

Inspiration

2016 ANNUAL AND
SUSTAINABLE DEVELOPMENT REPORT

INNOVATIVE
EXPERIENCE

LEADERSHIP
EXPERIENCE

USER
EXPERIENCE

COLLABORATIVE
EXPERIENCE



Smart city



e-efficient buildings



Energies



Industry services

SPIE, sharing a vision for the future





GLOBAL EXPERIENCE

Inspired by its contribution to the Dutch Windwheel in Rotterdam, SPIE has chosen to connect the real world to the virtual world, simply, efficiently and transparently. The result is a holistic experience, on the outer boundaries of technological innovation and emerging science.

Based on a bioclimatic architectural design, the building no longer serves just as shelter, but instead communicates with its occupants, adjusts to its surroundings and participates in its changing activities, so as to form an organic whole.

Users are no longer defined by where they are, what they do or what they are a part of. They organize their activities as they see fit, interact with each other regardless of location, and live and work in a virtualized environment.

The building infrastructure is equipped with multiple intelligent sensors, connected to digital platforms and big data applications, in order to perform complex tasks and proactively manage issues without any human input.

When completed in 2025, the Dutch Windwheel in the port of Rotterdam will offer the vision of two gigantic, 174-metre high glass and steel rings seemingly floating on the sea.

SPIE is proud to be contributing to this ambitious experiment, based on an overarching commitment to preserving the environment.

Find out more: page 49

We are living in an era that encourages intensive, open innovation and experiment. At SPIE, this is inspiring us to reinvent the world of services.



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Transforming technological and digital breakthroughs into drivers of innovation in every aspect of a customer's business.

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Fostering a shared dynamic in which everyone can act as a change agent in the company.

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**INNOVATIVE
EXPERIENCE**

WITH SPIE, WE'RE OPTIMIZING THE PRODUCTION CHAIN.

SIEMENS

ULRICH SEMSEK
KREFELD PLANT
MANAGER



Germany



In Germany, Siemens has entrusted SPIE with the maintenance of its entire Krefeld plant, which manufactures regional and high-speed trains. A collaboration aimed at optimizing the plant's production Facilities, in a space hosting some 2,500 employees.

Ulrich Semsek shows us the high-speed trains that have made the brand so famous. "On the right, you can see a Eurostar train, which will travel between France and the United Kingdom; on the left, you can see one of the new-generation ICE trains for Deutsche Bahn, which we have just started producing here." It's an impressive assembly line, where each stage of production is meticulously controlled. When asked what he expects from SPIE, his immediate response is to say that producing three to four coaches per day requires flawless maintenance. Thorough knowledge of the systems and machines is also a prerequisite.

"It's easy to work with SPIE because the company has been by our side for several years already," he explains. And then there's the ability to adapt to new requirements. "You can be sure that the job will be finished on time and on budget," he says with satisfaction. That's because beyond technical expertise, Siemens wants to ensure that its operations are managed responsibly, in line with its productivity objectives. "We've drawn up a plan that describes each different response procedure, and SPIE knows it by heart, down to the last detail." And last but not least, there's the advantage of being supported by a company focused on innovative solutions, such as finding ways to reduce noise levels. "It's always a good idea to work with a global partner," he concludes at the end of the tour.

Watch the
interview.



CNES

VÉRONIQUE GRÉGOIRE
DEPARTMENT MANAGER,
MAINTENANCE AND
OPERATIONS



France



WITH SPIE,
WE'RE TAKING CARE
OF THE SPACE
CENTRE.

Watch the
interview.



The Toulouse Space Centre has been tasked with a wide range of missions, from reviewing space projects to providing operational and technical support. To carry them out, it relies on SPIE to manage Facilities in its 55 buildings, covering around 110,000 sq.m.

When SPIE's contract was renewed in late 2015, Véronique Grégoire was very pleased, because she needed some clearly defined services. "We have electrical, mechanical and air conditioning systems that require advanced skills to keep them running smoothly. And we need people who are knowledgeable about all kinds of Facilities, to improve their operation. And lastly, there's compliance, which has to be regularly monitored." For the CNES, these services are mission-critical, in that they support programmes where the slightest failure of the electrical or air-conditioning systems could be disastrous, as Véronique notes in a compelling example: "When sending a probe into space, a loss of power could prevent it from communicating with the space system." This means that SPIE has to be ready for any eventuality, with teams assigned on-site during launch campaigns. More broadly, Véronique Grégoire is responsible for improving the energy efficiency of the Centre's Facilities, which is another of SPIE's commitments. The contract therefore includes an incentive clause, with performance the subject of regular discussions, meetings and reviews. "We're moving forward together," she says, emphasizing the importance of good communication.



**INNOVATIVE
EXPERIENCE**

WITH SPIE,
WE'RE
STEPPING UP
THE DIGITAL
TRANSITION.

STREGO

GILLES LECLERC
CHIEF INFORMATION
OFFICER



France

Based in Paris and western France, Strego is a diversified consultancy that assists its 19,000 clients in managing their businesses with accounting, tax and legal advice, asset management services, financing and insurance consultancy, and information systems deployment.

Swept up in the digital revolution and the spread of the gig economy, people sometimes find it hard to understand the digital transition, but companies are already having to address critical issues for the future. "The question we're all asking ourselves," explains Gilles Leclerc, "is whether or not I'm threatened by a change that I can't control. For Strego, as well as for our clients, there's just no way we can take the risk of having any kind of disruption." That's exactly the challenge that Strego wanted to meet when it called on SPIE,

which, according to Gilles Leclerc, knows how to think outside the box. "SPIE is supporting us in this process, because we believe very strongly in the ability of Cloud solutions to deliver new services." In addition to secure, highly reliable infrastructure, the Group is cooperating with Strego on its product catalogue and developing leading-edge services for connected customers. More than just deploying new technologies, Strego intends to focus sharply on its core business. "SPIE provides reassurance on the technical side and saves us time," says Leclerc. Because developing applications is not an end in itself. "The main thing is to integrate the technologies and revise the business models and organizations, as well the impact of change on people." Digital time flies by, so there's not a minute to lose.

Watch the
interview.





NORTH LANARKSHIRE
COUNCIL

EMMA WALKER
MANAGING DIRECTOR
OF NL LEISURE



United Kingdom

WITH SPIE,
WE'RE IMPROVING
OUR PUBLIC
SERVICES.

Watch the
interview.



The Broadwood Stadium is a multi-use 8,000-seat venue owned by the North Lanarkshire Council in Cumbernauld, near Glasgow, Scotland. SPIE was chosen to upgrade the stadium's video surveillance, fire alarm and intrusion prevention systems, which are now interconnected via a single, high-performance network.

Previously in charge of closed-circuit television (CCTV) operations for North Lanarkshire's public spaces, where she gained extensive experience in deploying large scale, multi-use, wireless networks, Emma Walker is now head of North Lanarkshire Leisure, the organization responsible for the management and operation of all of the sports and leisure Facilities in the county, which includes the 8,000 capacity Broadwood Stadium. In her opinion, the most difficult part of the project awarded to SPIE was having to rethink the whole system.

"You can actually use the network for more than one purpose," she explains. "So for me it's not just about public space CCTV. It's what else we can use that network for. And that's where we need to be creative."

SPIE made an initial commitment to develop a network that's flexible, resistant and reliable. "To meet the required standards, it's critical that the CCTV and the fire and intruder alarms are all linked throughout the stadium," she notes. The upgrade draws on an innovative design, based on a lengthy assessment of the technical specifications.

Another challenge is to meet Scotland's strict, municipal budgetary constraints. "That's why we really have to work hand in hand with the contractor," she explains. In the end, she expects to meet this challenge with the help of SPIE. "We'll be able to trial, test and pilot new solutions, without it being too cost- or labour-intensive," she says with conviction.



**INNOVATIVE
EXPERIENCE**

WITH SPIE, WE'RE PROMOTING THE CIRCULAR ECONOMY.

VENLO

MICHEL WEIJERS
PROJECT MANAGER



Netherlands

One of the largest cities in the Dutch province of Limburg, Venlo is famous not only for its logistics, agriculture and food industry, but now also for being the global capital of infinite recyclability, or cradle-to-cradle (C2C).

When the city Council decided to build a new town hall, Michel Weijers and his team immediately imagined a building that would be a shining example of the application of C2C principles. "Not only is the building made from recyclable materials and able to produce its own energy, it also creates added value for its surroundings," he says. The result is striking. "Thanks to the green walls, the trees and the greenhouse, but also the water storage system inside the greenhouse, we clean the air and add extra moisture and oxygen to it before it enters the building."

Other innovative features, such as the natural climate control system that uses air heated by the sun, contribute to the building's unique atmosphere. And let's not forget the solar chimney, which evacuates air from the building once it's saturated with CO₂. "The termites in Africa do exactly the same thing," he adds with a SMILE. Today, Michel can be proud that the city hall has received such a warm reception from Venlo's residents. As the company in charge of all the installations, "SPIE did a great job," he says. His only regret is that a company so steeped in innovation wasn't associated with the project from the outset, at the design stage. "Next time, we'll integrate the subcontractors into the process earlier on," he says.

Watch the
interview.



WITH SPIE, WE'RE SUPPORTING URBAN MOBILITY.



COMMUNITHINGS
ETAY OREN
CEO COMMUNITHINGS
S.A.



Belgium

Focused on providing smart parking services for cities and businesses, CommuniThings develops cutting-edge solutions for on-street and off-street parking. A service that is growing rapidly in Smart Cities, and which the start-up is rolling out in Mons, Belgium with the help of SPIE.

CommuniThings and SPIE, two companies with highly complementary capabilities, are teaming up in a common objective to boost local business in Mons while also reducing air pollution. It is estimated that 30% of urban traffic congestion is caused by drivers looking for a parking space.

"As a software provider, says Etay Oren, we develop solutions that can handle all types of sensors, which enables us to deliver end-to-end systems adapted to different situations. These include shop-and-go zones near local stores, residential car parks, disabled parking and delivery zones."

SPIE provides its expertise in traffic management systems. "SPIE's role is to install our solution and get it up and running on time, during both installation and maintenance operations."

This unique partnership illustrates how quickly the Smart city market is evolving. For Etay, "not only is the project innovative in terms of the services offered, it's also pioneering in its approach." The two companies intend to strengthen their cooperation in the future by leveraging their respective strengths.

Pascal Lafosse, Alderman in charge of mobility, city of Mons, Belgium.

"We want to develop our municipal mobility policy by making it possible to "smart park" everywhere within the city limits. Today, the city centre high streets already have 110 spaces with embedded sensors that detect the presence of a vehicle and how long it stays parked.

Once parked, drivers have 30 free minutes to go shopping. They can also download the Achat Minute Mons application to see which spaces are available and, once parked, how much time they have left. Thanks to the 110 Achat Minute spaces, total rotations per space have risen from 2.6 to more than 10 vehicles a day."

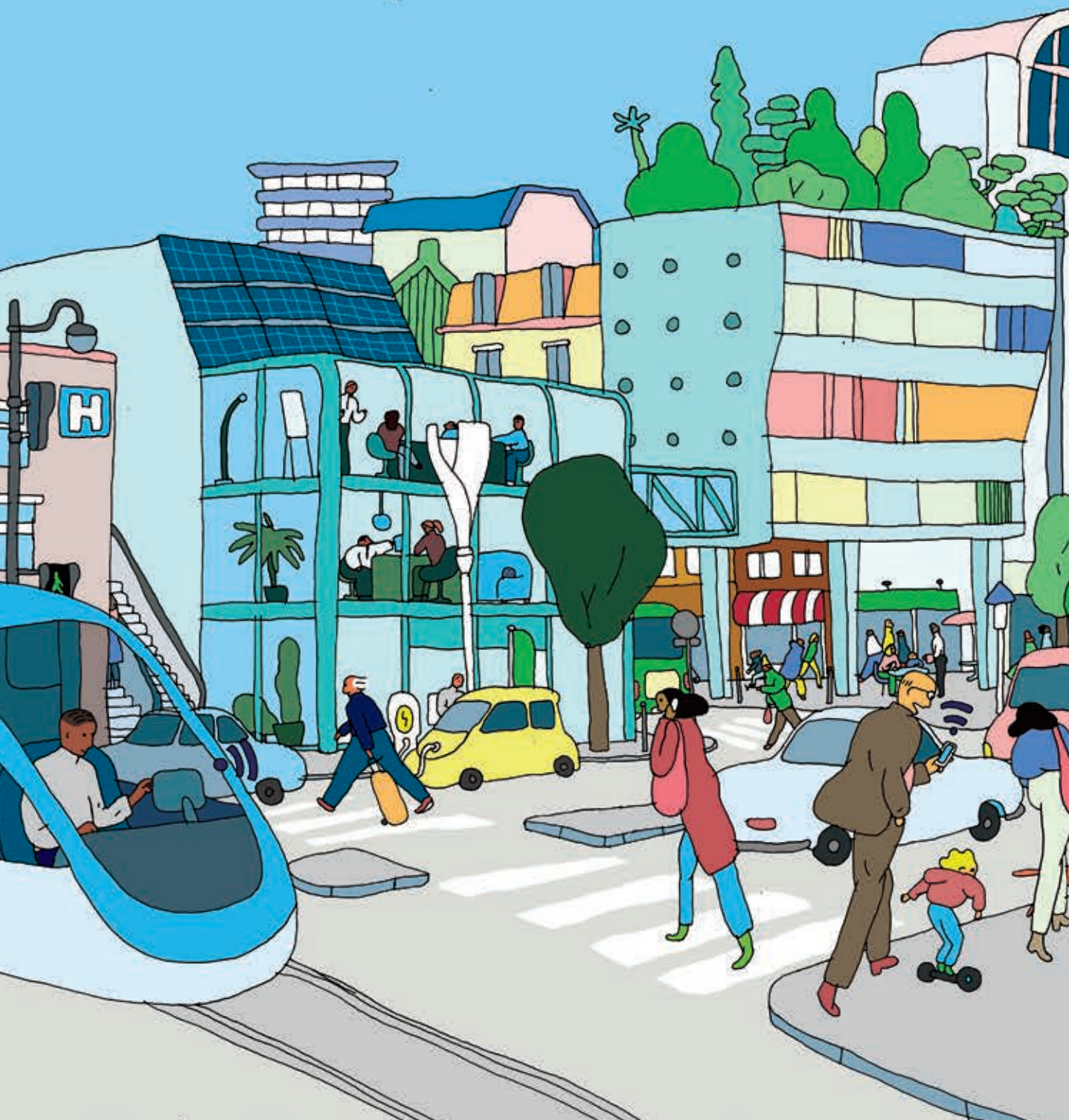


Watch the
interview.

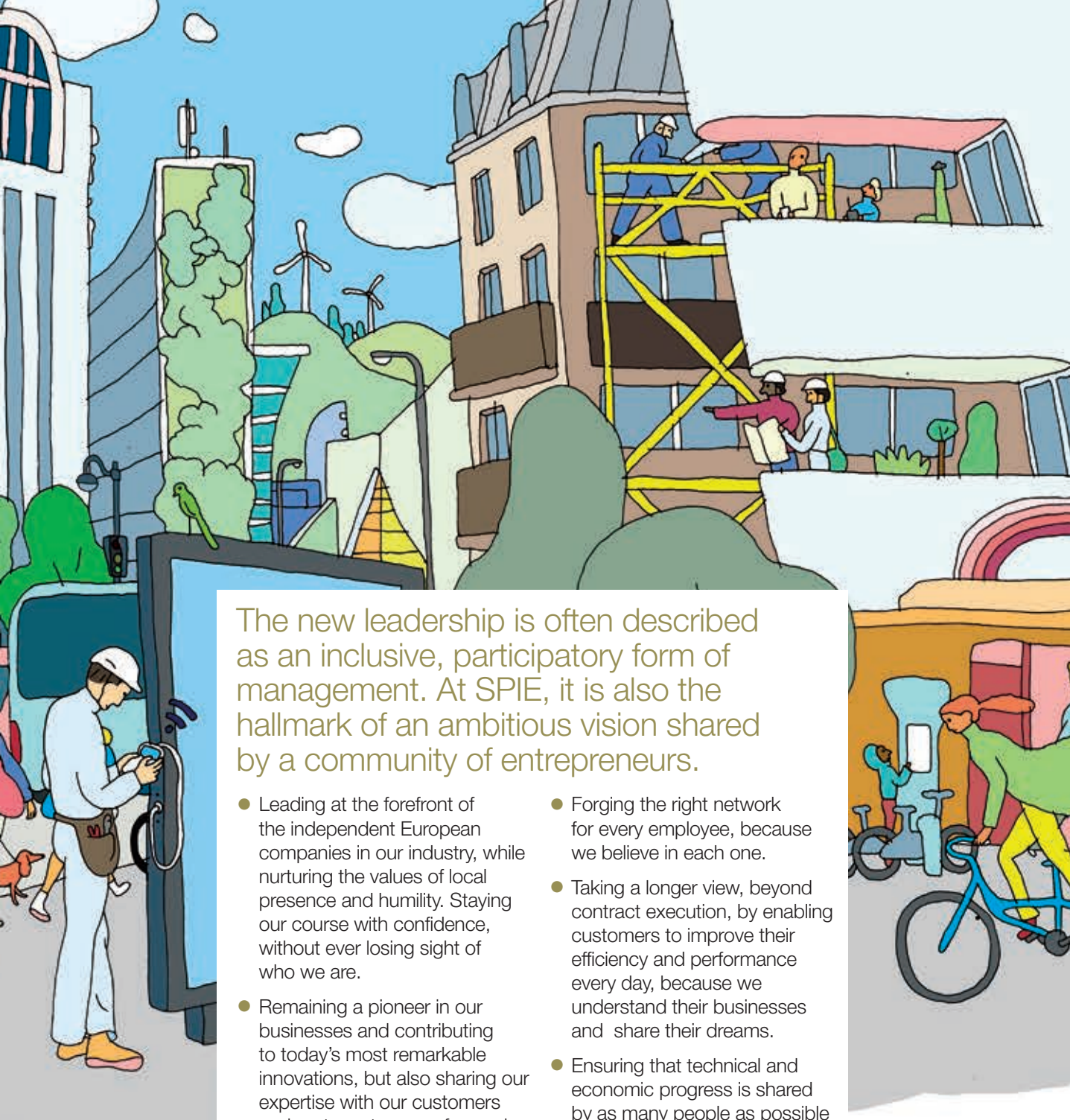


Watch the
interview.





LEADERSHIP EXPERIENCE



The new leadership is often described as an inclusive, participatory form of management. At SPIE, it is also the hallmark of an ambitious vision shared by a community of entrepreneurs.

- Leading at the forefront of the independent European companies in our industry, while nurturing the values of local presence and humility. Staying our course with confidence, without ever losing sight of who we are.
- Remaining a pioneer in our businesses and contributing to today's most remarkable innovations, but also sharing our expertise with our customers and partners to move forward together.
- Recognizing the talent of all our employees, in every job, to enable them to grow with the company.
- Forging the right network for every employee, because we believe in each one.
- Taking a longer view, beyond contract execution, by enabling customers to improve their efficiency and performance every day, because we understand their businesses and share their dreams.
- Ensuring that technical and economic progress is shared by as many people as possible in a Europe where the need for mutual support and the sharing of cultures has never been greater.



LEADERSHIP
EXPERIENCE

ONE SPIE

SPIE is the independent European leader in multi-technical services in the areas of energy and communications.



Watch the Corporate video.

ONE COMPANY

As the leading independent group in Europe in its industry, SPIE has been built on a bedrock of shared values: proximity, ethical and professional responsibility, and high standards for performance and technical excellence. Enriched by its diversity that encompasses some one hundred

nationalities, SPIE represents a community of entrepreneurs united by a strong Corporate identity. Its employees thus share the same culture, exercise the same professions and meet the same challenges, particularly that of safety.

