



ANNUAL
REPORT
2016

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LOCATIONS

23 Altawest sites



Engineering centres

- Bourg-la-Reine
- Jeumont
- Puteaux
- Nantes
- Grenoble
- Étupes

Industrial sites

- Jeumont
- Champagne-sur-Seine
- Carquefou
- Vadodara - IN
- Nantes
- Elblag - PL
- Étupes

Sales offices

- Abu Dhabi - UAE
- Rio de Janeiro - BR
- Mumbai - IN
- Delhi - IN
- Kolkata - IN
- Pune - IN
- Hyderabad - IN
- Sarrebruck - DE
- Nyköping - SE

Waste-to-energy plant operations

- Pithiviers
- Noyelles-sous-Lens
- Chinon

Biomass power plant operations

- Brignoles



ALTAWEST GROUP IS AN EQUIPMENT MANUFACTURER AND CONTRACTOR ADDRESSING THE ENVIRONMENT AND ENERGY MARKETS.

Present at every stage of the energy production and transformation chain via its portfolio of highly respected subsidiaries Jeumont Electric, Leroux & Lotz and Inova, Altawest is positioned as an active player in energy transition, both as an industrial partner and a facilities operator. With its 1,000-strong workforce and focus on innovation underpinned by a permanent R&D drive, Altawest delivers solutions with high added value technologies that provide enhanced industrial and energy performance to its customers in over 70 countries.

ACTIVITIES



Energy



Environment



Industries



Oil & Gas



Marine

BRANDS



Designs and builds power generation and conversion equipment (alternators, electric motors, power electronics, command and control systems)



Designs and builds boilers and gasifiers for waste, biomass and complex fuel processing facilities



Operates waste energy recovery units, biomass and solid recovered fuel power plants



Generates power from biomass. Green energy in the south of France

MESSAGE FROM THE CHAIRMAN

“ Reinforce technological differentiation ”

In a context marked by global energy transition, tighter environmental and economic standards, increased focus on local resources and a changing regulatory landscape, Altawest Group is committed to an ongoing process of adapting to a fast-changing energy market – a market that represents one of the core challenges facing today’s society and future generations.

The Altawest Group is an agile business: in 2016, a decade after it was founded, it strengthened its position in the energy production market by acquiring new skill sets, reaffirming its identity as an equipment manufacturer and focusing its activities on business segments offering sustained growth.

This strategic realignment led Altawest to withdraw from low added value service activities unrelated to the manufacturing of its products. It also opted out of its turnkey waste-to-energy plant construction business, as this requires an overly large critical mass.

By phasing out Inova Construction, Altawest will be better positioned to selectively obtain new contracts for delegated public services and waste-to-energy plant operation, and to play a greater role in developing projects for biomass and solid recovered fuel power plants. The commissioning during 2016 of the Inova-designed biomass power plant in Brignoles, southern France, illustrates Altawest’s ability to deliver appropriate solutions to local energy challenges, as well as the good fit between the synergies deployed by the various Altawest subsidiaries when successfully delivering complex projects.

Altawest’s new strategic focus is also reflected in the Group’s positioning as a contractor able to deliver complete equipment solutions tailored to its clients’ varied business lines, through new offerings from Leroux & Lotz Technologies and Jeumont Electric.

Altawest is broadening its role as an OEM through developing and marketing its industry-specific solutions. For Jeumont Electric, this will take the form of an extension of its product offering to include drives and controls of rotating machines.

In 2016, Altawest Group continued to consolidate its presence in specialist naval and nuclear market segments via its Jeumont Electric subsidiary. A highlight was the contract to supply propulsion packs to Australia’s deep-water submarine programme in partnership with DCNS - Naval Group.

The Group has also increased its investment effort, including the decision to build Innov’Energy, the first energy recovery R&D platform and pilot facility able to operate in combustion or gasification mode, with a bubbling or circulating fluidised bed, the construction of which started in March 2016. This strategy will ensure that Altawest is perfectly positioned to anticipate a return to growth in the cogeneration market, driven in large part by new obligations under France’s Energy Transition for Green Growth Act and incentive measures put in place by public authorities.

