and Pakistan, are directly or indirectly cited in anti-trust proceedings without, however, any proven or serious risk of conviction in this regard having been identified to date.

Schneider Electric was also among 2,000 companies worldwide that were mentioned in the Volcker report on the Oil for Food program published by the UN in October 2005. Schneider Electric Industries SAS was investigated by the French judiciary in 2010 in relation to this report, which stated that the Group had entered into agreements with the Iraqi government between 2000 and 2004 under which surcharge payments totaling approximately USD450,000 are alleged to have been made to the Iraqi government. In May 2013, in accordance with the indictment of the Public Prosecutor's Department, the judge referred Schneider Electric Industries SAS and 13 other French companies to the criminal court, which rendered its decision on June 16 2015, discharging all the companies. However, the Bench appealed this decision, which is currently scheduled to be judged by the Appeal Court of Paris by end-January 2018.

Various other claims, administrative notices and legal proceedings have been filed against the Group concerning such issues as contractual demands, counterfeiting, risk of bodily harm linked to asbestos in certain older products and work contracts.

Although it is impossible to predict the results and/or costs of these proceedings with certainty, Schneider Electric considers that they will not, by their nature, have significant effects on the Group's business, assets, financial position or profitability. The company is not aware of any other governmental, court or arbitration proceedings, which are pending or which threaten the company, that are liable to have or, during the last 12 months have had, a material effect on the financial position or profitability of the company and/or the Group.

7.7 Insurance policy

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.

This strategy entails:

- identifying and analyzing the impact of the main risks;
- preventing risks and protecting industrial equipment; definition of protection standards for sites (including when those are managed by third parties) against the risk of fire and malicious intent, audits of the main sites by an independent loss prevention company, roll-out of a self-assessment questionnaire for the other Group sites;
- drawing up of business continuity plans, in particular for the Group main sites and critical suppliers;
- roll-out of crisis management tools by the Group's Security Department;
- carrying out hazard and vulnerability studies and safety management for people and equipment;
- implementing global insurance programs negotiated at the Group level for all subsidiaries with insurers meeting the criteria for financial position recognized by insurance and reinsurance players;
- optimization of financing for frequent, low amplitude risks through retentions managed either directly (deductibles) or through captive insurance companies.

Liability insurance

The insurance program put in place on January 1, 2015 for 3 years was continued in 2016. This program, deployed in more than 70 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 aeronautic, nuclear and environmental risk, are covered by specific insurance programs.

Property damage and business interruption insurance

A new 3 year insurance program was put in place as of July 1, 2016 with the same insurer. This is an "all risks except" 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. The global limit of indemnity has been increased to EUR500 million per event. The applicable sub-limits for natural disasters have been increased as well.

Assets are insured at replacement value.

Transport insurance

The insurance program that covers all risks of loss or damage to goods while in transit, including intragroup shipments, renewed on January 1, 2014, was continued in 2016.

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 2016.

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 frequent, low-amplitude risks through 2 captive insurance companies:

- a captive company based in Luxembourg provides property damage reinsurance worldwide capped at EUR5 million per year, and liability reinsurance outside the USA and Canada capped at EUR17 million per year;
- for the entities located in the USA and Canada, a captive insurance company based in Vermont (USA) is used to standardize deductibles for civil 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 provisions 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, totalled around EUR24,6 million in 2016.