ONE VISION

Customers are our core strategic concern. By their side, SPIE implements innovative, global and integrated solutions for the entire life cycle of their operations. These solutions benefit from local expertise adapted to its environment and from inter subsidiary

pooling of skills in order to access the best services. Customers are thus assured of aligned high quality offerings throughout Europe that meet their needs for global performance, a consistent approach and long-term support.

ONE MISSION

Thanks to its presence in all sectors of the economy, SPIE fully contributes to the transition to a post-carbon society. Its services are centred on technical, financial and environmental optimization and cover energy efficiency, energy production and distribution, the deployment of new

technologies and ICT services and the sustainable improvement of infrastructure. SPIE is a recognized player in urban and regional transformation, with solutions that support the emergence of smart cities and the transition to new growth models.

2016
REVENUE
in € billions
5.1

2016
EBITA
in € millions
352

close to **600** SITES
38 countries



25,000
i customers

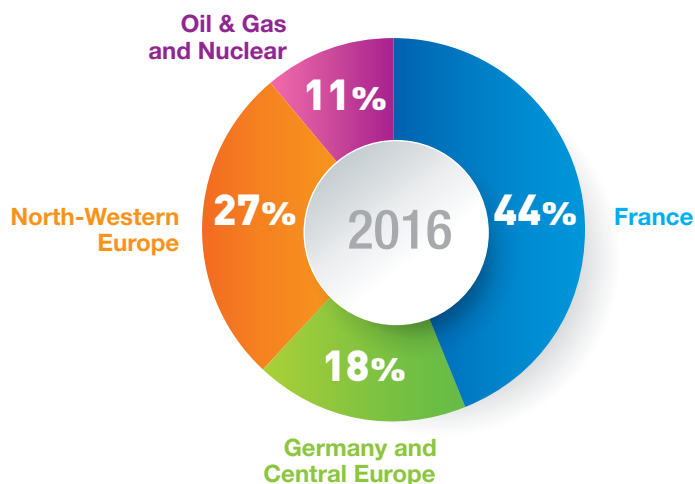
WORKFORCE

AT 31 DECEMBER 2016

i 37,626 employees representing
120 nationalities

91% in Europe / **4%** in Africa / **2%** in Asia / **3%** in the Middle East

REVENUE
BY REPORTING SEGMENT

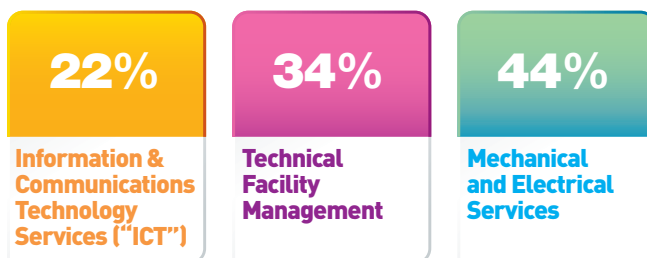


European advertising campaign
on SPIE's 2016 results



Read the press
release about our
2016 results.

3 FIELDS OF EXCELLENCE



4 MARKETS

Contribute to a sustainable model of urban and regional development

- Smart public lighting
- Connectivity and telecommunications
- Video protection
- Transport and mobility
- Educational and healthcare infrastructure
- Public services equipment
- Water and waste treatment



Optimize long-term building performance

- High energy performance electrical and HVAC systems
- Information and communication systems
- Control and safety systems
- Energy multi-technical services

Facilitate the energy transition around the world

- Oil and gas extraction and production
- Nuclear cycle and energy production
- Thermal and renewable Energies
- Power transmission and distribution networks



Support the development of each industrial sector

- Local engineering
- Mechanical and electrical installations
- Instrumentation, automation and production management systems
- Optimization of energy consumption in industrial processes

PROVIDING SUPPORT THROUGHOUT THE BUSINESS LIFE CYCLE



TRANSFORMING QUALITY OF LIFE

In driving convergence between new technologies and digitized services, SPIE is constantly innovating to improve our quality of life. Here are some of the most visible indications of this commitment.

Digital strategy

SPIE's digital strategy is being deployed by instilling a digital culture across the entire organization, integrating more and more digital technology into every internal process and supporting customers in an increasingly digital world. Our digital organization is based on a collaborative community built around a network composed of a central Digital Core Team, a digital expert in each subsidiary and 12 Digital Project Owners in charge of leading cross-functional projects.



IoT

As a partner to the INSA Lyon Foundation, **SPIE was the first services provider in France to endow a teaching and research chair dedicated to the Internet of Things (IoT).** Combining international research with industrial innovation, this open ecosystem will help to bring innovative new applications to market.



Creation of an
endowed IoT chair.
Read the press
release.

Industry 4.0

In such leading-edge industries as aerospace and pharmaceuticals, **SPIE's solutions are helping to upgrade installations and processes,** from collaborative robots to augmented reality and predictive maintenance services.



BIM

To model technical data in 3D, **SPIE plans to deploy next-generation building information modelling (BIM) tools** that will revolutionize the way buildings and their infrastructure are designed, built and maintained over time.

Electric Mobility



ORIOS ID Charge.
Watch the video.



Working with regional development stakeholders, car manufacturers and private operators, SPIE is deploying electric vehicle charging points on a design-build-operate basis. In France, nearly 7,000 points are already up and running and another 3,600 are being

installed. With its ORIOS solution, SPIE manages all the related services, from charging point design, installation and remote supervision to user support with online booking, electronic payment and hot-line services.

Energy efficiency

SPIE's energy efficiency solutions cover the planning, installation and long-term operation of new technologies. Focused on reducing carbon emissions and lowering costs, these solutions have been recognized as being some of the most efficient on the market. In 2016, for example, SPIE was awarded first prize in the German cooling technology competition.



ICT SERVICES

With the spread of Open Data, Analytics, big data, Machine learning and other emerging technologies, ICT services are changing dramatically. To support the shift from reactive to predictive information system management, for example, SPIE provides customers with Cloud-based analytical tools that can generate reports and alerts on demand, based on the collection and compiling of huge amounts of data, such as connection logs, application flows and security events.

SMART FM

Facility Management (FM) services for commercial and industrial buildings are increasingly backed by powerful digital systems that enable customers to track ongoing actions, simply and transparently, with full traceability and detailed performance indicators. Thanks to such features as building scans, real-time diagnostics and help desks to access additional expertise, building operators will manage their property assets more efficiently.



A NEW PHASE OF GROWTH

GAUTHIER LOUETTE
CHAIRMAN AND CHIEF
EXECUTIVE OFFICER, SPIE

SPIE's acquisition* of SAG
has opened up major opportunities
for expansion in Germany and
central Europe.

*Acquisition closed on 31 March 2017



“Today, our geographic footprint in Europe is the industry’s largest and operations outside France will now account for around two-thirds of our revenue.”

THE AGREEMENT LATE LAST YEAR TO ACQUIRE SAG CREATED QUITE A STIR. WHAT DOES THE TRANSACTION MEAN?

It's really great news for SPIE! SAG is the German leader in the fast-growing energy infrastructure services market, where it enjoys a very good reputation. With its 8,000 employees and €1.3 billion in 2016 revenue, the new subsidiary will give us a much bigger footprint in Germany, where we already had a very solid position and where we will now be market leaders, both in Germany and in Eastern Europe. This is a key step towards fulfilling our European ambition of becoming a major driver of consolidation in the multi-technical services industry.

In terms of business operations, SAG's capabilities also offer promising prospects for the future. As part of the Energiewende program, which is phasing out all of the country's nuclear power plants by 2022, Germany has undertaken a major restructuring of its power grid, to increase feed-in from renewables. The program is also designed to improve the European grid's coverage, in particular by using the smart control services that we are already installing in several neighbouring countries.

TAKING A WIDER VIEW, HOW DO YOU FEEL ABOUT SPIE'S EXPANSION?

Our Group has made considerable progress in Europe in recent years. Today, our geographic footprint in the region is the industry's largest and operations outside France will now account for around two-thirds of our revenue. Our performance is being supported by the continent's leading economies, starting with Germany and the Netherlands.

Important milestones have been reached in France as well, in a persistently difficult economic environment. In one exciting development, two new national units, SPIE Facilities and SPIE CityNetworks, began operating on January 1.

With SPIE ICS and our network of regional subsidiaries, they will improve our ability to address customer expectations with more effective bids, optimized processes and enhanced innovation capabilities.

2016 was also a very active year on the acquisitions front, with 10 mid-market companies acquired in such areas as ICT and multi-technical services in Germany, Belgium, France, the United Kingdom and the Netherlands. Continuously expanding our portfolio of services and getting closer to the customer are two cornerstones of our business model, as well as two important drivers of growth.

WHAT ARE SOME OF THE HIGHLIGHTS OF YOUR PERFORMANCE DURING THE YEAR?

With a 2.3% increase in consolidated revenue (excluding oil & gas) to €5.1 billion and a 15-basis point improvement in EBITA margin, 2016 was another year of EBITA growth, excellent cash conversion and sustained acquisitions. In fact, the purchase last September of Agis Fire & Security in Poland marked our 100th acquisition completed since 2006. Our business model once again demonstrated its robustness, with further margin gains in our four business segments and an excellent cash conversion ratio of 122%.

SPIE IS ALSO ACTIVE IN ENERGY SERVICES. HOW DID YOU DO IN THIS MARKET?

In 2016, SPIE suffered from the contraction in the oil market during the year.

Our international teams did everything possible to reduce our dependence on the upstream and diversify our industrial business, which helped to cushion the impact. We're going to continue redeploying downstream, mainly in the Gulf countries, while preparing to seize the opportunities that will arise as supply and demand move back into balance.

We made very satisfactory headway in the nuclear segment, led by EDF's Grand Carénage refit programme and the final phases of the Flamanville EPR project. We won several large contracts and are participating in some of the market's biggest developments, as seen in the start-up of the first Cluster dedicated to the digitized maintenance of nuclear installations. We also continued to expand in green Energies, particularly in the wind farm projects being carried out around the North Sea.

HOW IS SPIE MEETING THE DIGITAL CHALLENGE?

In an increasingly digital world, SPIE has undertaken its own digital transformation. This is driving fast change not only in our processes, but also in our solutions and jobs. We're working more collaboratively, experimenting with new platforms and bringing together our customers and partners in communities of expertise. This is a major change being led by our teams, with the goal of embedding digital innovation deep in our services and nurturing a more collaborative culture. A wide range of cross-subsidiary projects are under way, as well as new pilot programmes in social media and e-learning.



Note as well that in 2016, SPIE ICS was the first services provider to set up, at the INSA engineering school in Lyon, a teaching and research chair on the Internet of Things. We are also forging a large number of partnerships with start-ups, for example, in home automation applications, drone services and predictive maintenance.

TO CONCLUDE, WHAT ARE YOUR HOPES FOR SPIE IN 2017?

More than anything, I hope that people will pay careful attention to their safety and to the safety of others. We got back on the road to improvement last year, but we still have a long way to go before becoming accident-free in all our operations. More than ever, we must nurture our best practices, stay alert together and fight against routine, our worst enemy. Beyond that, I especially hope that SPIE will continue to attract and retain people who are proud of their profession and their company.

INSPIRED IN 2016 BY THE RAPID TRANSFORMATION OF OUR GROUP

FOR THE MANAGEMENT TEAM, THE YEAR WAS SHAPED BY THE COMPANY'S MANY TRANSFORMATIONS, FROM THE REORGANIZATION OF THE BUSINESS BASE TO THE SHIFT IN CULTURES UNDER THE IMPACT OF GROWING DIGITIZATION.

GILLES BRAZEY

Chief Operating Officer for France, SPIE

The creation of **two new French subsidiaries**, SPIE Facilities and SPIE CityNetworks, will enable us to support our customers more effectively, both nationally and in the rest of Europe, while improving our processes and innovation capabilities. In this way, we're going to raise the visibility of our solutions and develop synergies, while broadening and deepening our regional presence.



DENIS CHÊNE

Chief Financial Officer, SPIE

SPIE delivered **a solid financial performance in 2016** and met all of its objectives. Reflecting our tight financial discipline, cash flow was excellent, with cash conversion well above 100%, enabling us to self-finance our acquisitions once again while enhancing the Group's already solid financial position.



YVES COMPAÑY

Managing Director, SPIE Oil & Gas Services

After years of strong growth in the oil and gas industry, we had to deal with **the sudden drop in oil prices**, at a time of growing international instability and contracting demand. This was an unprecedented situation, which got all our teams involved in strengthening our presence in the downstream, diversifying our industrial projects and improving our competitiveness vis-à-vis the operating companies.

JOHAN DEKEMPE

Managing Director, SPIE Belgium

The growing digitization of our activities

was once again the year's defining characteristic, both operationally and technically. This transformation is now impacting every aspect of our business, from the technician service reports written and submitted on tablets to the use of BIM technology to compile and model building information in a single file.



OLIVIER DOMERGUE

Managing Director, SPIE Nucléaire

We're deploying an increasing number of **digital transformation projects**, both in our on-site projects, such as the Flamanville EPR power station, and in our maintenance contracts, including the ones being implemented in partnership with our customers, such as the E-CLIDE Cluster in Le Blayais in association with EDF. Digital is playing an increasingly important role in meeting our objectives, by helping to improve safety, increase reliability and optimize our services.



MARKUS HOLZKE

Managing Director, SPIE GmbH

The acquisition of SAG,

a leader in energy infrastructure services, has opened up tremendous opportunities for SPIE in Germany and in Eastern Europe. With complementary capabilities, a high-quality customer base and a very dense geographical footprint, we are going to create a German leader in multi-technical services and a broader platform to drive further growth.



PABLO IBAÑEZ

Director of Operational Support, SPIE

Transforming a company primarily means moving faster than the competition

and always maintaining your lead. For that, we need an agile, intelligent organization that is close to our customers, suppliers and partners, as well as our front-line employees. It also has to be capable of changing the way we do things at every level and of recommending possible solutions for reducing costs.



JAMES THODEN VAN VELZEN

Chief Executive Officer, SPIE UK

The growing digitization of the company is driving synergies among our units and subsidiaries, while making us more efficient and customer focused in the way we do business. This is reflected in our new centralized Facility Management platform, which enables all the stakeholders in a project to instantly access current operations and work together more effectively.



THIERRY SMAGGHE

Human Resources Director, SPIE

The year was one of outstanding dialogue with employee representatives. A unanimous agreement was signed to smoothly transfer 5,200 employees to two new French subsidiaries, while consultations with the European Works Council made it possible to take a decisive step towards the future integration of SAG's 8,000 employees.



VINCENT MAGNON

Managing Director, SPIE ICS and SPIE Facilities

Our ambition is to simplify the in-situ User experience and to drive faster convergence in our capabilities in energy efficiency and digital technology. We want to position ourselves as a go-to partner in the e-efficient buildings market. The SPIE – INSA Internet of Things (IoT) chair will act as a powerful vector in making this transformation of usage patterns a success.



LEI UMMELS

Managing Director, SPIE Nederland

To make the world a better place, our company has to constantly reinvent itself and nurture a bold, open mindset. This goes for every aspect of our business, from developing innovative, proprietary digital tools to sharing knowledge across our industry, for example at the "InSPIerations" event at the Van Nelle plant in Rotterdam.





JÉRÔME VANHOVE

Strategy, Development and M&A Director, SPIE

2016 was shaped by a robust acquisitions dynamic with 10 bolt-ons and an agreement to purchase SAG, a decisive transaction for SPIE in Germany. In terms of the digital transformation, **we chose to take a flexible, fast-track approach**, covering both our solutions and our internal processes.

CORPORATE GOVERNANCE

OUR CORPORATE GOVERNANCE PRACTICES ARE SYSTEMATICALLY DESIGNED TO ENSURE TRANSPARENCY, PREVENT AND MANAGE RISKS, AND CLEARLY DEFINE THE RESPONSIBILITIES ASSOCIATED WITH OUR VALUES.

BOARD OF DIRECTORS

SPIE SA is a limited liability company incorporated in France as a *société anonyme* and governed by a Board of Directors. Its head office is located at 10 Avenue de l'Entreprise, 95863 Cergy-Pontoise, France.

CHAIRMAN AND CHIEF EXECUTIVE OFFICER

Gauthier Louette

DIRECTORS

Michel Bleitrach*,
Former Chairman of Keolis

Daniel Boscari, employee representative, SPIE

Denis Chêne, SPIE

Sir Peter Mason* **,
KBE, Chairman of Thames Water

Nathalie Palladitcheff,
Caisse de dépôt et placement du Québec

Christian Rochat,
Clayton, Dubilier & Rice

Sophie Stabile*, Accor

Regine Stachelhaus*,
former member of the E. On Executive Board

Gabrielle Van Klaveren-Hessel, representative of the SPIE Actionnariat Corporate mutual fund

NON-VOTING MEMBERS

Baudoin Lorans,
Caisse de dépôt et placement du Québec

Alexandre Motte,
Ardian

* *Independent Directors.*

** *Senior Independent Director.*

EXECUTIVE COMMITTEE

The Group's Executive Committee meets regularly under the leadership of Gauthier Louette, Chairman and Chief Executive Officer.

It comprises the Managing Directors of the Group's subsidiaries, as well as Denis Chêne, Chief Financial Officer, Thierry Smagghe, Human Resources Director, Jérôme Vanhove, Strategy, Development and M&A Director, Pablo Ibañez, Director of Operational Support, and Gilles Brazey, Chief Operating Officer for France. The 13-member committee defines and deploys the company's operating strategy, coordinates initiatives at Group level and develops company-wide synergies.

ANOTHER YEAR OF ROBUST FINANCIAL PERFORMANCE



DENIS CHÊNE
CHIEF FINANCIAL OFFICER,
SPIE

HOW WOULD YOU DESCRIBE SPIE'S PERFORMANCE IN 2016?

2016 was another year of successful execution of SPIE's business model. We delivered a solid financial performance and met all of our objectives, despite a mixed economic environment. Revenue excluding Oil & Gas rose during the year and consolidated margins hit new highs, maintaining their more than ten-year string of annual gains. Reflecting our tight financial discipline, cash flow was also excellent, with cash conversion exceeding 120%. The sustained deployment of the SPIE model in our most recent markets delivered benefits, while we agilely and successfully responded to the sharp contraction in our Oil & Gas business. We had a record year for bolt-on acquisitions, adding 10 companies that brought in a total of €263 million in full-year revenue. Lastly, the acquisition of SAG,

signed in December 2016, represents a major step forward in SPIE's strategic development and has taken our presence in Germany and Central Europe to a whole new level.

COULD YOU TELL US MORE ABOUT LAST YEAR'S FINANCIAL HIGHLIGHTS?

Excluding Oil & Gas, consolidated revenue increased by 2.3% in 2016. EBITA margin widened by 15 basis points to 6.8% and cash flow from operations rose to €430 million, with an especially high cash conversion ratio of 122%. This performance enabled us to finance the acquisitions made during the year and to recommend that at the next Annual General Meeting, shareholders approve a 6% increase in the dividend. It also helped to deleverage the Group, which ended the year with a net debt to EBITDA ratio of 2.3x, down from 2.6x a year before. Lastly, following a significant reduction in the Group's interest expense and the non-recurrence of the IPO costs incurred in 2015, net income quadrupled in 2016, to €184 million. In all, these good results attest to the Group's vitality, its ability to adapt, and the steady improvement in both its operating performance and financial discipline.

WHAT ARE THE MAJOR ISSUES THAT SHOULD BE THE FOCUS OF SPIE'S UNDIVIDED ATTENTION IN 2017?