These changes were supported by measures to strengthen governance of Altawest Group, including the creation of the role of Chief Executive Officer in June 2016. We have also strengthened our sales teams, reflecting the Group’s determination to increase customer focus and develop closer customer relationships.

Altawest Group is now firmly positioned at the centre of the value chain as an equipment manufacturer and supplier of high added value solutions to integrators. The Group is therefore well-placed to begin a new phase in its development, winning new business that will make it a leading force in energy efficiency technologies and their applications.

“ Boost international positioning — Develop services to customers ”

Philippe GARELLI
Chairman

EXECUTIVE COMMITTEE

Stronger governance



Philippe GARELLI

Chairman, Altawest



Brahim AMMAR

CEO, Altawest & Chairman, Jeumont Electric



Assia GAOUAR

Head of Structured Finance, Altawest



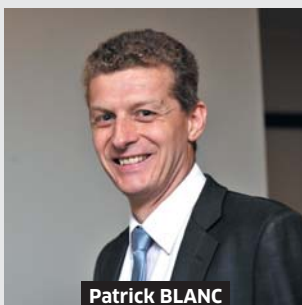
Emmanuel AUGEREAU

General Counsel, Altawest



Huu-An PHAM

Administrative and Finance Director, Altawest



Patrick BLANC

CEO, Leroux & Lotz Technologies



Jean-Marc SIBBONI

Development Director, Altawest



Dominique DUDA

Development Director, Inova Group

HIGHLIGHTS

Energy across the board

JANUARY

Jeumont Electric carried out maintenance on propulsion and energy generation equipment on board of two Scorpène-class conventional submarines - Periodic Intervention for Maintenance and Repair, Scorpène Malaysia: Tunku Abdul Rahman and Tun Abdul Razak. This maintenance operation was the vessels' first major out-of-service technical intervention and is a testament to Jeumont Electric's capacity to deliver its services in sensitive environments.



JANUARY

Leroux & Lotz Technologies booked an order from the Séché Group in Laval, western France, for a 15 MWth circulating fluidised bed boiler for refuse-derived fuels.

This project illustrates the advanced technology that Leroux & Lotz Technologies is able to deliver for energy recovery from this next-generation fuel, which is being closely monitored by authorities throughout Europe.

FEBRUARY

Sylviana, the biomass power plant in Brignoles, southern France, entered service. The Inova Var Biomasse power plant, owned at 65% by Altawest and 35% by Caisse des Dépôts, is the fruit of a project submitted during the CRE4 tender round held by the French Energy Regulation Commission (CRE) in 2010. It represents a €90m investment, with 80% backed by Caisse d'Épargne Provence-Alpes-Corse, Caisse d'Épargne Côte d'Azur and Bpifrance. Sylviana is a local project, both in terms of its use

of an available resource, biomass, and the energy it generates. Sylviana is a local response to the challenge of energy transition.

The plant generates 168,000 MWh annually, equivalent to the energy needs of 42,000 local households. 180,000 tonnes of biomass are needed every year for the boiler to operate, avoiding the emission of 138,600 tonnes of CO₂.

25 months
to create a showpiece facility



MARCH

Construction began on Innov'Energy, the R&D technology platform.

Innov'Energy is a platform for R&D and fuel classification that can operate alternately in combustion and gasification modes, depending on the fluidised bed technology employed. The inauguration on 18 January 2017 was attended by Altawest's chairman, Philippe Garelli, as well as Roland Gérard, general director of the regional ADEME, Gérard Allard, vice-chairman of Nantes Métropole authority, and Patrick Blanc, chairman of Leroux & Lotz Technologies.

The unit is a technology showcase that represents an investment of over €3m, part of the ambitious R&D drive at Leroux & Lotz Technologies over the past decade. Leroux & Lotz is France's leading specialist in combustion and gasification technologies for renewable energy resources.



APRIL

Jeumont Electric replaced a 900MW rotor at the Bugey nuclear power plant. This highly complex maintenance operation was delivered using an innovative process that saw EDF award Jeumont Electric the Nuclear Generation Division Challenge. Jeumont Electric rewound the stator unit at the same time.