In a complex, constantly evolving environment, we need, more than ever, to make effective risk management a priority in



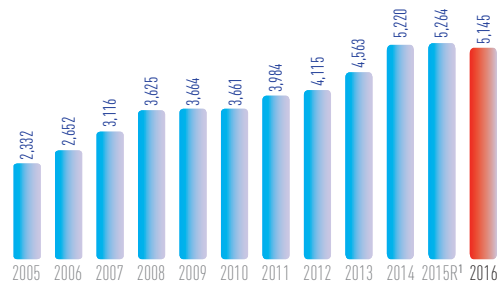
LEADERSHIP EXPERIENCE

all our operations. In addition to maintaining our basic control procedures, we will continue to instil a real risk management culture across the organization, in a commitment to making this process a driver of improvement in every business. In particular, this continuous risk management improvement process will have to take into account the new challenges arising from the rapid digitization of both our company and our businesses, and the changes in our customers' business models.

Another core concern will be to continuously improve the quality of our earnings and our ability to create value at every level of the organization. In particular, we're going to experience a pivotal year due to the acquisition of SAG, a company with around 8,000 employees and a strong reputation in Germany, with which we can share our high standards for performance and operational excellence.

Lastly, we are confidently staying the course towards our growth objective for 2017. Excluding SAG, consolidated revenue is expected to increase by around 4% and, once again, around €200 million will be allocated to acquisitions, in line with our commitment to strengthening our local presence and shifting our portfolio towards future-facing businesses.

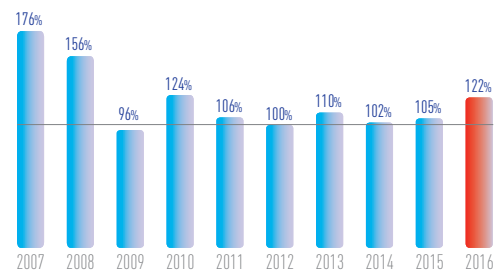
REVENUE (€M)



EBITA (€M)



CASH CONVERSION (%)



1. Restated in accordance with IFRS 5 (please refer to the notes to the 2016 consolidated financial statements for more detail).

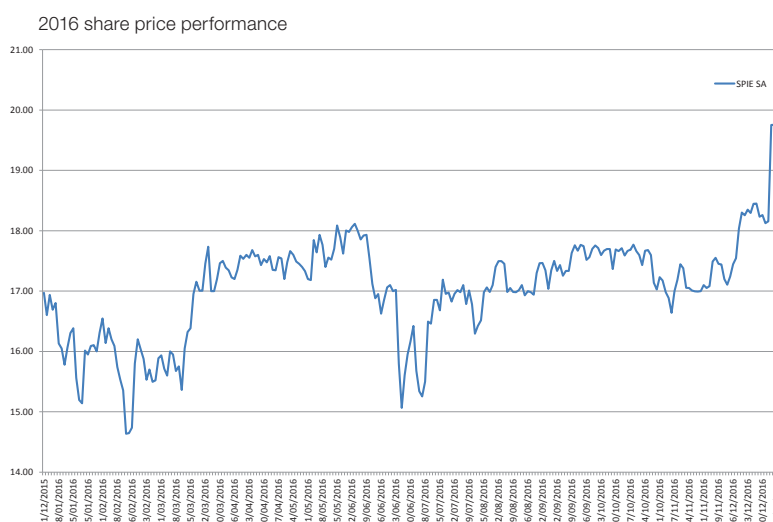
2. 2013 pro forma EBITA margin.

A SOLID DYNAMIC IN THE FINANCIAL MARKETS

Since the success of its initial public offering in June 2015, SPIE has gained new leeway to drive faster growth in Europe. This dynamic drove a sharp increase in the share price in 2016, which, along with the higher dividend, has given all our shareholders a stake in their Company's performance.

A REMARKABLE SHARE PERFORMANCE IN 2016

The SPIE share rose sharply in 2016, with an almost 18% gain amply outpacing the nearly 6% increase over the period in the SBF 120 index, which it joined in March 2016. The SPIE share hit a historic high* at year-end, closing at more than €20.00 for the first time on 28 December. At year-end, the Company's market capitalization stood at close to €3.1 billion. In addition, the share's market widened considerably over the year, led by the increase in the free float.



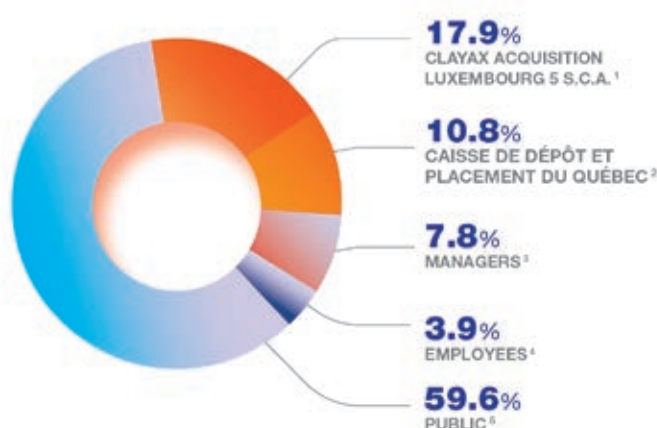
DEMONSTRATING CONFIDENCE WITH A 6% INCREASE IN THE DIVIDEND

Since its initial public offering in June 2015, SPIE's dividend policy has been to pay out approximately 40% of adjusted consolidated net income for the year. This attests to management's emphasis on shareholder return, as well as its confidence in the Group's ability to regularly deliver a sound financial performance. Subject to shareholder approval at the Annual General Meeting, a dividend of €0.53 per share will be paid in respect of 2016, an increase of 6% compared to the previous year. This would represent a yield of 2.6% on the last closing price for the year. In addition, an interim dividend, equal to 30% of the final 2016 dividend, will be paid for the first time in 2017.

*As of 31 December 2016, since exceeded.

A DIVERSIFIED, HIGH-QUALITY OWNERSHIP STRUCTURE

Ownership structure at 20 March 2017



1. Clayax Acquisition Luxembourg 5 S.C.A. is controlled directly or indirectly to 78.8% by Clayton, Dubilier & Rice and to 21.2% by Ardian. Post March 2017 placement.
2. Stake directly held by Caisse de dépôt et placement du Québec. Post March 2017 placement.
3. Current and former managers, on the basis of the information known at 31 December 2016.
4. Shares held by employees, directly or through the FCPE SPIE Actionnariat, on the basis of the information known at 31 December 2016.
5. On the basis of the information known at 31 December 2016 on the number of shares held by managers and employees.

EMPLOYEE SHARE OWNERSHIP: SHARING OUR CONFIDENCE IN THE FUTURE

Employee share ownership is designed to give employees a personal stake in their Company's growth, while nurturing their sense of belonging to the same Corporate community and enhancing their engagement in its performance. Their investment also demonstrates their confidence in the Group's growth strategy in its markets.

Deeply rooted in our Corporate culture, employee share ownership reached a new milestone with the IPO, when a new share ownership plan was offered in 14 countries. When combined with the investors in the SPIE 2011 Corporate mutual fund, the take-up rates of almost 43% Group-wide and of 56% in France rank SPIE among the European companies with the highest proportion of employee shareholders.

3.9%



**OF OUTSTANDING SHARES
ARE OWNED BY EMPLOYEES**

42%



**OF EMPLOYEES ARE
SHAREHOLDERS**

THE CORPORATE MUTUAL FUND'S SUPERVISORY BOARD PLAYS AN IMPORTANT ROLE THROUGH JOINT LABOUR-MANAGEMENT ADMINISTRATION

12

**members of the Supervisory
Board.**

8

**employee members, who own
units in the fund and are elected
by employee unit-holders.**

4

**members appointed by Company
management.**

1

**asset management company:
BNP Paribas.**



LEADERSHIP
EXPERIENCE

ACQUISITIONS & BUSINESS DEVELOPMENT

THE FAST PACE OF ACQUISITIONS IN EUROPE

SPIE continued to expand across Europe in 2016, with the acquisition of ten companies based primarily in Germany, the Netherlands and the United Kingdom. The €263 million in acquired revenue, a ten-year record high, attests to our growth momentum in markets where our local presence plays a decisive role, based on a self-financed growth model that has demonstrated its validity.



Watch the Tevean video.



Watch the AGIS Fire
& Security Group/
COMNET/GIT video.



Watch the Alewijnse
Technisch Beheer/
Aaftink video.



Watch the RDI video.



Watch the SPIE UK video.

Environmental Engineering Ltd €23.4m

UNITED KINGDOM

Based in England and serving the food, beverage and pharmaceuticals industries, Environmental Engineering Ltd provides expertise in HVAC and clean technology systems.

Alewijnse Technisch Beheer €33m

NETHERLANDS

Alewijnse Technisch Beheer offers a wide range of technical services for industrial buildings, with particular expertise in the installation and maintenance of electrical equipment.

Aaftink €12m

NETHERLANDS

Based in the province of Utrecht, Aaftink works with the retailing industry for the design, installation, maintenance and repair of building-related systems.

GPE Technical Services €1m

NETHERLANDS

Specialized in steam and condensate systems, GPE Technical Services carries out measurement and maintenance operations for condensation traps, particularly for the petrochemicals industry.

TriosGroup €73.9m

UNITED KINGDOM

Operating in central England in the commercial, health, leisure, retail and other sectors, TriosGroup is a leading provider of technical Facility Management services.

AGIS Fire & Security Group €28m

POLAND

Primarily present in Poland and Hungary, AGIS provides all types of services related to fire protection, security and building technology.

RDI €36m

FRANCE

Based in southern France, RDI offers IT managed services and infrastructure integration, as well as application and Cloud-based services, for the agrifoods, telecommunications, manufacturing and services industries.

Tevean €9m Belgium

In Flanders and the Brussels area, Tevean engineers, builds and maintains electrical, security, fire protection and building management systems.

GfT €17m

GERMANY

In the Rhine-Ruhr region, Gesellschaft für Elektro- und Sicherheitstechnik mbH (GfT) provides services in the areas of safety engineering, fibre optics, data technology and electrical engineering.

COMNET €30m

GERMANY

Operating at eight locations, COMNET is one of Germany's leading providers of information technology, telecoms and security services, from unified communications to fire alarm and access control systems.

ACQUISITION OF SAG

A MAJOR STEP FORWARD IN SPIE'S STRATEGIC DEVELOPMENT

The acquisition in 2017 of SAG, the German leader in energy infrastructure services, is going to accelerate SPIE's expansion in a fast-growing market in Germany and Central Europe.

Signed on 23 December 2016 with private equity firm EQT, the agreement to acquire SAG has enabled the creation of a leading multi-technical services provider in Germany. The major acquisition will give SPIE new capabilities in a fast-changing industry, which is playing a key role in the energy transition and the development of smart networks.

**SAG, THE GERMAN LEADER IN ENERGY
INFRASTRUCTURE SERVICES**

Headquartered in Langen, between Darmstadt and Frankfurt, SAG is a services and systems supplier for power, gas, water and telecommunications networks, primarily focused on servicing power transmission and distribution grids. The company celebrated its 100th anniversary this year and has played a major role in shaping German energy infrastructure. It is now the market leader in Germany, where it generates close to 75% of its revenue, and has an established footprint in Slovakia,

the Czech Republic, Poland, Hungary and France. SAG employs approximately 8,000 highly qualified people across more than 170 locations, including 120 in Germany. In 2016, it earned some €77 million in EBITA on around €1.3 billion in revenue for the year. SAG's technical capabilities cover the entire energy infrastructure value chain, including design, engineering and installation. The company also offers a comprehensive range of maintenance and asset support services. SAG has forged robust relationships with a diversified customer base, and operates a low-risk, high-visibility business model, with close to half its revenue derived from multi-year framework contracts. In this way, over the years, SAG has built leading positions in dynamic markets, supported by structural long-term growth drivers.



Find out more about SAG.
Watch the video.

SPIE AND SAG, A SHARED VISION

IN THE HEART OF GERMANY
AND CENTRAL EUROPE, THE NEW
AMALGAMATION FORMED BY SPIE AND
SAG WILL STRENGTHEN THE GROUP'S
LEADERSHIP IN MARKETS WITH
EXCELLENT GROWTH PROSPECTS.

A LEADING PLAYER

With more than 37,600 employees and
a highly densified geographical footprint,
SPIE has taken its operations in Germany
and Central Europe to an entirely new level.
The Group will now be able to develop new
operational and commercial capabilities,
to accelerate its growth in multi-technical
services.

COMPLEMENTARY CAPABILITIES

Building on the large number of local
acquisitions made over the past three years
in Germany and Central Europe, mainly
in ICT services and multi-technical
maintenance, SPIE can now leverage SAG's
expertise in energy infrastructure to expand
across the entire value chain.

A SHARED CULTURE OF EXCELLENCE

Drawing on their long heritage in engineering
services, SPIE and SAG share the same
commitment to technical and operational
excellence. Both companies also share a
diversified, high-quality customer base, with
which they cultivate strong values of safety
and responsibility.



EUROPE

BELGIUM
FINLAND
FRANCE
GERMANY
HUNGARY
NETHERLANDS
POLAND
SWITZERLAND
UNITED KINGDOM

AFRICA

ALGERIA
ANGOLA
CAMEROON
CHAD
GABON
LIBYA
MOROCCO
NIGERIA
REPUBLIC OF THE
CONGO
TUNISIA

MIDDLE EAST

IRAN
IRAQ
KUWAIT
QATAR
SAUDI ARABIA
UNITED ARAB
EMIRATES
YEMEN

ASIA-PACIFIC AND REST OF THE WORLD

AUSTRALIA
BANGLADESH
BRUNEI
INDONESIA
MALAYSIA
MYANMAR
NEW ZEALAND
SINGAPORE
SOUTH KOREA
THAILAND
VIETNAM
VENEZUELA

FACILITATING THE EMERGENCE OF A POST-CARBON ECONOMY

In its commitment to driving the emergence of a low-carbon, responsible economy, SPIE is focusing on deploying a local network of excellence and working with regions to support their sustainable transformation.



One Planet.
Watch the video.

January

Belgium – To carry offshore wind power inland to West Flanders, while supporting the sustainable development of the port of Zeebrugge, Elia engages SPIE to build two 380kV high-voltage substations as part of the Stevin decentralized power generation programme.

February

UNITED KINGDOM

In North East England, the Tees Valley Facilities are home to two of the world's most innovative renewable energy projects, based on the plasma gasification of waste. SPIE services include the repair and maintenance of electrical systems and the management of instrumentation and control systems at one of the Facilities.

March

FRANCE – SPIE is expanding its design, build and manage solutions for EV charging points, as illustrated by the contract signed with five departments in South-East France to install the country's largest regional charging network, comprising nearly 900 units.



April

GERMANY – In Berlin, the panel of judges for the 2016 German Cooling Prize awards SPIE first prize in the category “Measures to Reduce Emissions by Partial Refurbishment of Cooling or Air Conditioning Systems”, for its solution that enabled Takeda GmbH to save €1.1 million.

June

SWITZERLAND – SPIE partners the new CityZen association that addresses all the key areas of the Smart city, from ecomobility to smart buildings and safety management. The goal is to offer practical, consistent solutions that leverage the synergies among the various local stakeholders in the urban transformation process.

August

GERMANY – SPIE and Saint-Gobain develop their cooperation in energy supply at the Herzogenrath plant. The contract extends the existing agreement for the delivery of energy used to produce compressed air, with an innovative solution combining energy savings and sustainable technologies.

October

GERMANY
At Benecke-Kaliko AG's plant in Eislingen, SPIE is now in charge of overseeing all the energy consumption in the production processes. While carbon emissions have already been reduced by nearly 25%, the two companies have set up an “energy team” bringing together multi-disciplinary expertise to upgrade services.

November

NETHERLANDS & FRANCE – SPIE continues to expand in drone-delivered services. In the Netherlands, authorities have issued the Group a licence to conduct inspections and measurements from above the official 120-metre limit, while in France, a partnership has been formed with Azur Drones to test a solution for a fire-safety system.

September

UNITED KINGDOM
Leading telecoms operator BT asks SPIE to upgrade 23km of its networking tunnels. Enhancements to the underground channels, which carry cabling, will save BT approximately £1.5 million and remove 3,500 tonnes of CO₂ from its carbon footprint.

December

FRANCE – After launching its Cloud and Internet of Things division, SPIE sets up a strategic partnership with Sigfox, whose network provides a global low-cost, low-energy communication solution for the billions of devices awaiting connection worldwide.

May

NETHERLANDS – SPIE becomes the first official partner of the Het Dorp Academy, the country's most famous residential community for people with disabilities, with the goal of creating a smart village featuring the latest innovations in the areas of healthcare, technologies, construction and the environment.

July

FRANCE – SPIE helps to create Village by CA near Rheims, a world-class ecosystem combining BIM methods (Revit®) and BREEAM Very Good-certified Facilities with open innovation and start-up incubation activities.







USER EXPERIENCE

The User experience is only just beginning. Welcome to a new world of smart technologies and digitized services.



Smart city



e-efficient buildings



Energies



Industry services



USER
EXPERIENCE

FABRICE VALOIS
DOCTOR IN INFORMATION
TECHNOLOGY. UNIVERSITY
PROFESSOR AT INSA LYON.



A NEW WORLD WITHOUT BORDERS

THINKING ABOUT THE IoT

In recent years, the Internet has metamorphosed into a vast network of connected devices, known collectively as the Internet of Things (IoT), which is acting as a powerful business driver not only for the digital industry but also for the entire manufacturing sector. Today, the IoT's infinite potential is prompting widespread debate about the technical challenges, social changes and economic issues arising from its deployment.

Fabrice Valois shares with us his expert thoughts on the subject.

WHAT ARE WE TALKING ABOUT WHEN WE TALK ABOUT THE IoT?

The IoT means putting the Internet everywhere – in devices (electrical outlets to manage power use, smartphones to manage lighting and music), in people (sensors to measure vital signs, monitor treatment effectiveness or detect possible health problems) or in nature (to measure river flood levels, for example).

The Internet of Things involves installing instruments in people's physical environment, but also in people themselves, in order to understand, foresee and optimize trends and events. So the initial impetus behind the IoT was to improve control over energy flows and use, a critical component in our economy. Today, the applications are much broader but they all seek to understand a system and the interactions of a given device with its environment.

WHAT ARE THE SPECIAL FEATURES OF IoT RESEARCH PROGRAMMES?

Let's go back to the beginning. For me, three inventions have transformed the world: the wheel, in 3500 BCE, which

enabled people to travel farther and faster, and to invent machines; then Gutenberg's printing press in 1400, which made it easier to spread knowledge; and now the Internet, which has freed us from the notions of time and distance. Today, the IoT is posing some major challenges to society. Digital technology is forcing us to rethink the fundamentals of freedom and fairness, because bringing technology closer to people means impacting their environment, privacy and mobility and their relationship to time, space and other people. As a result, our research programmes have to take a systemic approach to the world we live in. Our analysis is holistic, both scientific and technical, and calling on the humanities and social sciences. This is something very new in an initial scientific approach. Two worlds now coexist – the physical world in which we live and the digital world – and we are constantly and seamlessly moving from one to the other and trying to create a borderless continuum between our digital and physical spaces.



Watch the
interview with
Fabrice Valois.



USER EXPERIENCE

“The IoT is not dangerous.
As is often the case, it’s what people could do with it that’s dangerous.”

HOW IS THE ECONOMY TAKING ADVANTAGE OF CONNECTED DEVICES?