MAY

Jeumont Electric received its first order for an 11kV high-voltage frequency converter for use with industrial compressors. The customer chose a technology developed for merchant marine applications that provides high levels of compactness and reliability coupled with extremely efficient back-up solutions.

MAY

Jeumont Electric was named a key supplier, working with DCNS (Naval Group), the exclusive partner to the Australian government's Sea 1000 submarine programme. Jeumont Electric will supply propulsion packs for 12 attack submarines based on the French Barracuda class. An unusual feature of the Australian contract is the high power of the propulsion systems involved, as the vessels are large, long-range, ocean-going submarines. DCNS also handed Jeumont Electric a design contract for FMOD, (Future Means of Dissuasion). Based on proven advanced technologies already in service with many national navies, and recently fitted to submarines being delivered to India and Brazil, the propulsion systems selected deliver outstanding acoustic, vibration and electromagnetic discretion, vital features for the safety of the vessels.

From **2019** to **2035**,
delivering design
and equipment



JUNE

Leroux & Lotz Technologies started work on an order for a gasification cogeneration power plant, fired by wood, waste and solid recovered fuels, on behalf of civil engineering contractor Bonnefoy. Located in eastern France, the power plant's turbines will generate 7.5MWe, equivalent to the electricity used by 52,800 people, as well as 12MWh of heat. The project, backed by ADEME and with Leroux & Lotz Technologies as a co-investor, represents a major step-change in technology. The plant will be able to handle 45,000 tonnes of waste a year, collected from across the region. The fuel will comprise biomass and shredded material from waste sorting centres that cannot be diverted to cement works: metal, board, treated wood and plastics.

JULY

Jeumont Electric signed a deal with Areva for supply and replacement of 112 stators for primary reactor cooling pumps at EDF operated nuclear power plants. These safety-critical pumps are central to the operation of nuclear power stations.

OCTOBER

Jeumont Electric Maintenance supplied EDF with two mobile power systems to provide back-up for voltage regulators at hydropower plants on the River Rhine. The two mobile excitation units will be installed to cover all the alternators managed by GEH Rhin, so that they can be quickly brought back online in the event of any malfunction with the primary excitation system. This operation is a perfect illustration of Jeumont Electric Maintenance's reputation for responsiveness and expertise in the creation of mobile power systems.

SEPTEMBER

A process waste-fired biomass power plant for ESKA Graphic Board (the Netherlands), designed, built and installed by Leroux & Lotz Technologies enters service. Some 25,000 tonnes of process waste from the paper mill will be recovered directly on-site, an annual saving of 18 million cubic metres of natural gas, equivalent to the annual consumption of 11,000 Dutch households.



200

maintenance staff operating in Jeumont Electric and in Jeumont Electric Maintenance



◀ **NOVEMBER**

Inauguration of the Strasbourg biomass power plant, designed, built and installed by Leroux & Lotz Technologies and using bubbling fluidised bed technology. The plant will ultimately boast a capacity of 70GWh of renewably-sourced electricity, equivalent to the consumption of 14,000 homes, and 112GWh of renewably-sourced heat, equivalent to the consumption of 10,000 homes. It will help the fight against greenhouse gas emissions by reducing emissions by almost 40,000 tonnes annually, the equivalent to taking 25,000 cars off the road each year.

1,000 MWth
of biomass power installations
from Leroux & Lotz Technologies

NOVEMBER

Commissioning of two modular grease and lubricant manufacturing plants, designed and built by Leroux & Lotz Technologies: Idemitsu in Thailand and LMU DZ in Algeria. This success was underlined by a new order from Saudi Arabia booked the following month. These projects illustrate the depth of oil and gas market expertise at Leroux & Lotz Technologies.

They employ innovative functional modules delivering high levels of performance in terms of controlling production losses and limiting product contamination, along with ease-of-use for operating staff.