Already water, gas and power use is being precisely managed and measured through the IoT. We are also starting to track consumer movements, calculate how much time people spend in front of an object and suggest special offers aligned with what they look at in a shop window. If we can geolocate you and measure the interactions you have with certain devices, we can try to push you closer to things you might need or want. Although the marketing side still lags far behind the datamining capabilities, the IoT will make our societies more seamless, more open and less restrictive, by supporting continuous interaction. The possibilities are endless

HOW WILL THE ECONOMY BE IMPACTED?

I think that there will be two impacts on the economy. The first is that we’re going to see the emergence of pure players, focused solely on the IoT, with their own dynamic and business model based on capturing and then mining, analysing and understanding data. And second, the IoT is obviously going to impact every company, whereas today it is primarily revolutionizing industry. The fact that the physical environment will be much more precisely measured will impact every economic process.

HOW DOES THIS REPRESENT A NEW CHALLENGE FOR BUSINESS?

The IoT will be disruptive for every company, in every industry. If their original business was to build cars or houses, tomorrow it will be to embed the Internet into systems – to put digital technology in a building, a manufacturing process, a vehicle or a logistics facility. This is a fantastic opportunity for companies to reinvent themselves. In this new landscape, operators of networks, telecoms and connected objects will have to deploy reconfigurable, scalable systems and services that don’t need complex or costly maintenance.

Lastly, for users, product cycles won’t be the same. Regularly collecting data will make it possible to analyse how each product ages. Looking forward, we’ll have to invent new processes and services that in turn will drive the creation of new businesses.

DOES THE IoT HAVE ANY LIMITS?

i believe that there’s a practical limit, in that Earth is a finite world with finite resources. Even if we dream of having a digital society by 2020/2030, will we have enough energy and resources? But in terms of services and applications, I don’t see any limits. We’re still in the early days of the IoT and growth will be

“The IoT saves us time that we can use to do other things. It’s a new opportunity for people to communicate with each other.”

“This chair is the meeting of two worlds, academia and business, which are both exploring the impact that IoT could have over the next five years.”

exponential. Today, we're thinking about building the tactile Internet. After all, we have five senses. With our smartphone, we're using hearing and sight, but we don't have touch, even though it's a fundamental sense. Our challenge is to be able to navigate freely among physical and digital spaces. In the future, when I touch my phone, the person I'm talking to will feel it, because both of us will be bodily connected to the Internet. We'll be there in just a few years. But of course, we have to master all the digital tools now being developed. Plus we have to be aware of all the ways that the new services could be abused, to keep them focused on their original intent and avoid overuse.

All these technological developments are having a very powerful impact on civil society, which is why we need to work with sociologists, lawyers and philosophers. Our role is also to ensure that all the algorithms treat users fairly and on an equal footing, so as to fight against digital discrimination.

WON'T THE IoT TURN US ALL INTO COUCH POTATOES BY MAKING ALL OUR INTERACTION VIRTUAL?

I don't think so. When I was 14, my friends lived on my street or in my town. Today, young people have friends living everywhere on the planet. They interact online, in apps and games, in completely borderless

spaces. Being liberated from the constraints of time and distance isn't going to keep people glued in one place. The IoT is increasing interaction and offering more opportunities to get together, while encouraging people to explore new territories. The main objective is to increase interaction through movement or interconnection. This is excellent news, because humans are communicators by nature and the IoT is offering them new opportunities to interact with their peers.

TALK TO US ABOUT THE ENDOWED CHAIR CREATED WITH SPIE ICS

In July 2016, we partnered with SPIE ICS to endow a teaching and research chair at INSA Lyon, supported by the CITI laboratory. This chair will help us, as academics, to broaden our thinking about market needs and the requirements of business, while giving us a more comprehensive, integrated and ambitious vision of manufacturing, energy and retailing. For its part, the SPIE Group has begun to think strategically about how these devices can be integrated in the future and how the IoT is going to change its business and, as a result, drive the emergence of new service solutions.



Fabrice Valois is a doctor in information technology and University Professor at INSA Lyon. He heads the Centre of Innovation in Telecommunications and Integration of Service (CITI) at INSA Lyon, whose research takes a systemic approach to connected devices, from design to application in civil society, with the goal of building a connected digital society.



At the Smart to Future Cities & Urban IoT 2016 Summit in London, attended by the world's leading experts, discussions focused largely on the role of Open Data and big data in transforming today's cities, with such initiatives as the City Data Exchange in Copenhagen.

Read the Smart city brochure.



SMART CITY

Key Figures

DEMOGRAPHIC TRENDS

9.7

BILLION PEOPLE ON THE PLANET IN 2050, TWO-THIRDS OF WHOM WILL BE LIVING IN CITIES.

Source: United Nations.

GLOBAL CAPITAL EXPENDITURE

\$147.5

BILLION SPENT ON SMART CITY PROJECTS IN 2020, VERSUS \$53.4 BILLION IN 2015.

Source: MarketsandMarkets.

THE INTERNET OF THINGS (IoT)

1.6

BILLION CONNECTED DEVICES IN A SMART CITY IN 2016, HALF OF THEM IN SMART BUILDINGS.

Source: Gartner.

HEADING FOR THE AUGMENTED CITY OF THE FUTURE

Four trends that are drawing on SPIE's expertise to support the city of tomorrow

THE INTERNET OF THINGS IS BECOMING A TANGIBLE REALITY

The use of a multitude of connected sensors and devices, combined with Cloud-based and big data solutions, is transforming the way cities are managed. SPIE is helping to drive this shift in many areas, from smart homes to electric mobility and connected healthcare services.

URBAN INFRASTRUCTURE IS GOING TO TIGHTLY CONVERGE

Today's conurbations comprise an increasingly complex array of movements and activities. SPIE is fostering the convergence of urban infrastructure, both in the outside networks used for power, water and transport, and in telecoms networks and telephone, IT and multimedia systems.

PUBLIC SPACES ARE ALREADY BEING RECONFIGURED

Train and metro stations, sports Facilities, administrative buildings, theme parks and other public spaces are all undergoing rapid change. In schools, for example, our solutions range from refurbishing buildings to deploying France's National Digital Plan for Education.

CITIES AND REGIONS ARE REDEFINING THEMSELVES

The regional development model is being reorganized around the energy and digital transition, which SPIE is supporting in areas like electrical infrastructure services, regional digitization projects, renewable Energies, multimodal transport, and resource conservation.



The Elbphilharmonie concert hall in Hamburg, Germany

Over the next 20 years, SPIE will manage all of the utilities and commercial Facilities in Hamburg's Elbphilharmonie concert hall complex under a comprehensive Facility Management contract.



The new Elbphilharmonie concert hall relies on SPIE's expertise. Read the press release.

SMART CITY

Socially responsible citizenship

For SPIE, a city is more than just a collection of buildings and infrastructure; it is a living community shaped by needs, behaviours and uses involving a broad diversity of stakeholders. This was demonstrated in 2016 by our involvement in Switzerland's CityZen association of companies and concerned stakeholders, dedicated to serving the city of tomorrow.

A NEW ENVIRONMENT FOR RESIDENTS

In a commitment to improving local quality of life by taking a more collaborative approach, SPIE has become the first official partner of Het Dorp Academy, the Netherlands' most famous residential community for people with disabilities, with the goal of using smart technologies to help the residents. Already active in some 1,100 healthcare establishments in Europe, SPIE pursued its public health initiatives in 2016, from working on innovative buildings like the AZ Groeninge teaching hospital in Belgium to installing digital devices for patients and staff.

More broadly, SPIE is helping to improve the daily well-being of residents in communities across Europe. In the United Kingdom, the Group was honoured with the year's Urban Safety and Fire Protection Award for a solution developed with the North Lanarkshire Council. In Germany, music lovers are appreciating the new, world-renowned Elbphilharmonie concert hall in Hamburg, whose state-of-the-art Facilities are controlled by an integrated Facility Management system. All over Europe, quality-of-life issues are top-of-mind, in such areas as sustainable mobility, smart energy, the preservation and use of heritage buildings, eco-neighbourhoods, health and safety.

REINVENTING REGIONAL GROWTH MODELS

Driven by the energy and digital transition, the reconfiguration of urban and regional territories gained momentum in 2016. In Belgium, SPIE has become a recognized player in renewable Energies, after fully cabling four new wind farms and connecting them to the grid since late 2015. In France, SPIE supported deployment of the high-speed broadband network in the Aude department, a priority project that will initially enable 80% of residents to enjoy fibre optic broadband speeds.

Public policies are also becoming more ambitious in the transport sector, which alone accounts for a quarter of all carbon emissions in Europe. In France, for example, SPIE has supported the deployment and operation of the country's largest regional network of EV charging points, comprising nearly 900 units. At a time of renewed interest in river-sea transport, the Group also won a major maintenance contract in the Netherlands for 92 bridges and locks in the province of Brabant.

Jo Brohan – President of Morbihan Energy Association (SDEM), Mayor of Muzillac

"Our association comprises the 256 communes in the Morbihan department. By working with SPIE, we want to ensure that electric vehicle owners travelling through the region will always find a charging station, ideally never more than 10 km away."



Lascaux Caves, France

In the Dordogne, the new replica of the Lascaux caves capitalizes on SPIE's expertise in electrical contracting and scenic lighting, as well as in building data wiring, fire and intruder alarms and public address systems.

INNOVATIONS DEMONSTRATING COLLECTIVE INTELLIGENCE

As the first services provider in France to fund a teaching and research chair on the Internet of Things in partnership with INSA Lyon, SPIE wanted to create an open ecosystem, bringing together a broad network of academic and business partners. The challenge is to lead innovative programs in such advanced fields as smart clothes, the deployment of IoT nodes and Li-Fi networks, as well as to conduct in-depth research on sustainable development issues and user acceptability factors. In addition to bringing new technologies to market, the ultimate goal is to work with responsible partners to change the way innovation is approached. One such partner is Sigfox, an IoT network operator, whose model focuses on the transition to a low-carbon economy.

VISION

CONTRIBUTING TO A SUSTAINABLE URBAN AND REGIONAL DEVELOPMENT MODEL, TAILORED TO THE CHALLENGES OF IMPROVING COMMUNITY QUALITY OF LIFE AND WELL-BEING.

OBJECTIVES

IMPROVE

THE QUALITY OF LIFE IN COMMUNITIES

SUPPORT

REGIONAL TRANSFORMATION

DEVELOP

NEW WAYS OF USING THE CITY

AREAS OF EXPERTISE

URBAN LIFE

INTELLIGENT PUBLIC TRANSPORT
ELECTRIC VEHICLES
CITIZEN INFORMATION SYSTEMS
ROAD INFRASTRUCTURES
VIDEO SURVEILLANCE
INTELLIGENT LIGHTING
MONUMENT LIGHTING
TOURIST TRAILS

BUILDINGS OPEN TO THE PUBLIC

OCCUPANT SERVICES
COMFORT AND CONVENIENCE
ENERGY EFFICIENCY
COMMUNICATION AND OTHER NETWORKS
SAFETY AND SECURITY
HEALTH AND ENVIRONMENT

ENERGY TRANSITION

RENEWABLE ENERGIES
COGENERATION
SMART GRIDS

DIGITAL SOLUTIONS

4G NETWORK
HIGH-SPEED BROADBAND
FIBRE TO THE HOME (FTTH)



Real-time video surveillance on the D line of the Lyon metro.
Read the press release.



Reducing light pollution.
Read the press release.



The hyper-connected stadium

Stade de France, France

ONE OF THE WORLD'S LEADING SPORTS VENUES.

with more than 45,000 seats, the Stade de France sports arena offers fans an immersive connected experience, far exceeding the convenience of online ticketing. While meeting operator requirements, from network infrastructure performance to high-density Wi-Fi support, SPIE's

future-facing solution has also prepared the stadium to offer such emerging features as HD slow-motion replay, high-quality audio commentary, live statistics, online betting, online ordering of meals and merchandise with in-seat delivery, and a social media environment both in the stadium and elsewhere. ■



Managed services

Insel Gruppe AG, Switzerland

In the canton of Bern, the Insel medical care group has commissioned SPIE to ensure optimal communications at its six Facilities, comprising 75 buildings and housing more than 10,000 employees. The managed services include 15,000 LAN ports and 2,500 Wi-Fi hotspots. ■



Communication networks

British Telecom (BT), United Kingdom

British Telecom's 23 kilometres of underground tunnels play a critical role in its communications infrastructure. SPIE's project to refurbish them will save the operator nearly £1.5 million and eliminate 3,500 tonnes of CO₂ from its carbon footprint. ■

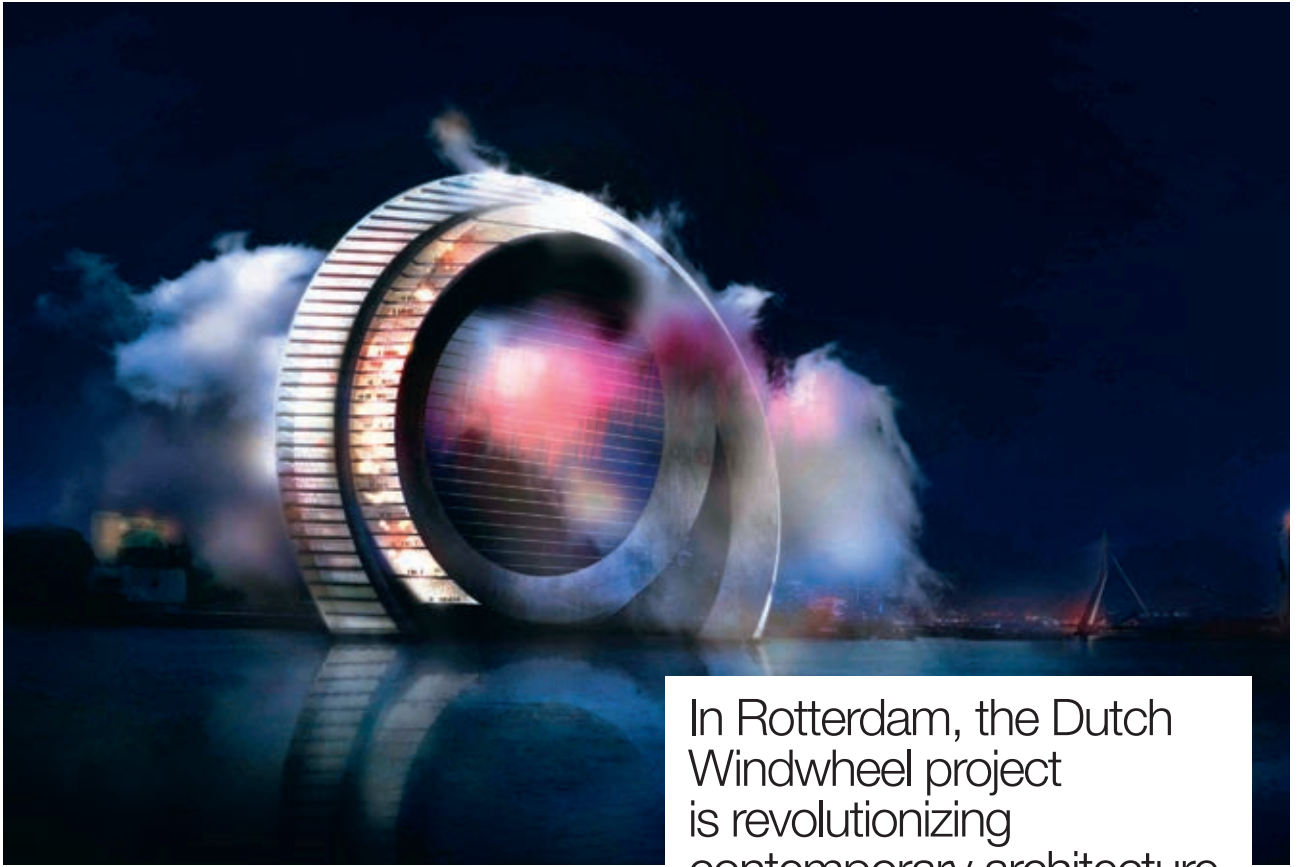


Energy efficiency

Roger-Couderc Aquatic Centre, Saint-Chamond, France

FRANCE'S FIRST WAVE POOL. the Roger-Couderc aquatic centre in Saint-Chamond, in the Loire department, has been completely refurbished, with an end-to-end solution to optimize its air and water heating and cooling utilities.

To improve the centre's operating efficiency, SPIE led all of the projects to redevelop the premises and lower energy costs, driving reductions of 44.5% in gas and power consumption and of 37.5% in water use. ■



In Rotterdam, the Dutch Windwheel project is revolutionizing contemporary architecture



Panoramic screen

Barco, Belgium

THE WORLD LEADER IN NETWORKED VISUALIZATION PRODUCTS

for professionals, Barco selected SPIE to partner the roll-out in European cinemas of its new Barco Escape solution, whose 270-degree surround projection offers movie-goers a wide, immersive experience unlike any other. Just before the film starts, two additional screens appear on each side of the

main screen, forming a 100-110-degree angle. The assembly of the 400-kg suspension structure required SPIE's expertise in working at height, in cinema electrical networks and in wiring optimization, while Barco is counting on the Group to support deployment across Europe as a partner contractor. ■

Dutch Windwheel, the Netherlands

THE ONE-OF-A-KIND DUTCH WINDWHEEL PROJECT IS DESIGNED TO DEVELOP A WIDE RANGE OF INNOVATIONS IN THE FIELDS OF WATER, ENERGY AND CONSTRUCTION, based on a combination of digital services and smart technologies. Along with ten other companies and universities, SPIE is deeply involved in the exciting project, which will offer Rotterdam another high-profile landmark. Electricity will be generated by a silent wind turbine, as well as by 3,000 sq.m of photovoltaic cells and by burning the biogas produced by algae and organic waste. Rain water will be recovered, with some of it reused in the architectural wetlands at the wheel's base. To accommodate some 1.5 million visitors a year, around 40 intelligent glass cabins will rotate around the surprising structure, which will also comprise a panoramic restaurant and a 160-room hotel, as well as apartments, offices and shops. ■



At the 2016 Build & Connect conference in Strasbourg, 500 organizations, companies, and research and training centres from Germany, France and Switzerland shared their pioneering technologies and practices in the green building industry.

See the e-initiative buildings brochure.



e-EFFICIENT BUILDINGS

Key Figures

DIGITAL ECONOMY

25%

OF THE WORLD'S ECONOMY WILL BE DIGITAL IN 2020.

Source: Digital Economic Value Index, Accenture.

SMART BUILDINGS

\$24.73

BILLION SPENT ON SMART BUILDINGS IN 2021, VERSUS \$5.7 BILLION IN 2016.

Source: MarketsandMarkets.

ICT SERVICES

3/4

OF IT SPENDING IN 2019 WILL CONCERN INTERDEPENDENCE ENABLERS LIKE MOBILE TECHNOLOGIES, THE CLOUD, BIG DATA AND THE IoT.

Source: IDC FutureScape Report.

FOCUSING ON SUSTAINABLY TRANSFORMING BUILDINGS

Four trends that make SPIE a catalyst for better buildings

ENVIRONMENTALLY RESPONSIBLE BUILDINGS ARE BECOMING THE NORM

Today's real estate projects are focused on sustainability, from the quality of the building materials to the completed property's energy and environmental efficiency. In addition to supporting certifications such as BREEAM, LEED and HQE®, SPIE is contributing to innovative designs that improve properties' performance and appeal.

USER NEEDS ARE SHAPING THE LATEST STRUCTURES

These days, the User experience is paramount. Office buildings, for example, have to be designed from the outset for co-working, telecommuting and nomadic work. Fittings, Facilities and systems are now organized around user practices, as illustrated by the SPIE headquarters in Cergy-Pontoise.

PROPERTY PERFORMANCE IS BEING RESHAPED

New tools, systems and methods are emerging to more efficiently manage a building's lifecycle, 75% of which concerns operation and maintenance. SPIE, for example, uses digital technologies such as building information modelling (BIM) and smart Facility Management platforms.

DIGITIZATION IS TRANSFORMING BUILDING MANAGEMENT

Digitization is revolutionizing building management services with the Internet of Things, big data and Li-Fi applications. As a member of the Smart Building Alliance, SPIE is involved in high-profile initiatives in Europe and supports the transformation of the User experience in commercial, residential and industrial Facilities.



Banque de France, Paris

To improve its digital services by 2020, Banque de France has commissioned SPIE to deploy a nomad-friendly Wi-Fi infrastructure, aligned with the needs of a more mobile world. The solution includes a WAN interconnecting the customer's data centres and the guest Wi-Fi service hosted on SPIE servers.



SPIE earns CISCO Gold certification in Germany. Read the press release.

SMART BUILDINGS

Experiencing new practices

To create value, property owners and managers are increasingly relying on the support of design/build systems integrators. In the retailing segment, for example, Irish apparel chain Primark has entrusted SPIE with the turnkey delivery of a store in Paris targeting 15-25 year olds. In the United Kingdom, the Touchwood Shopping Centre in Solihull, West Midlands has asked SPIE to improve its building management performance.

BOOMING DEMAND FOR BUILDING RECONFIGURATION PROJECTS

Saving energy and reducing greenhouse gas emissions are now key objectives in an ultra-functional vision of a modern building, involving the reconfiguration of all or part of its living or working environment.

In the Paris La Défense business district, Société Générale has called on SPIE to recondition more than 6,000 air treatment modules in the Alicante and Chassagne office towers, with the goal of improving their energy and environmental performance, while creating a smarter, more comfortable workplace. Not far from there, to prepare for the AXA Group's move into the Majunga tower, SPIE created a hyper-connected environment on the building's first 20 floors, leveraging the Group's combined expertise in multi-technical solutions and ICT services.

In this way, SPIE is changing the traditional vision of building renovation and management. In the United Kingdom, the Group has introduced an innovative approach based on four improvement drivers: engineering systems, building performance, maintenance services and facility upgrades. Across Europe, services are being refocused on the total efficiency of property assets, as in Belgium where SPIE will centrally manage the ING Group's 800 branches and 30 office buildings.

USERS WANT MORE FROM EXISTING BUILDINGS

The housing sector is also undergoing major change, driven not only by increasingly strict standards but also by new user practices.

In south-western France, for example, SPIE has supported three major projects involving nearly 500 housing units. The quality of life of their residents has been enhanced by home automation devices and connected data networks, from fibre optics to access control systems. Their environmental footprint has been reduced with, for example, a new type of low-carbon heat pump and new-generation photovoltaic panels. Building management is now even more efficient, thanks to smart facility control and monitoring systems.

At the same time, radically new building designs are emerging. In the Netherlands, the Dutch Mountains project is being developed according to a completely new model. Flexible and upgradable, the ultra-circular structure is designed to change and improve over time, to offer users an ideal living and working environment. All of the building services, such as lighting, heating, food, façades and even the grounds, are part of an intelligent system capable of learning and improving over time. Closely involved in this challenge from the design phase, SPIE plans to test new approaches to home automation and energy management systems.



SPIE partners with Equinix.
Read the press release.

Michael Brügger, Cisco Product & Partner Manager, SPIE ICS

"SPIE is now training Cisco IoT-certified specialists. This is absolutely necessary if we want to ensure superior quality of service in a market where the boundaries between information, communication and digitization are increasingly permeable."



Telehouse, United Kingdom

A pioneer in the construction of carrier-neutral colocation Facilities for IT and telecom infrastructure, Telehouse took its 20-year cooperation with SPIE to an entirely new level by deploying innovative electrical and mechanical solutions that improve the performance of its headquarters in London's East India Dock.



SPIE partners with Nest Labs.
Read the press release.

COMPLETELY RETHINKING THE PROJECT DEVELOPMENT PROCESS

Real estate project management is benefiting from the new approaches being deployed across the value chain to analyse usage patterns, optimize costs and delivery times, and digitize processes. In the case of SPIE, building information modelling (BIM) is helping to improve coordination among project participants, ensure a seamless transition from one phase to the next, and streamline lifecycle management processes. In addition, cooperative agreements are enabling more seamless integration of a project's various aspects, particularly the use of new technologies. In 2016, for example, SPIE partnered with California-based Nest Labs, which supplies Internet-connected devices for smart homes, so that the Group can be ready to respond to changes in the Greater Paris housing market.

VISION

OPTIMIZE LONG-TERM BUILDING PERFORMANCE THROUGH THE CONVERGENCE BETWEEN NEW TECHNOLOGIES AND DIGITIZED BUILDING MANAGEMENT SERVICES.

OBJECTIVES

IMPROVE
ENERGY EFFICIENCY

CREATE
COMMUNICATION-CAPABLE BUILDINGS

IMPROVE
OCCUPANT AND BUILDING MANAGER PRACTICES

AREAS OF EXPERTISE

USER COMFORT AND OCCUPANT SERVICES

ELECTRICAL AND HVAC SYSTEMS
BUILDING MANAGEMENT SYSTEMS
LIFECYCLE EQUIPMENT MAINTENANCE
LIFTS AND MOVING WALKWAYS
INDOOR RADIO COVERAGE
MANAGEMENT OF BUILDING AREAS
CONCIERGE SERVICES

ENERGY EFFICIENCY

LOW-CONSUMPTION EQUIPMENT
HYPERVISION AND BUILDING MANAGEMENT SYSTEMS
ENERGY USE MONITORING

SAFETY AND SECURITY

FIRE PROTECTION
VIDEO SURVEILLANCE
ACCESS CONTROL

COMMUNICATION AND OTHER NETWORKS

DATA SECURITY
IT INFRASTRUCTURE
TELEMEDICINE AND eHEALTH

HEALTH AND THE ENVIRONMENT

COLD CHAIN
FLUID DISTRIBUTION AND MANAGEMENT
WATER AND WASTE TREATMENT



See the Healthcare
brochure.



Northern Germany's largest regional bank selects SPIE to manage its head office in Hanover

Nord LB, Germany

ONE OF GERMANY'S LARGEST COMMERCIAL BANKS

and a regional powerhouse, Norddeutsche Landesbank Girozentrale (NORD/LB) boasts a remarkable head office in Hanover, designed by the Behnisch Architekten architecture firm. To manage its 82,000 sq.m premises year-round, day and night, SPIE installed an end-to-end system designed to support a comfortable, high-quality working environment for the bank's 3,500 employees. In addition to maintaining the electrical, mechanical and HVAC systems and other utilities, SPIE provides a wide range of user services, such as building automation systems, communication services and the maintenance of a fully renovated artificial pond. ■



Energy transition

Antwerp Harbour House, Belgium

A REFURBISHED FIRE STATION topped by a gigantic glass and steel structure, the Antwerp Harbour House is a unique architectural marvel that sets the new standard for public buildings. Shaped like a futuristic ship, the innovative facility will house the Antwerp port authority in thoroughly redesigned premises, from the offices to the auditorium.

Given the technical challenge of the installations, SPIE decided to bring together in close cooperation all its expertise in offices and industrial buildings. The main ducts on the upper floors, almost 30 meters from the ground, contain nearly a kilometre of pipes so as to optimally distribute the heating and cooling water. ■

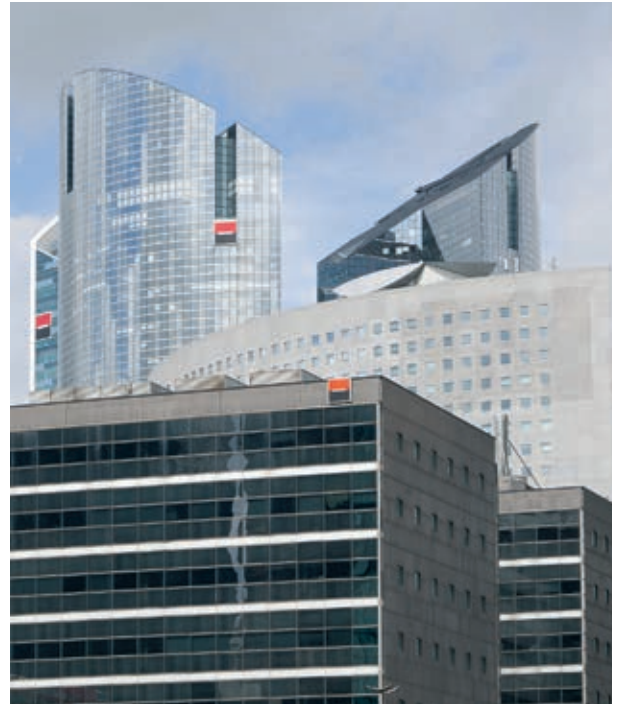


The building of the future

Dutch Mountains, The Netherlands

WITH ITS ULTRA-CIRCULAR STRUCTURE capable of changing and improving over time, the Dutch Mountains sustainable development project is unlike any other in the world. As a member of the project group that is working to deliver the structure in 2020, SPIE has participated from the design phase in the development of a completely

new model of operation and organization aimed at offering users an ideal living and working environment. In this way, lighting, heating, food, furnishings, installations, façades and the grounds are all managed as part of the same system, focused on the functional design of the services ecosystem that future users will experience. ■



Environmental performance

Société Générale, France

In the Paris La Défense business district, SPIE is helping to reduce the carbon footprint of the Alicante and Chassagne office towers, which serve as the head offices of French banking giant Société Générale, by reconditioning more than 6,000 air treatment modules. ■



Urban redevelopment

Euronews, France

To fit out the new 10,000 sq.m headquarters of Euronews in the Lyon Confluence district, SPIE installed state-of-the-art heating, ventilation and air conditioning Facilities, such as two water sinks with release into the Saône River. ■



Energy efficiency

Aixtron, Germany

AS PART OF AN ISO 50001 CERTIFICATION PROCESS at its new headquarters near Aachen, AIXTRON, a leading German manufacturer of deposition systems for the semiconductor industry, tasked SPIE with performing

an in-depth analysis of its energy Facilities. The solution has halved the energy costs for heating and air conditioning by adjusting the hydraulic circuits and optimizing the control technology. ■



ENERGIES

Key Figures

THE PHOTOVOLTAIC ECONOMY

100 GW

IS THE SYMBOLIC MILESTONE REACHED IN 2016 BY THE EUROPEAN SOLAR POWER INDUSTRY, CORRESPONDING TO MORE THAN 10% OF THE INSTALLED POWER GENERATION CAPACITY.

Source: SolarPower Europe.

NUCLEAR ENERGY

28%

OF EUROPEAN ELECTRICITY IS PRODUCED FROM NUCLEAR ENERGY, WITH 129 POWER REACTORS IN 14 MEMBER STATES.

Source: EU - Nuclear Illustrative Programme 2016.

IMPORTED ENERGY

53.5%

OF EUROPE'S GROSS ENERGY CONSUMPTION DEPENDS ON IMPORTS, VERSUS LESS THAN 40% IN THE 1980S.

Source: Eurostat 2014 data released in July 2016.

Nine months after defining its Energy Union Framework Strategy, the European Union revised its priorities in 2016. However, the primary objective remains to decarbonize the economy through more selective investment projects, of which half concern the North Sea Member States.



Read the SPIE Nucleare brochure.

BRINGING MORE FLEXIBILITY AND INNOVATION TO ENERGY

Four trends in which SPIE is helping to transform the energy mix

THE REVOLUTION IN ELECTRIC POWER HAS BEGUN

In Europe, the interconnection of regional power transmission networks is gaining momentum, while lines are being increasingly reconfigured to accept renewable in-flows and address new uses. SPIE is supporting this dynamic, from line upgrades to power grid management systems.

RENEWABLE ENERGIES ARE GOING TO SEE RECORD GROWTH

The renewable energy market is steadily expanding around the globe, led by wind and solar power, whose generation costs are declining year after year. SPIE is supporting this development in every segment, including hydropower, biomass and geothermics.

SUSTAINABLE REGIONAL DEVELOPMENT IS MOVING TO THE FOREFRONT

Energy and climate plans have become powerful vectors of a region's appeal and vitality, with such objectives as reducing carbon emissions by 75%, stabilizing electricity use and developing circular economy solutions. As a major source of regional development solutions, SPIE offers a wide range of expertise to drive this process forward.

THE WAY FOSSIL FUELS ARE USED IS CHANGING DRAMATICALLY

At a time when the European Union is seeking to limit the impact of fossil fuels on the environment, SPIE is helping to optimize their use and management with such processes as VOC filtration systems for oil & gas installations and gas pipeline automation systems.



Near Rodez in the Aveyron region, SPIE spent nearly eight months working on a new solar power plant built on former mining slagheaps rehabilitated by Valeco. The project involved the installation of ten 1-MVA inverters, 120 LV distribution boxes, and 36,980 photovoltaic modules of 315 Wp each, as well as the use of 1,849 solar trackers to optimize power generation.

THE ENERGY TRANSITION

Experiencing a disruptive model

The global energy sector is being transformed at an ever quicker pace under the combined impact of regulatory change and disruptive technological and digital innovation. The energy transition is now an integral driver of another form of development and reconfigured services, in which SPIE intends to play an active role.

Although European countries agree on the need to reduce the use of fossil fuels and to develop a more energy-efficient economy, their energy models are still uncertain. In the United Kingdom, for example, authorities want to phase out coal-fired power plants by 2025 and replace them with nuclear and gas-fired plants for basic power generation. In Germany, the Energiewende programme has not yet managed to create a green nation. And the European carbon allowance has lost more than 40% of its value since the end of 2015.

Jack Foubister, HS&E Advisor and Training Centre Manager, SPIE UK

"The Training Centre demonstrates SPIE's commitment to the power sector and to maintaining a skilled workforce. The current programme offers a route into the industry for new staff as well as the means of up-skilling our existing employees. The trailblazer Apprenticeship is recognized throughout the United Kingdom."

ELECTRICITY AND GAS OPERATORS ARE INCREASING CAPACITY

Decentralized power generation continued to have a rising impact on transmission and distribution networks in 2016, led by the growth in renewable Energies and user services, such as electric mobility. Together with the Dutch national grid operator TenneT, SPIE helped to erect new high-voltage lines for the future wind farm off the coast of Walcheren in the province of Zeeland. Another example is the interconnection project between the eastern Netherlands and Germany's Lower Rhine region, in response to the growing in-flow of solar and wind power. The 21-kilometre HV interconnection will consist of 54 Wintrack masts, whose eco-innovative design substantially reduces the lines' magnetic fields.

More generally, power grid upgrade works continued throughout the year. In the United Kingdom, where SPIE has become the country's largest provider of distribution overhead line services, infrastructure is being actively refurbished, as illustrated by a new contract in northern Scotland and southern England. In the natural gas market, the focus is on increasing transmission capacity and facilitating access to new sources of supply. In France, for example, GTRGaz's Val de Saône project has entered a new phase, designed to smooth gas transmission flows between markets in northern and southern Europe.



SGN, United Kingdom

SGN has engaged SPIE for its programme to replace gas mains and service lines across the Thames Valley and Oxford.

RENEWABLES ARE ON A ROLL

Despite the stop & go policies that have weakened certain industries, the use of renewable Energies continued to increase in Europe over the year. Active in every segment of the green energy market, SPIE is committed to encouraging the harmonious deployment of Facilities, while participating in innovative processes in biogas, geothermal power and other areas.

The wind power market continued to expand, particularly in northwestern Europe. In Belgium, SPIE fully cabled four new wind farms and connected them to the grid, as part of ambitious projects like the one being developed by Storm in Meer, near Antwerp, whose wind turbines rise to a record height of 200 meters.

The European solar power market benefited from the sharp decline in generation costs. In France, 212 projects representing total capacity of 800 MWp have been selected as part of the CRE3 tender. This is an opportunity for SPIE, which has recognized expertise in the installation and management of solar farms.



See the Energy Efficiency brochure.

In the hydropower segment, EDF's RenouvEau program continued apace with the Hydraulics Modernization and Standardization project. As a participant, SPIE will help to upgrade electrical, mechanical, automation and management systems in the 230 largest hydroelectric power stations in mainland France.

Lastly, new energy recovery processes are driving the increasing success of power generation from waste and biomass-fired plants. In the United Kingdom, Tees Valley has engaged SPIE to manage the instrumentation and control systems at its plasma gasification waste-to-energy Facilities, which use a technology that has the potential to revolutionize electricity production.

THE NUCLEAR INDUSTRY FUTURE-PROOFS ITS AMBITIONS

To position itself for the future, the nuclear power industry is currently addressing a wide range of challenges, with such far-reaching programmes as the on-going post-Fukushima upgrades and EDF's Grand Carénage refit projects, designed to extend the service lives of today's power plants by 10 to 20 years.

To support this process, SPIE helped to found the E-Clide nuclear maintenance Cluster in France's Nouvelle Aquitaine region. It offers a digital forum for contacts, discussions and news, as well as administrative support in identifying resources available in the Nouvelle Aquitaine region to implement the innovative projects selected by participating companies. Already, several projects in areas as diverse as the digitization of servicing operations, the safety of maintenance personnel and the security of plant Facilities will be tested at the Le Blayais power station before being extended to other plants.

In this fast-moving environment, the nuclear power landscape is gradually being reconfigured with the emergence of European Pressurized Reactor (EPR) plants, like the ones in Flamanville in France and Hinkley Point in the United Kingdom. At the same time, as a stakeholder in this long-term process, which will see the arrival of a new generation of safer, more cost-effective reactors in France by 2030, SPIE intends to capitalize on its experience and expertise in general electrical contracting for existing power plants. For instance, the Group is involved in electrical contracting projects at the Flamanville EPR, where it has installed more than 2,000 km of electric cables (60,000 connections) and in the new contract from EDF's Plant Engineering, Decommissioning and Environmental Division (DIPDE) for work on complex instrumentation-control and automation projects at current nuclear power stations. Post-Fukushima upgrade projects to improve plant safety continued apace throughout the year. Examples include the installation of new switchboards in seven French power stations, as part of the connection to the "last-resort" emergency diesel generator sets, and the installation of a new automatic seismic trip system at the Areva plant in Tricastin, southern France.

THE OIL & GAS MARKET IS TRYING TO REBUILD

As oil prices dropped below \$30 a barrel in January 2016, the oil & gas industry continued to drastically restructure operations over the year, with deep cuts in both operating expenses and capital expenditure.

The situation prompted SPIE to deploy a number of market initiatives, in particular to transfer as much business as possible to the less exposed downstream sector.



EDF, France

EDF has awarded SPIE a new four-year contract to maintain rotating machines at its nuclear power plants in Chinon and Belleville.

Philippe Sasseigne, Executive Vice President, Nuclear Power Generation, EDF

"It's all about improving plant safety and getting it right the first time, which is why training equipment for handling operations is so important. We have to complete maintenance works on schedule and increase the service life of our power stations, while complying with post-Fukushima safety regulations."



CEA, France

SPIE is assisting the French Atomic Energy Commission (CEA) in maintaining its infrastructure, refurbishing its sensitive equipment and decommissioning obsolete Facilities. In 2016, two major contracts were awarded to maintain power distribution systems and to renovate the fire detection and emergency power systems for the Phénix reactor at the Marcoule nuclear site.