DECEMBER

Jeumont Electric carried out a full retrofit of the drive aboard Princess Star, a cruise liner operated by Princess Cruise Lines. The original system, now over 15 years old, had become obsolete, and manoeuvring the vessel was becoming increasingly tricky and hazardous. The solution designed by Jeumont Electric was chosen for its technical quality and reliability. These highly critical systems are backed by a 24/7 support service, enabling Jeumont Electric to win significant new business in this particularly competitive market.



DECEMBER

INOVA CONSTRUCTION WAS SOLD TO VINCI ENVIRONNEMENT WHICH TOOK OVER TWO CONTRACTS: CONSTRUCTION OF THE IVRY-PARIS XIII HOUSEHOLD WASTE ENERGY RECOVERY CENTRE ON BEHALF OF SYCTOM PARIS, AND CONSTRUCTION OF A LIQUID EFFLUENT TREATMENT PLANT FOR AREVA'S MALVÉSI PLANT IN SOUTH WESTERN FRANCE.



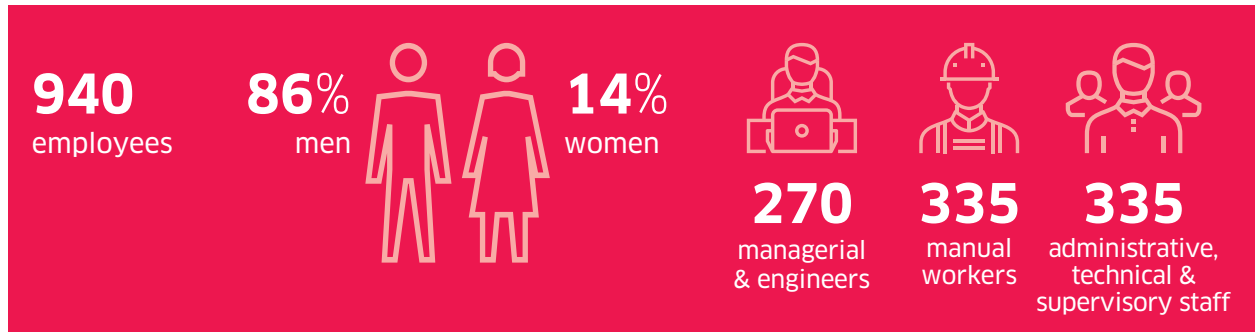
PANORAMA

Key figures

ACCOUNTS*

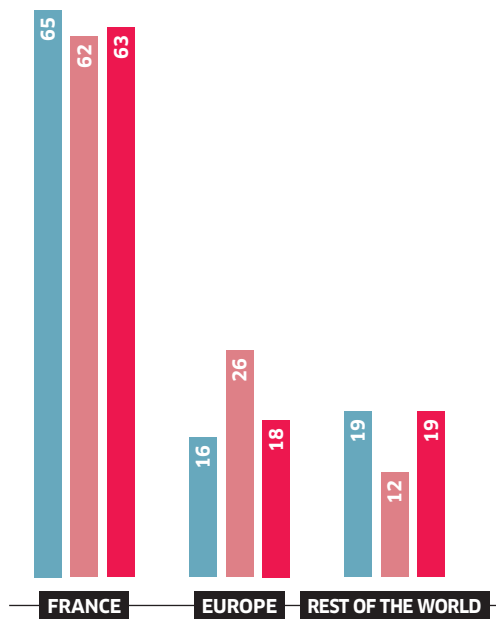


HEADCOUNT



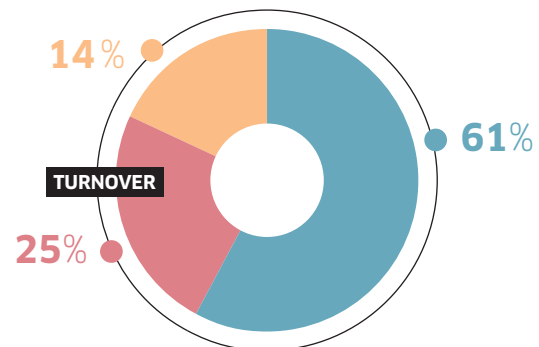
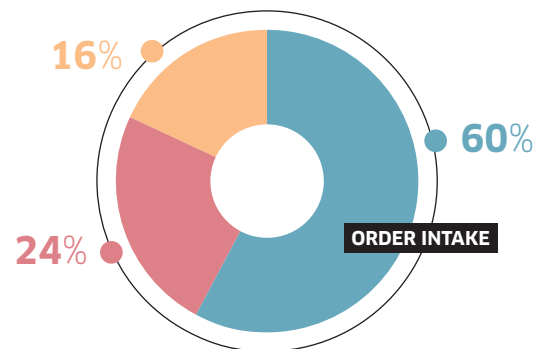
GEOGRAPHICAL BREAKDOWN OF TURNOVER (%)

2014 2015 2016



BREAKDOWN BY SEGMENT

Electricity Heat Operation



*to IFRS standards



FINANCIAL ITEMS

In brief

ANNUAL RESULTS

Orders secured during 2016 amounted to €180m across the entire Group.

Consolidated sales revenue for the entire Group amounted to €169m in 2016, down from €247m in the previous financial year. The fall in sales revenue is caused by a change in the basis for consolidation in 2016, with the removal of three activities (Leroux & Lotz Timolor, Leroux & Lotz Maintys and Inova Construction). The share of international sales is stable, accounting for 37% of sales revenue in 2016 (38% in 2015).

Group-wide EBITDA and current operating income for 2016 are €10,943k and €7,368k respectively, up strongly on 2015's figures of €7,707k and €338k respectively. This is a consequence of the Group's decision to refocus and divest itself

of loss-making activities, notably the removal of Inova Construction from the basis for consolidation as of 31 December 2016.

Earnings after tax for continuing operations amounted to €3,579k.

After net profits from discontinued operations amounting to €7,179k in 2016, following the removal from the consolidation perimeter of Leroux & Lotz Timolor, Leroux & Lotz Maintys and Inova Construction, Altawest Group generated a consolidated net profit of €10,737k, compared to a loss of -€8,267k in 2015. The Group share of net income in 2016 amounted to €10,502k, compared to a loss of -€7,981k in 2015.

A SOLID BALANCE SHEET

As of the end of December 2016, Altawest Group's balance sheet

remained solid, with cash reserves of €33,271k, generating a negative net financial debt for the Group of -€11,218k.

OUTLOOK BEYOND 2016

The priority for the next few years remains continued growth by the Group's flagship companies in their respective markets, with a special focus on international growth and differentiated technologies.

Specifically, Altawest Group will continue to reinforce its identity as a key player in the energy generation chain by placing greater emphasis on its role as an OEM equipment manufacturer, while also growing its range of associated services, including as an operator of energy-generation facilities where conditions permit.

INNOVATION

High-performance new technologies

A strongly innovation-led culture, steered by Altawest Group and put into effect by its various business units, is one of the characteristics that the Group encourages and wishes to further develop. Our efforts to research, develop and perfect innovative solutions are driven by current and emerging needs. With commercial offers backed by a continuous innovation pipeline, Altawest delivers major competitive advantages to its customers in terms of energy efficiency, operational flexibility, reliability, availability and maintainability. Our R&D programmes are tightly targeted to address the challenges of sustainability.

Every year sees Altawest Group devote close to 4% of sales revenues to R&D. Altawest Group relies on in-house resources to further improve its existing products and define its products for tomorrow. For complex projects, it partners with other leading industrial companies and universities. Altawest Group listens closely to its customers and actively promotes conversations with end-users, ensuring that it can continue to offer on-going refinements to its installed products. Altawest regularly acquires new tools to allow it to manufacture newly perfected innovative systems and carry out highly complex maintenance tasks. In 2016, Altawest Group invested almost €7m (industrial capex), equivalent to 4% of its continuing operations.