For example, SPIE has broadened its presence in the Gulf States, where refining and petrochemical services are in growing demand. In Qatar, the contract to operate and maintain the Common Seawater Facility (CSF) in Ras Laffan Industrial City was renewed for the third time running. Designed for 100% availability, the ultra-modern facility supplies drinking and process water to industries in the city. Another example is the five-year contract to improve the performance of two Kuwait National Petroleum Company (KNPC) refineries, from increasing throughput capacity to producing more environmentally friendly fuels.

In Africa, which has been severely impacted by falling oil prices and internal factors in some countries, SPIE has stepped up its diversification strategy, as illustrated by the construction of a power plant in Nigeria. A strategic partnership has also been signed with UK-based Sparrows Group to develop synergies in areas such as cranes, lifting, mechanical handling, fluid power, and cable and pipe lay services.

Internationally, the Group strove to preserve the capabilities that will be critical in the future and to step up the digitization of its services to global operators. Chevron and Exxon, for example, are now using advanced software developed by SPIE in Australia, while a predictive maintenance project is being devised for offshore applications.



Dolphin Energy Limited has awarded two new service contracts to SPIE. Read the press release.

VISION

FACILITATING THE ENERGY TRANSITION WITH TECHNOLOGIES AND SERVICES THAT IMPROVE THE WAY ENERGY IS PRODUCED, PROCESSED AND TRANSPORTED.

OBJECTIVES

SUPPORT
ENERGY OPERATORS
REDUCE
ENVIRONMENTAL IMPACTS
CONTRIBUTE
TO ENERGY INNOVATION

AREAS OF EXPERTISE

OIL & GAS
WELL DELIVERY & MANAGEMENT SOLUTIONS
PROJECT ENGINEERING & CONSTRUCTIONS SOLUTIONS
COMMISSIONING & START-UP
ASSESSMENT & COMPETENCY DEVELOPMENT

NUCLEAR POWER
NEW SITES
PROJECTS AT EXISTING SITES
MAINTENANCE
DECOMMISSIONING

RENEWABLE ENERGIES
PHOTOVOLTAIC
WIND POWER
BIOMASS
HYDROPOWER
GEOTHERMAL ENERGY

POWER TRANSMISSION AND DISTRIBUTION
ELECTRICITY GRIDS
TRANSFORMER SUBSTATIONS
GAS NETWORKS
STORAGE SITES
LNG TERMINALS



Consult the dedicated website for SPIE Oil & Gas Services.



The challenge of the Grand Carénage refit programme. Read the article.



Wind energy

Elia, Belgium

IN WEST FLANDERS, SPIE has been awarded a major contract to build two new 380kV high-voltage substations as part of the Elia Group's Stevin programme, which is designed to carry inland the power generated by offshore wind farms. Following on from the successful installation of the "Horta" high-voltage

substation in 2015, the new order attests to SPIE's technical expertise in this fast-changing market, as well as to the performance of the proposed solutions with regard to both scheduling and risk analysis. Other decisive factors were the availability of nearly 25 SPIE technicians for a year and the particular attention paid to safety. ■



Water treatment

Ras Laffan, Qatar

For the third time running, SPIE has won the contract to operate and maintain the Common Seawater Facility in Ras Laffan, an industrial and port complex located 80 km north of Doha. ■



Electric substation

TenneT, The Netherlands

To support the growing number of wind farms in Zeeland, SPIE is involved in reconfiguring power lines by designing and building a new 380 kV substation, including the civil engineering works. ■



Gas production

Hyundai Heavy Industries, Indonesia

TO DEVELOP THE JANGKRIK PROJECT, a deep-water gas complex near Karimun Island, Hyundai Heavy Industries asked SPIE to quickly assign about 100 employees to the start-up and commissioning phases. Led by a consortium,

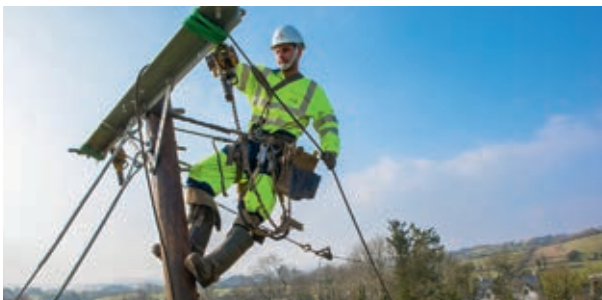
the project calls for the reconditioning of existing wells and the drilling of new ones, followed by the installation of a new floating production unit (FPU) capable of processing 450 million cubic feet of gas per day. ■



At the Cattenom nuclear power plant, SPIE teams are actively involved in EDF's Grand Carénage refit programme

EDF Cattenom, France

PRESENT IN THE LORRAINE REGION FOR 30 YEARS, the Cattenom nuclear power plant is equipped with four pressurized water reactors, each with a rated capacity of 1,300 megawatts. While all of the Facilities undergo a thorough maintenance outage every decade, Unit 1 was subject to an even stricter inspection in 2016 as part of the Grand Carénage refit programme, which is designed to extend its service life and strengthen safety standards. As a result, SPIE's on-site team has grown from 160 to 360 people, with assignments ranging from improving electrical equipment room ventilation and cooling systems to installing digital devices, for example to upgrade the instrumentation and control system. Throughout, they are careful to ensure optimal safety, in particular in the areas of radiation dose control and biological protection. ■



Overhead power lines

Scottish and Southern Energy Power Distribution, United Kingdom

FOLLOWING THE NEW CONTRACT AWARD from Scottish and Southern Energy Power Distribution (SSEPD) covering northern Scotland and southern England, SPIE is now the largest provider of distribution overhead line services in the UK. The contract calls for the construction, dismantling and maintenance of overhead lines

up to 33kV, along with the provision of critical emergency cover. SPIE will also enhance its continuous improvement process, particularly in the areas of safety, customer service and efficiency, while increasing investment in its overhead power lines training school to support the hiring of local Apprentices. ■



Organized in Berlin in September 2016, the Franco-German Energy Platform symposium gave companies the opportunity to share their experiences in improving energy efficiency with Industry 4.0 technology, alongside start-ups and trade organizations.

INDUSTRY SERVICES

Key Figures

DIGITIZING INDUSTRY

€50

BILLION IN PUBLIC AND PRIVATE INVESTMENT TO BE COMMITTED BY THE EU TO ACCELERATE THE DIGITIZATION OF EUROPEAN INDUSTRY.

Source: EU – April 2016.

THE INTERNET OF THINGS

21

BILLION DEVICES WILL BE CONNECTED WORLDWIDE BY THE END OF 2020, OF WHICH MORE THAN 70% WILL CONCERN MANUFACTURING.

Source: Gartner/McKinsey.

INDUSTRIAL OUTPUT

3.5%

GROWTH IN INDUSTRIAL OUTPUT IN THE EUROZONE SINCE 2006, 3.1% IN THE EUROPEAN UNION.

Source: Eurostat.

See the Smart Industry brochure.



DELIVERING EVER MORE AGILE, RESPONSIVE INDUSTRY SERVICES

Four trends in which SPIE services are supporting the industrial transition

INDUSTRIAL BUILDINGS ARE BEING COMPLETELY REINVENTED

From environmentally responsible shopfloor layouts to flexible production platforms, industrial buildings are being transformed through a wide variety of technological and digital innovations. Beginning in the engineering and design phases, SPIE helps to define a building's performance parameters, in close alignment with the requirements of each one's industrial operations.

MANUFACTURING INDUSTRIES ARE RETHINKING THEIR PRODUCTION SYSTEMS

To optimize machine time, reduce costs and improve profitability, SPIE is applying its smart automation and production facility networking expertise to assembly lines, covering everything from robotics and conveying technology to the information system.

THE FACTORY OF THE FUTURE IS DISRUPTING TODAY'S ECOSYSTEMS

More than just new technologies, Smart Industry offers a radically new vision, in terms of approach, organization and culture. Agilely and flexibly virtualizing the production environment is opening up new opportunities, as seen in the augmented reality applications designed by SPIE.

NEW FACILITIES MUST BE HIGHLY SECURE

The growing digitization of production workflows is increasing the need for tighter security, from programmable logic controllers to human/robot cooperation systems. Cybersecurity is becoming a major issue in the communication and energy networks deployed by SPIE.



Boiron, France

Boiron, a French manufacturer and distributor of homeopathic products, asked SPIE to support the extension of its plant in Messimy near Lyon, from heat generation and distribution to mechanized air treatment systems.

PRODUCTION FACILITIES

Experiencing the intelligent future

To enhance their performance in a fast-changing environment, manufacturers rely on ecosystems that seamlessly and flexibly blend building intelligence and innovative utilities and processes.

SPIE is implementing this approach through its pan-European expertise centres, particularly in its contracts with such leading manufacturers as Airbus, Siemens and Rolls-Royce.

THE INDUSTRIAL BUILDING IS BECOMING A UNIQUE EXPERIENCE

Instead of just addressing functional and technical issues, implementation in existing Facilities now requires rethinking the organization of production activities, optimizing the product development cycle and delivering outstanding environmental performance. This was the case for Schneider Electric and its ambitious GreenOvalley project in Grenoble, which consolidated 13 Facilities into five, including two new office complexes. Managed with a building information modelling (BIM) application, the project leveraged all of SPIE's expertise in HVAC engineering, in particular for laboratory airflow modulation and the use of geothermal energy.

2016 saw the development of increasingly bespoke, integrated systems. For example, to build a supply chain hub for Hennessy, the world's largest cognac distiller, SPIE carefully aligned its capabilities with the demands of the new environmentally innovative building, from power supply and lighting to voice/data/image networks and EV recharging points. In the R&D Centre operated by global animal health leader Merial, the Group developed a totally new approach to safety based on 3D studies, with 13 separate air treatment systems for the laboratory areas.

FACILITY MANAGEMENT IS BOTH HOLISTIC AND SCALABLE

Whatever their size, today's production plants are managed according to a holistic vision of their operations. One example is Siemens' largest plant in Germany, in Krefeld, which manufactures regional and high-speed trains. In an ultra-modern environment comprising buildings, production lines, systems and machines, SPIE's role is to develop a comprehensive approach to industrial performance, from maintaining 24/7 uptime in the production Facilities to driving technical, cost and environmental improvements.

This notion of a production facility that is capable of constantly integrating new innovations, while maintaining optimal production conditions, is a core component of the new industrial management model. In 2016, for example, SPIE installed a new, fully automated drilling and riveting machine on the Airbus A320 and A330 Neo aircraft assembly line. With its 12-tonne crushing force, the new machine will increase output thanks to its seamless integration into the production line.

INNOVATIONS ARE TRANSFORMING THE VALUE CHAIN

By developing connected plants, improving energy efficiency and upgrading production lines, the new industrial rationale is designed to produce faster, at lower cost, with greater customization and less of an impact on the environment. At the Saint-Gobain Sekurit plant in Herzogenrath, Germany, for example, SPIE's solution will ensure the highly efficient production of compressed air by combining sustainable technologies and a compressor heat recovery system that lowers energy costs.

Andreas Feger, Technical Director, Benecke-Kaliko AG

"With SPIE's help, we have reduced our energy bill and carbon emissions while improving the security and availability of our inputs."



French Defence Procurement Agency (DGA)

To help train French and allied paratroopers, SPIE has built a life-size model of the troop compartment of the French Army's new transport plane that can simulate all sorts of in-flight events, such as night jumps and parachute accidents.



Holland Malt, the Netherlands

In Eemshaven, SPIE is building two additional state-of-the-art towers that will help Holland Malt's local malting plant double its capacity and become the largest, most sustainable facility of its kind in Europe.

To support the introduction of an innovative process to recycle technical textile waste, as part of Solvay's Move4earth™ project backed by the European Union, SPIE built eight reactors and integrated them into the production line at the plant in Gorzów, Poland. Lastly, maintenance services are undergoing extensive change as data geolocalization makes it possible to track the status of Facilities in real time.

VISION

SUPPORTING MANUFACTURERS ACROSS THE VALUE CHAIN, TO IMPROVE THEIR PERFORMANCE, LOWER THEIR COSTS, AND REDUCE THEIR ENVIRONMENTAL FOOTPRINT.

OBJECTIVES

IMPROVE
THE QUALITY OF PRODUCTION FACILITIES

SUPPORT
THE DIGITIZATION OF MANUFACTURING

MANAGE
PRODUCTION FACILITIES MORE EFFICIENTLY OVER TIME

AREAS OF EXPERTISE

INDUSTRIAL BUILDINGS

BUILDING MANAGEMENT SYSTEMS
COMMUNICATION AND OTHER NETWORKS
SAFETY, SECURITY AND COMPLIANCE
INDUSTRIAL FACILITY MANAGEMENT

ENERGY EFFICIENCY

ENERGY EXCHANGE, RECOVERY AND STORAGE
COGENERATION AND RENEWABLE ENERGIES
ENERGY PERFORMANCE OPTIMIZATION FOR UTILITIES AND PROCESSES

ELECTROMECHANICAL INSTALLATIONS

ELECTRICAL: SUBSTATIONS, CABINETS, PANELS, ETC.
HEATING, VENTILATION AND AIR CONDITIONING
MECHANICAL: PIPING, FABRICATION, ROTATING MACHINES, ETC.

INDUSTRIAL PROCESSES AND AUTOMATION

INDUSTRIAL ELECTRICAL SYSTEMS
INDUSTRIAL INFORMATION SYSTEMS
ROBOTICS
HYDRAULICS AND PNEUMATICS
CONTROL AND SUPERVISION



Heineken selects SPIE as a maintenance partner. Read the press release.



SPIE and Saint-Gobain Sekurit develop their partnership. Read the press release.



SPIE lands first contract with Airbus in the United Kingdom, at the Broughton plant

Airbus, United Kingdom

THE BROUGHTON PLANT IN CHESHIRE, WHICH IS RESPONSIBLE FOR ASSEMBLING THE WINGS OF ALL OF THE AIRBUS FAMILY OF AIRLINERS, enjoys a long heritage of excellence in aircraft manufacturing. Already an Airbus partner for the past 15 years in France and more recently in Germany, SPIE will now provide maintenance and repair services at the prestigious factory, where such aviation classics as De Havilland's Comet and Mosquito were produced. The contract covers 24/7 planned and reactive maintenance work for the plant's mechanical and electrical assets, such as paint booths, compressors, boilers, sealing machines and vacuum delivery systems. The initial collaboration positions SPIE to bid on pan-European tenders for further maintenance works, which are expected to include riveting machines, wing support and transport frames. ■



HVAC engineering

Benecke Kaliko, Germany

SINCE 2005, SPIE has steadily broadened and deepened its cooperative relationship with Benecke-Kaliko AG, a manufacturer of technical and decorative surface materials for the automotive industry. After significantly reducing energy use and cutting CO₂ emissions by more than 24% at the Eislingen plant, SPIE is now going to build a new

power station with a boiler house for steam production and a cooling station for the supply of cooling water. In addition, the existing exhaust air purification system has been replaced with a regenerative thermal oxidizer (RTO) and sections of the pipelines supplying the plant have been upgraded and a new control system installed. ■



Automation and robotics

Renault, France

THE FIRST RENAULT AUTOMOBILE PLANT to be certified to ISO 14001 standards, the Sandouville facility produces most of the marque's premium vehicles. Over the years, it has steadily and substantially reduced its energy use and introduced particularly strict production standards. In this hyper-competitive environment, SPIE built the end-of-line automated

packaging unit for the stamped parts produced by the plant's giant stamping presses. From the mechanical design of the structure supporting the KUKA robots to the automation and robotics solution, the prototype was assembled and mounted in just two and a half weeks. It is now ready for deployment in other Renault plants around the world. ■



Energy efficiency

Saint-Gobain Sekurit, Germany

At the Saint-Gobain plant in Herzogenrath, near Aachen, SPIE has designed a particularly innovative solution to optimize compressed air production systems by recovering the heat from the compressors. ■



Industrial information systems

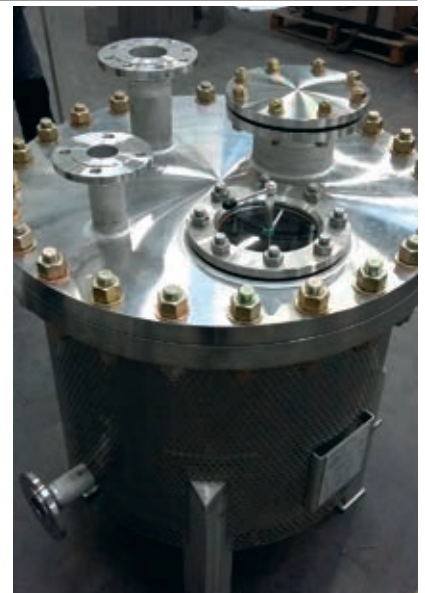
Capitaine Cook, France

The new manufacturing execution system (MES) deployed at the Capitaine Cook fish cannery manages all the processes by capturing and analysing data in real time. ■

Waste recycling

Solvay, Poland

TO RECOVER AND REUSE PROCESS WASTE from its plant in Gorzów, Solvay engaged SPIE to build eight reactors installed on the production lines. The solution was developed as part of the Move4earth™ project, supported by the European Union's LIFE+ programme. ■





COLLABORATIVE EXPERIENCE



APPRENTICESHIPS & TRAINING

Between the trainer and the Apprentice, trust is as important as learning.

CORPORATE SOLIDARITY

When co-workers decide to engage, it's the company's outlook that changes.

They have gained recognition for their personal success. Now they must succeed in a different way, combining their diversity to meet new challenges.

GENDER EQUALITY

The So'SPIE Ladies network, a novel approach to promoting gender equality.

E-LEARNING PLATFORM

With the digital revolution, every co-worker is helping to share knowledge.

SAFETY MANAGEMENT

On worksites, safety is everybody's business.

BUSINESS CASE

New graduates must produce ground-breaking solutions in only a few hours.

DIGITAL INNOVATION

From research to experimentation, SPIE and INSA are moving forward together.



SPIE'S CSR POLICY

SPIE's CSR commitment is in line with its values: proximity, performance and responsibility. It is organized around 4 pillars:

ENVIRONMENT: We strive to reduce our carbon footprint as well as those of our clients and partners thanks to our

SOCIAL: As a service company, our employees are our major asset. We care for them by striving to provide a safe work place, offering training and career progression opportunities, and fostering constructive industrial relations.

ECONOMY: We seek economic performance through strong business ethics, mutual trust and long-term relationships with all of our stakeholders.

SOCIETY: We promote diversity and encourage our people to dedicate their time for a sustainable world. We are committed to make the future better and are driven by our shared values of proximity and responsibility.



CSR at SPIE.
Watch the video.





COLLABORATIVE EXPERIENCE

BUILDING THE GROUP'S FUTURE TOGETHER

In its Corporate social responsibility (CSR) process, SPIE takes an aligned, consistent approach to human resources development, environmental stewardship and community outreach. This long-standing commitment is backed by deep synergies with stakeholders and the expertise of independent organizations like EcoVadis and Vigeo.

Led by the General Management Committee, the Corporate social responsibility governance system comprises several bodies:

- The Sustainable Development Department, which coordinates the CSR process across the organization.
- The CSR Committee comprised of representatives from the subsidiaries, which recommends CSR policies to the General Management Committee and supervises their implementation.
- The CSR Commission of the European Works Council, which gives employee representatives a voice in the process.
- The Responsible Purchasing Committee, which expresses our commitments to suppliers and contractors.

A HOLISTIC COMMITMENT, BUILT ON STRICT STANDARDS

Deeply committed to respecting human rights, SPIE has pledged to uphold the

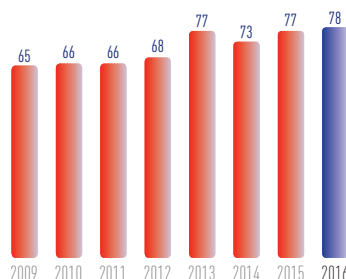
United Nations Global Compact's ten environmental, labour and ethical principles. We pay careful attention to employee relations and working conditions, and are proud of our long tradition of putting safety first. We also support diversity and equal opportunity, as well as professional growth, in particular through training, job transfers and promoting from within.