COMMISSIONING THE FIRST R&D PILOT FACILITY FOR CIRCULATING FLUIDISED BED GASIFICATION



The Innov'Energy R&D facility is an outstanding technology showcase that fulfils a triple function:

- world-class research and experimental tool for optimising the energy and environmental performance of all fuel mixes
- tool for fuel qualification, testing and training for site operators
- non-fossil-fired heating for the company's Nantes industrial site

The facility is able to operate alternately in combustion or gasification modes, with bubbling or circulating fluidised bed. Built at a cost of €3m, it is part of an ambitious R&D drive at Leroux &

Lotz Technologies over the past decade that has seen it emerge as France's leading specialist in combustion and gasification technologies for renewable energy sources. By the year 2050, 35% of gas used in France could be sourced from gasification. The Leroux & Lotz pilot facility operates using the widest possible range of inputs, from clean or contaminated biomass to all types of non-hazardous waste, including various categories of agricultural residues and refuse-derived fuels. The site, which has already attracted a number of visits and requests for further information, is set to make a lasting contribution to the circular economy and energy transition.

LEROUX & LOTZ TECHNOLOGIES, A PARTNER IN FRANCE'S FIRST POWER-TO-GAS PROJECT: JUPITER 1000

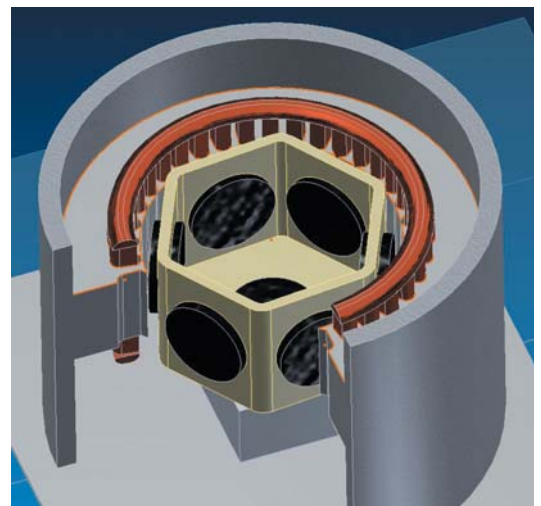
As part of the COP21 process, GRTgaz (formerly Gaz de France Réseau Transport) and its industrial partners officially announced the launch of Jupiter 1000, the first power-to-gas project to be connected to France's gas distribution network. The demonstrator in Fos-sur-Mer, southern France, provides an innovative and efficient mechanism for recovering excess renewable-generated electricity and recycling carbon dioxide (CO₂) into methane (CH₄) that will then be reinjected into the GRTgaz network. Seven French partners with complementary skills - Atmostat, CEA, CNR, Leroux & Lotz Technologies, McPhy Energy, TIGF and Grand Port Maritime de Marseille - have teamed up with GRTgaz to build this first demonstrator, scheduled to come onstream in 2018. Jupiter 1000, with a 1MWe capacity, is the first production facility on this scale in France. Two-thirds of the €30m project is financed by its industrial partners, with the remaining third provided as subsidies from the European Union (ERDF), the French government (ADEME's Investments for the Future programme) and the Provence-Alpes-Côte d'Azur region.



JEUMONT ELECTRIC IS A PARTNER IN ECOSWING, BRINGING SUPERCONDUCTIVITY TO WIND POWER

Limiting the effects of resistance is one of the overarching objectives for improvements to rotating machinery. Jeumont Electric is determined to be a force for progress in this field. It has been working with research organisation GREEN (Nancy Electrotechnical and Electronics Research Group) for several years, exploring superconductivity applications and setting up a joint superconductor hub. In 2015, Jeumont Electric joined the

consortium working on EcoSwing, the superconductive generator project for offshore wind farms funded by the European Union. In 2016, Jeumont Electric built the stator for this 3.6MW generator and assembled the machine at its production facility. The turbine, the first machine of this capacity to use superconductivity, will be installed during 2017 at a North Sea offshore wind farm operated by Denmark's Envision Energy.





GOVERNANCE AND STRATEGY

International roll-out

June 2016 saw the creation of the role of Chief Executive, a move intended to strengthen governance and support Altawest Group's strategic drive to refocus its activities. Altawest has also expanded its commercial footprint through a significant increase in spending in this area, paying particular attention to increasing its customer focus and developing closer customer relationships.