On the environmental side, we are steadily reducing our carbon emissions in a variety of ways, from introducing hybrid and electric vehicles in our Corporate fleet to helping customers recycle their electric and electronic waste.

To ensure ethical behaviour, all of our employees have pledged to apply our ethical business practices and can report any infringement of the rules to the Ethics Committee.

In regards to consumer and user issues, a quality process, certified by independent organizations, has been put into place. Lastly, to reaffirm our commitment to good Corporate citizenship, we are nurturing long-term partnerships with schools, supporting non-profit associations and participating in local economic development.

EMPLOYEES WORKING
IN UNITS WITH
ENVIRONMENTAL
MANAGEMENT
SYSTEMS CERTIFIED TO
ISO 14001 STANDARDS
as a % of total workforce





COLLABORATIVE EXPERIENCE

ASSERTING OUR CORPORATE SOCIAL RESPONSIBILITY

SPIE unveiled its new social and environmental responsibility policy in 2016 as part of a constant drive to strengthen operating procedures and internal controls. The policy is built on a comprehensive risk management approach and assertion of the Group's values.

DEVELOPING OUR LEADERSHIP VISION

SPIE's leadership is built on the values of an entrepreneurial community: closeness, responsibility and performance underpin the Group's goals and safety, strong ethics and an exemplary approach inform its principles of conduct. Every year, our management team is directly involved in numerous initiatives to strengthen our commitment. In 2016, SPIE UK launched a top management training programme to tackle emerging transformational leadership challenges and improve the company's performance. In France, SPIE Nucléaire organized a series of meetings for approximately 200 managers to raise awareness of the values endorsed by its leaders.

Gilles Landry, Director of Sustainable Development

"Social and environmental responsibility is developed on an ongoing basis in conjunction with the future of the business and of society. SPIE's priorities are therefore a function of the company's own specific environment, such as the safety of its employees working on building sites. They are also shaped by the stringent requirements that are part and parcel of being an international Group listed on the stock market that has demanding risk management and internal audit rules. Lastly, they are related to areas of the business that make an active contribution to a low carbon economy, including energy efficiency and renewable Energies."

DEVELOPING OPERATIONAL EXCELLENCE

In an increasingly competitive market, SPIE gives priority to constantly improving Corporate performance by updating existing processes and practices. In 2016, our Operational Excellence & Innovation Director led the roll-out of the Group's digitization programme based on a new, Lean Management-inspired organizational approach.

On the internal training front, SPIE launched an important initiative called the Internal Missions Programme (IMP) to promote a culture of internal control and risk management within the Group. From now on, all high-potential managers selected to take part in the SPIE Talents internal training programme will also take part in an internal audit assignment at one of the Group's subsidiaries with the support of staff from the Risk Control and Internal Audit Department. This will enable these "operational auditors" from a broad range of backgrounds to promote internal control while playing key business roles within the Group.



CSR Committee (from left to right): Christophe Santiago-Perez, SPIE Nucléaire; Claude Ranieri, SPIE Oil & Gas Services; Jane Bates, SPIE UK; Corinne Figuereo, SPIE ICS; Gilles Landry, SPIE Operations; Phillys Muller, SPIE GmbH; Pablo Ibanez, SPIE Operations; Hilary Harbaugh, SPIE Operations; Thierry Smagghe, SPIE Operations; Claudia Adler, SPIE Operations; Hedwig Van Lysebeth, SPIE Belgium – not shown: Andreas Schmutzler, SPIE GmbH.

FOSTERING AN ETHICAL BUSINESS APPROACH

To ensure strict compliance with business ethics and promote and maintain an internal culture based on trust and integrity, SPIE is constantly enhancing its rules and procedures. In 2016, the Group introduced new policies for gifts and Corporate sponsoring, and updated its guidelines to take into account new legislation passed to combat corruption, including the Sapin II law in France.

Business ethics training remains a Group priority, with modules available to cover the needs of the entire workforce. Internal ethics committees at subsidiary level are continuing with their efforts to take a more local approach in their relationships with stakeholders. Once the procedures have been outlined, SPIE intends to ensure that they are adhered to in the field by providing guiding principles that must be followed at all times.



One Planet.
Watch the video.

Hilary Harbaugh, CSR Manager

“The CSR Committee has established priorities for the Group, which include diversity, skills patronage, employee awareness and keeping our clients informed of our commitments. It has therefore organized initiatives to raise awareness of CSR among internal and external stakeholders with the support of specific communication materials. The introduction of a dashboard will also help us keep track of our progress. In addition to the work performed by the Committee, we must ensure that all of our departments and stakeholders support and adhere to our CSR approach to ensure it is a key performance driver. We will continue working towards this goal.”

SAFETY



Inspired by

LIAM MCMYLER,
General Manager, SPIE UK

STEPHEN MITCHINSON,
Apprentice Linesman, SPIE UK

Knowing how to protect yourself on worksites is a sign of true collective engagement. This is a requirement we meet on a daily basis, regardless of the challenges faced.



COLLABORATIVE EXPERIENCE

As the UK's number one provider of overhead line services, SPIE has opened its own specialized training centre in Cumbria. Trainees who are taught essential skills over the course of several months must first learn to manage the two primary sources of risk: electricity and working at height.

Although satisfied with SPIE's safety performance during the year, Liam McMyler never lets his guard drop. He reminds us of the very stringent policies and procedures put in place by the company to protect its employees. "For example, there is an exclusion zone around the bottom of the poles that no-one is allowed to enter when someone is working at height." Liam also shows us the full range of equipment that Stephen Mitchinson must learn to use properly to prevent the risk of a fall.

When it comes to safety, theory and practice go hand-in-hand. This takes the form of audits organized on a monthly basis with each individual employee, or at weekly safety meetings when everyone has the opportunity to speak to the site managers. As Liam explains, "We look at specific sections of the audit, such as near-accidents, and we listen to what each employee has to say." Stephen Mitchinson also stresses the importance of communication "to point out any dangers that exist and see what we can do to keep them in check."

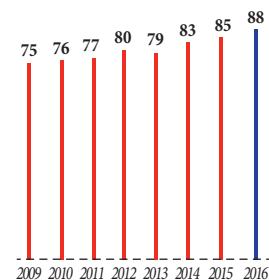
To optimize safety, management alone cannot be responsible for implementing initiatives. Employees must also get involved. Liam points out that there are WhatsApp groups and YouTube channels that employees can follow, as well as "safety champions" at each worksite. Upon completion of the course, trainees will have learned more than just the risks they face: "They will have the strength of character required to intervene when they see something dangerous," he adds. This awareness could one day save their lives.



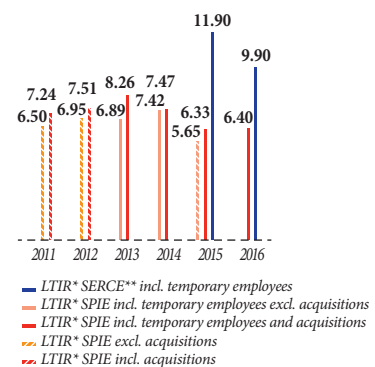
Watch the interview.

EMPLOYEES WORKING IN UNITS WITH HEALTH AND SAFETY MANAGEMENT SYSTEMS CERTIFIED TO OHSAS 18001/VCA/MASE STANDARDS

as a % of total workforce



LOST-TIME INJURY RATE (LTIR)



* LTIR: Number of accidents with lost time per million hours worked.

** SERCE: France's association of electrical and environmental engineering companies.



Health and Safety.
Watch the video.



Inspired by

CORINNE FIGUEROO,
*Business Director (Public
and Industrial Division),
SPIE ICS, France*

CAROLYN GINDEIN,
*IT Service Manager,
SPIE UK*

CÉLINE GOUDON, *Legal
Manager,
SPIE Est, France*

Women will only receive
true recognition if they
decide on it together.
The So'SPIE Ladies
network is there to help
them achieve this goal.

SO'SPIE LADIES



COLLABORATIVE EXPERIENCE

L launched in 2015, the So'SPIE Ladies internal network seeks to encourage women to play a full role in the Group's development. The network also aims to raise the Group's appeal among young graduates, and improve the gender mix in areas of the business that are still largely male-dominated.

Although from different backgrounds, these women have come together in pursuit of a common goal – obtaining recognition for the role played by women within the Group. Not only in relation to men, but first and foremost for themselves, as though a glass ceiling must be broken. "I joined the So'SPIE Ladies network to help female employees take the plunge," says Céline Goudon. According to Corinne Figuereo, "Female employees are more likely than their male counterparts to doubt their ability to rise to a particular challenge. Not only are they losing out as a result, but the company is too."

During their discussions, they realized that progress will only come if they get to the root of the problem. Carolyn Gindein saw this for herself when she attended a workshop where female and male roles were allocated by type of activity. She noticed that stereotypes still exist in the minds of both men and women. After the workshop, when she brought the topic up again, a male colleague admitted the extent to which he had been living by stereotypes without even realizing.

However, there is another, more objective reason behind the network. Women are isolated in male teams where they have difficulty making their voices heard, preventing them from fulfilling their true potential. "Some women working at operational level have told me that they were appreciated for their rigour and their worksite preparation," adds Céline Goudon.

In Corinne Figuereo's opinion, diversity is at risk: "If everyone has exactly the same thought processes, we will never be able to adopt a fresh approach. We need new ideas," she argues. The So'SPIE Ladies network intends to bring these new ideas to the fore.

A pilot mentoring programme at SPIE

SPIE carries out numerous initiatives to improve the role of women in business, through internal workshops, awareness campaigns in schools, and support for non-profit organizations such as *Elles bougent* in eastern France. One example is the 2016 pilot mentoring programme for several young, high-potential female employees, which is designed to encourage them to take on management positions with the help of a mentor.

Watch the interview.



Meet So'SPIE Ladies.
Watch the video.



COLLABORATIVE EXPERIENCE

INTRODUCING NEW PERFORMANCE MODELS

Keen to develop an open and agile environment, SPIE is taking steps to involve all of its employees in the company's transformation. Evidence of this can be seen in its ambitious digitization programme for its services, processes and internal ecosystem developed by its own in-house teams with the support of the Digital Core Team responsible for creating, coordinating and supporting Group initiatives.

ADAPTING TO THE DIGITAL ERA

To go beyond the constant exchange of skills that characterizes SPIE's network, the Group has decided to adapt its business to a fully collaborative model. In 2016, it rolled out Yammer, a social networking tool to support communities of expertise, and developed SMILE (SPIE My Interactive Learning Experience), a learning management system (LMS) devoted to improving knowledge sharing across Group subsidiaries.

SPIE also took steps to develop international partnerships, particularly through start-ups that play an increasingly important role in the provision of services. It also promotes the emergence of innovative ecosystems. In 2016, a major partnership with INSA Lyon led to the creation of a teaching and research chair devoted to the Internet of Things (IoT), bringing together an extensive network of academic and industrial partners. Also during the year, an internal training programme on the Internet of Things was launched, with the aim of raising awareness among managers of the future challenges Internet will pose.



Inauguration of the IoT chair.
Read the press release.

CHANGING OUR BUSINESS MODELS

Positioned on increasingly globalized and competitive markets, SPIE has set itself the goal of continuous improvement. To this end, two new subsidiaries were created in France, SPIE Facilities and SPIE CityNetwork, to offer innovative services to clients in the Facility Management and telecoms sectors. The Group has also developed the "One SPIE" approach to improve synergies between Group entities in each country of operation, and to forge a closer relationship with its customers and partners. An example of the approach is the One SPIE Fair held in Hanover, Germany in 2016.

Transforming its business lines is also a major focus of competitiveness as the Group takes part in increasingly innovative and complex projects. In Cumbria in the UK, the Group opened its first training centre for overhead power line engineering in 2016. In France, the Beligneux centre has become a benchmark for providing training in the highly-specialized skills required in the nuclear industry. At a time of growing convergence between multi-technical services and digital technologies, some subsidiaries have also strengthened their Apprenticeship programmes. In Germany alone, 81 new Apprentices were taken on in 2016 to learn cutting-edge technical skills.



On 3 November 2016, SPIE ICS and INSA Lyon jointly inaugurated a teaching and research chair devoted to the Internet of Things (IoT).

DEVELOPING THE GROUP'S INTERNATIONAL FOOTPRINT

SPIE's internationalization continued in 2016 on the back of numerous initiatives in its subsidiaries, including the international volunteer programme (VIE), training in several countries, and internal mobility efforts. The *Ambition Manager* training programme was held in France and the Netherlands, with a focus on a multi-technical approach that combines expertise from SPIE's European subsidiaries. Based on a similar successful programme in eastern France, the "Don't Let Safety Take a Holiday" programme in the UK focused on reducing accidents during the holiday period. Lastly, SPIE's European works Council welcomed more members from the European Union.



SPIE honours its young graduates. Read the press release.



At the One SPIE Fair in Hanover in 2016, SPIE unveiled its complete range of international, multisector solutions.



For the 3rd Business Case meeting in Paris, 14 Dutch students had to find a solution to a SPIE case study during their train journey to Paris.



Inspired by

BERTRAND HEIM,
*Human Resources Manager,
SPIE Operations, France*

CATHERINE DUBOIS,
*Human Resources
Development Manager,
SPIE Operations, France*

ROB HASTINGS,
*Learning & Development
Manager, SPIE UK*

MARIELLA LADEUILLE,
*Human Resources
Development Manager,
SPIE IDF NO, France*

PATRICIA LENE,
*Human Resources
Development Manager,
SPIE IDF NO, France*

The value of knowledge depends on the extent to which it is shared and the benefit it bestows. This is why new communities of expertise are developed.

E-LEARNING

*SPIE Est at the time of the interview.

**SPIE ICS at the time of the interview.



COLLABORATIVE EXPERIENCE



Run as a pilot scheme by four subsidiaries, the SMILE (SPIE My Interactive Learning Experience) programme will be launched in the near future. This learning management system (LMS) platform will offer three types of training: general business courses, Corporate subjects such as ethics, safety and a specific CSR training course, and advanced technical training focusing on communities of expertise.

By offering greater access to training, improving knowledge sharing and developing technical expertise, the SMILE programme is more than a simple exercise in making training material available online. "We decided to make content developed by our own technical experts available on our own platform for all of our technicians and engineers," explains Patricia Lene. This approach is fully in line with the Group's digital transformation as it adapts to its rapidly changing markets.

More generally, the use of e-learning modules is expected to revolutionize training habits. "In eastern France,"

says Bertrand Heim, "our employees are spread around various agencies, maintenance and worksites. With SMILE, they will no longer need to travel to attend training courses. "In Rob Hastings' opinion, SMILE offers greater autonomy and flexibility. "Rather than attend an entire training course in one go, users will be able to take advantage of ten minutes of free time to log on, save their work, and continue the next day until they complete the programme."

In fact, it is the relationship between knowledge and users that is changing. "We will be able to broaden and enhance our programmes, offering more content, and more images and training courses organized by experts," explained Bertrand Heim. At the same time, Catherine Dubois is hoping to develop synergies around the platform: "The subsidiaries will have more or less specific modules that in the long term can be complemented with faster, more direct information on our new businesses."

Digital culture: a key to Corporate transformation

Through its Skills Development Centre comprising the Technology Institute and the Management School, SPIE promotes new ways of working in a digital ecosystem. The Centre offers many training modules adapted to the company's rapidly changing environment, including an introduction to digital culture, connected objects and the Internet of Things, and innovative applications such as Building Information Modeling (BIM).

Watch the interview.





Inspired by

WALTER WIDMANN,

Project manager, SPIE GmbH

AMIN TOURE,

Apprentice, SPIE GmbH

Training means embarking on an adventure to reach your goal. It's about dreaming that one day, the Apprentice will become the trainer.

APPRENTICESHIPS



COLLABORATIVE EXPERIENCE

In addition to helping to meet its recruitment targets, the Apprenticeship programme enables SPIE to teach best practices to young trainees, with the support of employee trainers. Of the 56 junior employees who completed their training in 2016 in the German subsidiary, almost all decided to pursue a career with the Group.

Amin Toure from Benin has been on an Apprenticeship with Siemens for the past four months. His trainer, SPIE's Walter Widmann, is accompanying him on the first phase of his training. It's a big opportunity for Amin, a young refugee who arrived in Germany a short time ago, like many of his fellow countrymen who have come seeking work. It is also a considerable challenge, as he will have to quickly learn a language he does not know, including very specific electrotechnical engineering vocabulary.

Amin was drawn to SPIE by his desire to learn and grow in an international group. "SPIE is a major corporation that employees people from all over the world, including abroad. Since they understand our situation, they accept us for who we are," he explains. Walter Widmann confirms this, adding: "We don't differentiate between Amin and the other Apprentices. At first, he had some problems with the language, but they have been solved. Today, he's considered a good Apprentice and a fully-integrated member of the team."

As far as the subject matter is concerned, Amin tells us that he was very interested in the technical nature of the training. "Things are done differently where I come from. Here, we are taught all the theory of electrotechnical engineering, which gives me a better understanding." And he has the support of his trainer to ensure that he makes progress. "Walter is always there for me, helping me to solve problems when something goes wrong." Walter concurs with a SMILE, and when we ask him what his Apprentice will go on to do, he replies with encouragement: "He could be a technician, or a foreman if he wanted to. Or he could continue studying and become an engineer. Anything is possible."

Five Apprentices honoured in Germany

In 2016, SPIE GmbH's five best Apprentices of the year were awarded their diplomas at a management seminar. The Group currently employs 249 Apprentices in Germany in the industrial, technical and commercial sectors. At the beginning of the new training year in September 2016, 81 new Apprentices joined SPIE GmbH. At a kick-off event organized in Dusseldorf, they met their trainers and learned more about the company.

Watch the interview.





COLLABORATIVE EXPERIENCE

REDUCING OUR ENVIRONMENTAL FOOTPRINT AND THAT OF OUR CUSTOMERS

Given SPIE's involvement in businesses that strive to improve quality of life, the Group's goal is to implement an environmental protection policy that is second to none. After attending the UN Paris Climate Change Conference (COP21), the Group reached a new milestone in 2016 by participating in the Dutch Windwheel project in Rotterdam, a global first in bioclimatic architecture.

REDUCING THE ENVIRONMENTAL IMPACT OF OUR BUSINESS

Currently, 78% of SPIE employees work under an environmental management system certified to ISO 14001 or equivalent standards. The system is applied along the entire value chain, from equipment procurement through to the recycling of electrical and electronic waste. In 2016, the Group stepped up its efforts in energy efficient buildings, including the opening of its new headquarters in Cergy Pontoise, and improved its transport-related impact by increasing its fleet of electric and hybrid vehicles and encouraging car pooling.

Attentive to changes in EU regulations, the Group decided to implement an ISO 50001 certification programme in its subsidiaries. This will be beneficial not only to the company, but also to its customers who are seeking to improve their energy management systems. Through improved Facilities management, fleet management on a per-use basis, and raised awareness of eco-friendly behaviour, energy efficiency contributes to changing daily practices and creating a culture of environmental responsibility.

IMPROVING CUSTOMERS' ENERGY PERFORMANCE

A specialist in energy efficiency, SPIE offers its customers comprehensive, integrated solutions to save energy in transport and energy infrastructure, as well as commercial buildings and industrial production sites. In France, the 2016 renovation of the Saint-Chamond aquatic centre in the Loire Valley – including the heating, air-conditioning and water treatment systems – led to a 44.5% reduction in the amount of gas and power consumed.