The Group's international growth is driven by its local industrial subsidiaries (Jeumont Electric India and Eurobiomass in Poland), representative offices

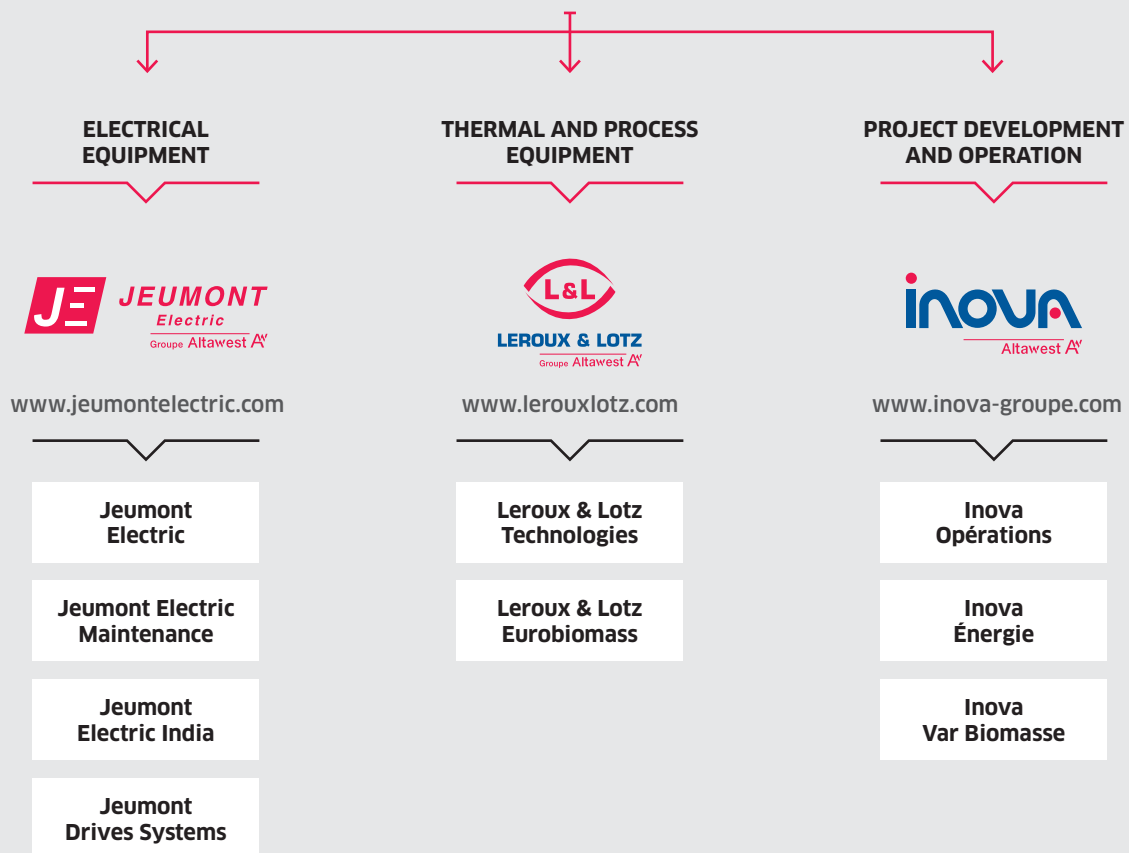
and commercial subsidiaries. In line with its target objectives, Altawest Group has expanded its presence internationally, developing a network of sales and service partners in Spain, Mexico, Ukraine, Iran, the Philippines and Thailand.

Benefiting from the backing of a stable long-term shareholding structure, Altawest Group continues to reinvest its entire profits to ensure the lasting growth that comes from R&D, staff training, industrial investment, rising sales and external growth, with a particular focus on risk management.

Altawest's QSE policy is driven by its ambition to cement its position as one of the leading players in the manufacture and implementation of energy efficiency technologies. Action plans rolled out in 2016 tackled improvements to safety indicators, with a safety challenge held at Jeumont Electric sites and screenings of training films on safety rules and guidelines. Jeumont Electric also continued to pursue its efforts to improve recycling and recovery of its waste.

ALTAWEST GROUP COMPANIES

From technological
leadership to operational
expertise





Imagination
in energy

www.altawest.net

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