In Germany, 160,000 tonnes of CO₂ were avoided during the year by customers, with those in the industrial sector putting in a particularly impressive performance. In Berlin, SPIE Energy Solutions GmbH was awarded first prize at the German Cooling Prize awards for developing a combined heat, power and cooling system which enabled pharmaceutical company Takeda GmbH to save €1.1 million.



SPIE renovates the Saint-Chamond aquatic centre, with the goal of achieving energy savings of 44%.
Read the press release.



Europa, SPIE's corporate headquarters, an energy efficient building and a showcase for its expertise.
Watch the video.



SPIE Energy Solutions was awarded the German Cooling Prize in Berlin in the presence of Barbara Hendricks, German Minister for the Environment.

PREPARING FOR A LOW-CARBON SOCIETY

While environmental protection is a priority, the approach taken is being transformed by the digitization of services. SPIE is promoting innovation in numerous areas, offering comprehensive electromobility solutions through to new applications for the Internet of Things in smart cities to manage vehicle flows, for example, or adapt lighting to suit user behaviour. The Group's innovative approach extends to buildings, where it offers security and energy hypervisor solutions, in addition to supervisory systems for workstations.

More generally, the Group supports new development models, such as the circular economy in industry, and resource conversation in the regions. In the Netherlands, SPIE has decided to focus on strong growth in the navigable waterways sector. For example, the North Sea Canal maintenance project, launched in 2016, will improve the sustainability of traffic flows and renovate the De Cruquius pumping station, the biggest in Europe.



A showcase for SPIE's new services in Burgundy, this "breathing building" will bring about a ten-fold reduction in the regional headquarter's energy bill.



SPIE staff take regular eco-driving lessons on a simulator and receive tailored advice from an instructor.



Inspired by

KAREN LUZIGNANT,
*Head of Department, Business
Operations in Eastern France,
SPIE ICS, France*

JEAN-MARIE GORCE,
*Lecturer and Researcher,
Department of Telecommunications,
Services & Uses, INSA Lyon,
France*

The Internet of Things
is raising questions about
technology and society.
The real challenge today
lies in successfully
connecting both through
the introduction of
new practices.

INTERNET
OF THINGS



COLLABORATIVE EXPERIENCE

In an area normally reserved for the industrial sector, SPIE and INSA Lyon recently inaugurated a teaching and research chair devoted to the Internet of Things. In addition to advanced technologies, their partnership will focus on developing a new approach centred around user services and sustainable development.

Karen Luzignat readily admits that customers are keen to discover new connected object solutions in areas ranging from intelligent flooring systems to air-conditioning systems regulated in accordance with the surrounding environment. But the Internet of Things is not like any other product, particularly when it comes to designing new solutions. "Research has to be reconciled with operating results to answer the long-term questions our customers are asking. This pragmatic approach is what they appreciate most about SPIE."

Jean-Marie Gorce confirms this assessment. "When we install sensors in a restricted environment, they must have a lifecycle of several years, which makes energy the number one problem. We also have to ensure that data can only be accessed under certain conditions, know how it will be treated, and ensure its ownership is protected." In his opinion, SPIE has what it takes to implement this approach with the support of research labs.

The chair will therefore provide assistance to the work of the CITI (Centre for Innovation in Telecommunications and Integrated Services) carried out by international researchers. "It's about building advanced expertise in an area that for the last 15 years has been referred to as the sensor network," he explains. Karen Luzignat highlights the synergies between SPIE and INSA. "In the end, we are both looking for the same thing. We want to learn more about how digital technologies can provide new services to transform our everyday lives." This common goal and the values shared by the partners for many years were the driving force behind the project.

SPIE and INSA Lyon committed to the energy transition

Sytare is one of the SPIE-INSA partnership's research projects. The aim is to enable connected objects to collect the energy generated in their environment through vibrations, heat or even electromagnetic waves. This would involve the use of non-volatile RAM that does not lose information when the power supply is turned off. This approach is based on a new software architecture, which has recently given rise to the first demonstration module.

Watch the interview.





Inspired by
NAJLA BARHOUM,
Accountant,
SPIE Belgium

The most personal thing we can offer is our time. It's up to each individual to decide what that time is worth and what it represents.

TIME FOR SOCIETY



COLLABORATIVE EXPERIENCE

SPIE Belgium has taken the step of allowing around one hundred employees to take one working day and devote it to a social or environmental project with their colleagues. Rather than going down the traditional donations road, the Group has taken a new approach to encouraging its employees to get involved in community projects that reflect the Group's values while simultaneously bolstering team spirit.

There is no lack of ideas to contribute to social well-being, with projects including helping the most vulnerable members of the community, organizing DIY workshops for the disabled, or cleaning up a wildlife park. For Najla Barhoum, SPIE's "Time for Society" programme has come at just the right time. "Instead of thinking of the company solely in terms of turnover, we are building much warmer relationships with our co-workers and the outside world. It's a great idea," she adds.

For Najla Barhoum and her colleagues, the first initiative involved a meeting with refugee families at a Red Cross site. "After a short introduction to the team, we got to know each other really quickly. They were very open to us, and very touched by our presence." What surprised Najla immediately was not the material help they might need, but rather the need to tell people what happened to them. Some of them also wanted to learn more about life in Belgium, to gain a better understanding of a land unknown to them.

After a baking class that offered a delicious afternoon snack to the children after school and a moment of respite for the refugees, Najla and her colleagues realized that it is difficult for them to forget what they have been through. "Emotionally, reactions were mixed. Some people were sad, others completely lost. At the same time, others laughed a lot." Before they left, some of SPIE's employees with young children gave the families clothing and equipment that they had brought along with them. This will help the families prepare for the next step of their journey.

In the Paris region, SPIE offers its time to the poor

At a seminar, 140 SPIE ICS employees spent two hours putting together personalized gift boxes for low-income families. This show of solidarity was organized in partnership with the *Grenier des 4 Saisons* in Puteaux, a "social supermarket," with help from the *Ça me regarde* cooperative. SPIE intends to organize similar initiatives throughout the year.

Watch the interview.





COLLABORATIVE EXPERIENCE

SHARING OUR CONVICTIONS WITH AS MANY PEOPLE AS POSSIBLE

SPIE intends to take specific measures to promote new social practices and spread its core values throughout society. In 2016, it supported the Handi'Cap 2016 Himalaya expedition, a world first to show that disability can be overcome, even in the most extreme conditions.

TURNING DIVERSITY INTO OPPORTUNITY

Improving team diversity, ensuring knowledge is handed down from one generation to the next, building teams with a multidisciplinary profile, and taking a new approach to disability... In a Group boasting 120 nationalities, recognizing diversity means much more than simply taking different talents into account. In fact, it is a powerful driver of performance and innovation.

Through its new So'SPIE Ladies network, which aims to change the role of women in the Group, a mentoring programme has been created to make it easier for high-potential female employees to reach important management positions. At the same time, steps will be taken to measure the collective progress made within the company in this area. Another example of these efforts was the 4th SPIE Disability Month involving employees at over 60 Group sites. This year's theme was "disability and innovation." The event provided an opportunity to raise awareness of the many improvements that have been made at the request of our disabled members of staff, such as adaptable workstations and smart clothing for healthcare.



The 2016 *La Parisienne*
women's race.
Watch the video.



Time4Society.
Read the press release.

COMBINING LEISURE TIME WITH COLLECTIVE ENGAGEMENT

As a stakeholder in the development of active citizenship through support for local non-profit organizations and public-private partnerships, such as the Nantes classical music festival (La Folle Journée), SPIE has launched a new initiative to enable its teams to become more directly involved in programmes to help the community. In Belgium, the Group has joined forces with Time4Society, giving staff 100 working days to devote to social and environmental projects, such as cleaning and weeding parks, helping vulnerable members of society, or organizing DIY workshops for the disabled. All of the Group's subsidiaries will gradually become involved. Other projects include helping young people in Marseille's poorest neighbourhoods in partnership with the "Nos quartiers ont du talent" (Our neighbourhoods have talent) association, and supporting bone marrow donation, organized with the help of the German Bone Marrow Donor Centre (DKMS).



185 employees from all over Europe took part in the La Parisienne women's race dedicated to the fight against breast cancer.

SPIE employees also know how to show solidarity through their work. In early 2016, the Group's teams in the north of the UK helped restore power to some 23,000 homes that had been left without electricity after three large storms caused torrential rain and flooding in parts of the country.

SUPPORTING STAKEHOLDERS

Through its European profile and local businesses, SPIE contributes to economic and social progress alongside many stakeholders, including professional associations and trade unions, such as the electrical and climate engineers union (SERCE) and the Smart Buildings Alliance in France, and the Construction Industry Council (CIC) in the UK.

The Group also backs European initiatives, such as the Shift Project, a think tank committed to fighting climate change by influencing public policymakers.



SPIE once again sponsored the prestigious La Folle Journée classical music festival in Nantes. Nature was the theme of the 2016 event.



Belgium: SPIE was ranked Top Employer for the 10th consecutive year.



Inspired by
MAARTJE MACHIESEN,
HR Trainee, SPIE Nederland
MARGOT JASPARS,
*Technical Management Trainee,
educated at the Technical
University of Eindhoven
in the Netherlands*

When you are so attracted to something that you want to make a career out of it, nothing will stand in your way. By deciding what you want to do, you are already striving for excellence.

BUSINESS CASE



COLLABORATIVE EXPERIENCE

These students at technical universities in the Netherlands are about to undergo a brand new experience that begins by taking the Thalys train to Paris. With only the journey time to solve the renowned SPIE Business Case, they then find themselves before a panel of Dutch and French managers in front of whom they must defend their innovative design solutions.

For Margot Jaspars, the 2016 winner, it all started because of her curiosity. "I had never heard of SPIE before, but I was interested in the project and the company seemed really interesting," she says. Maartje Machielsens, in charge of the Business Case Programme, ensured each stage of the programme went smoothly. As Maartje explains, "First, we had to attract students using networks such as LinkedIn." Of the 45 students interested in the programme, 14 will be selected, half of them women. Their involvement is crucial to improving gender equality within the Group.

In the third edition of the Business Case Programme, SPIE decided to combine two themes: the green economy and digital transformation, with a focus on new urban trends. This was a challenge for Margot, who was more used to dealing with questions about architecture or land planning. She explains, "We didn't know anything about energy, but we had to invent a self-sufficient, environmentally-friendly, economical energy system." It paid off. Of the eight finalists, she is one of the three that will join the Group.

"Even for those who didn't make it through", she said, "the feedback from the experience gained has been very positive." Margot seems to have been very inspired by the entire programme. "It was the first application I had produced for a company. I really got a good feeling from SPIE. I liked the atmosphere during the day I spent with them." Her training to become a Technical Manager begins shortly in the Netherlands. This will give her the opportunity to test her application and even invent new ones.

In France, SPIE introduces Ecole Polytechnique students to the various careers it offers

As a stakeholder who promotes strong relationships between business and schools in several European countries, SPIE unveiled its Cloud and Operated Services activity to students at the prestigious Ecole Polytechnique, France's most international university. With a view to selecting an internship for the second year of their studies, students learned about SPIE ICS and its digital services at one of the Group's data centres in Paris.

Watch the interview.





GLOBAL COMPACT: A WORLDWIDE COMMITMENT

In 2003, SPIE pledged to support the United Nations Global Compact, which invites companies to embrace, support and enact, within their sphere of influence, a set of core values in the areas of human rights, labour standards, the environment and anti-corruption.

	<i>Principles</i>	<i>Examples of application at SPIE</i>
HUMAN RIGHTS	<ul style="list-style-type: none"> • Businesses should support and respect the protection of internationally proclaimed human rights, within their sphere of influence; and • make sure they are not complicit in human rights abuses. 	<ul style="list-style-type: none"> • Deployment of the OHSAS 18001 (or equivalent) occupational health and safety management system. • International business travel safety guide. • National agreements in Africa and the Middle East to employ locals. • Stress management agreements. • Supplier CSR audits with EcoVadis.
LABOUR	<ul style="list-style-type: none"> • Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; • the elimination of all forms of forced and compulsory labour; • the effective abolition of child labour; and • the elimination of discrimination in respect of employment and occupation. 	<ul style="list-style-type: none"> • A forum for social dialogue within the European Works Council. • CSR committee responsible for such initiatives as: <ul style="list-style-type: none"> - improving employment opportunities for the disabled; - increasing gender parity; - providing work opportunities for the young as well as for older employees; - promoting diversity. • Supplier CSR audits with EcoVadis.
ENVIRONMENT	<ul style="list-style-type: none"> • Businesses should support a precautionary approach to environmental challenges; • undertake initiatives to promote greater environmental responsibility; and • encourage the development and diffusion of environmentally friendly technologies. 	<ul style="list-style-type: none"> • Deployment of the ISO 14001 environmental standard. • Participation in the Galerie des Solutions show during COP21. • Extension of the carbon footprint analysis programme. • Environmentally friendly management of the Corporate vehicle fleet and eco-driving courses for employees. • Deployment of electric vehicles and hybrids within the Corporate vehicle fleet. • Environmentally friendly digitization and reprinting of Corporate publications. • Environmental criteria used to assess suppliers. • Special training programmes at the SPIE Technology Institute. • Energy efficiency projects and low-carbon solutions for our customers.
ANTI-CORRUPTION	<ul style="list-style-type: none"> • Businesses should work against corruption in all its forms, including extortion and bribery. 	<ul style="list-style-type: none"> • Ethics charter, handbook on ethical business practices. • Ethics Committee. • Services Agreement Procedure. • Training in business ethics, with a special module on the Bribery Act in the United Kingdom. • Supplier CSR audits with EcoVadis.



Learn more about
the Global Compact.
www.unglobalcompact.org

SPIE SUPPORTS HANDI'CAP 2016 HIMALAYA

With a long-standing commitment to the social inclusion and professional integration of disabled persons, SPIE supported Handi'Cap 2016 Himalaya, a sporting expedition designed to show that disability can be overcome, even in the most extreme conditions.

After a year of physical and logistics preparations, the expedition was completed successfully. 14 seasoned and trained sports professionals took part, including 6 disabled and 8 non-disabled persons. Equipped with all-terrain wheelchairs, handbikes, tandems and mountain bikes, the team set out along the highest motorable road in the world. After the Ladakh slopes, they reached the Pensi La Pass at 4,400 metres, before climbing to the Khardung La Pass on the ancient trade route between northern India and Kashgar in China's Xinjiang Province.

Watch the video.



At last, they reach the Khardung La Pass at 5,350 metres, according to their altimeters. Six of them made it under their own steam: Jerome and Camille, both partially paralysed, rode a tandem, a world first. Jacques, who has muscular dystrophy, rode a mountain bike, as did Catherine, Claude and Jean-Claude.



Riding past the foot of the Purog Kangri Glacier, the world's third largest, covering 422 square kilometres, along the Suru Valley in the region of Ladakh.

CSR INDICATORS

Committed to the green economy and guided by its core principles, SPIE deploys a Corporate social responsibility process that takes into consideration every stakeholder.

Social	2016	Scope	2015	Scope
TOTAL WORKFORCE¹ *	37,628	World	37,662	World
Europe	34,228		33,509	
Asia	594		981	
Middle East	1,175		866	
Africa	1,631		2,305	
Other	0		1	
WORKFORCE BY BUSINESS		World		World
Multi-technical regional services	28,740		28,093	
SPIE ICS (France & Switzerland)	3,584		3,611	
SPIE Nucléaire	2,106		2,118	
SPIE Oil & Gas Services	3,198		3,840	
WORKFORCE BY JOB CATEGORY*		World		World
Operators	13,609		13,446	
Administrative employees, technicians and supervisors	17,331		17,455	
Managers	6,688		6,761	
EMPLOYMENT				
New hires ²	2,512	World	2,343	World
% of workforce on permanent contracts	89	World	88	World
Average length of service	10.7	World	10.5	World
DIVERSITY				
% of employees who are women*	13	World	13	World
% of managers who are women	14	World	14	World
Average age	42	World	42	World
% of employees over 57*	10	World	10	World
% of employees under 26*	8	World	8	World
Number of nationalities represented in the Group	118	World	120	World
% of employees with a disability	5	France	4,84	France
TRAINING				
Training outlays as a % of payroll	3.18	Europe	3.03	Europe
% of employees on work/study contracts	3.91	Europe	4	Europe
CAREER OPPORTUNITIES AND EMPLOYER APPEAL				
Number of partnerships with schools and universities	154	World	150	World
SOCIAL DIALOGUE				
Number of collective bargaining agreements signed during the year*	77	World	83	World
EMPLOYEE SHARE OWNERSHIP				
Employee shareholders as a % of the workforce	42	World	54	World

1. Number of employees on payroll at 31 December, including acquisitions.

2. New hires on permanent contracts, excluding acquisitions.

Occupational Health and Safety

	2016	Scope	2015	Scope
OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM				
% of employees working under an OHSAS 18001-certified or equivalent ¹ system	89	World	85	World
ACCIDENTS² INVOLVING SPIE EMPLOYEES*				
		World		World
Total recordable injury rate ³ (at constant scope of consolidation)	9.6		9.9	
Total recordable injury rate (including acquisitions in 2016)	9.6		9.8	
Lost time injury rate (at constant scope of consolidation)	6.2		5.7	
Lost time injury rate (including acquisitions in 2016)	6.2		5.7	
ACCIDENTS INVOLVING SPIE EMPLOYEES AND TEMPORARY WORKERS*				
		World		World
Total recordable injury rate (at constant scope of consolidation)	10.5		10.9	
Total recordable injury rate (including acquisitions in 2016)	10.5		10.9	
Lost time injury rate (at constant scope of consolidation)	6.4		6.3	
Lost time injury rate (including acquisitions in 2016)	6.4		6.3	
FATAL ACCIDENTS				
	1	World	3	World

1. VCA in Belgium.

2. Number of accidents per million hours worked.

3. Number of accidents with or without lost time, per million hours worked.

Environment

	2016	Scope	2015	Scope
ENVIRONMENTAL MANAGEMENT SYSTEM				
% of employees working in ISO 14001-certified units	78	World	77	World
WASTE MANAGEMENT				
% of permanent Facilities with a waste storage and sorting area	73	Europe	71	Europe
Tonnes of waste electrical and electronic equipment collected from customers in partnership with Recylum	160	France	142	France
ENERGY USE AT PERMANENT FACILITIES*				
Electricity used, in millions of kwh	44.3	World	49.3	World
Gas used, in millions of kwh	26.7	World	24.3	World
CORPORATE VEHICLE FLEET				
Fuel used, in millions of litres	32.7	Europe	29.5	Europe
Average carbon emissions from Corporate vehicles on a long-term lease, in grams of CO ₂ /km	128	Europe	138	Europe
Average carbon emissions from long-term lease vehicles added to the fleet during the year, in grams of CO ₂ /km	119	Europe	115	Europe
Number of electric and hybrid vehicles	639	Europe	644	Europe

Responsible Purchasing

	2016	Scope	2015	Scope
SUPPLIER CSR AUDITS*				
% of total purchases from suppliers audited for CSR performance	30	World	26	World
SOLIDARITY PURCHASING				
Amount of purchases with protected sector (EA, ESAT, etc.) in millions of euros	1.6	France	1.6	France

*Data verified by our Statutory Auditor in accordance with French regulations and more particularly Article 225 of the Grenelle II Act.

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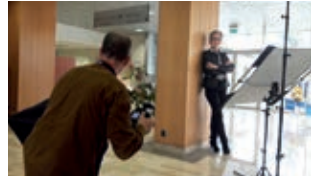
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Find out about our
locations around
the world.



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