



SOLVAY

asking more from chemistry®



TRANSFORMATION
FOR
GROWTH

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SOLVAY

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Solvay
in short
2017

#WHO

we are

Because chemistry is the mother of all industries...

Solvay innovates and partners with its customers to improve the lives of the millions of people every day who take a plane, use a car, a smartphone or a shampoo. It is in this way that our advanced materials contribute to ever more sustainable mobility and our formulations help to optimize natural resources.

With a passion for Science, Solvay is open to the world around it.

For more than 150 years, Solvay has devoted itself to building innovative ecosystems so as to align the Group more and more closely with the needs of each of its stakeholders.

The demanding nature of our ambition also imposes responsibilities on us: to guarantee quality and innovation, to set a professional example and to make a commitment to society.

These are the responsibilities enshrined in the commitment and sense of initiative of our 26,800 employees who innovate and manufacture our products in more than 61 countries.

Solvay. Asking more from chemistry.

26,800
EMPLOYEES

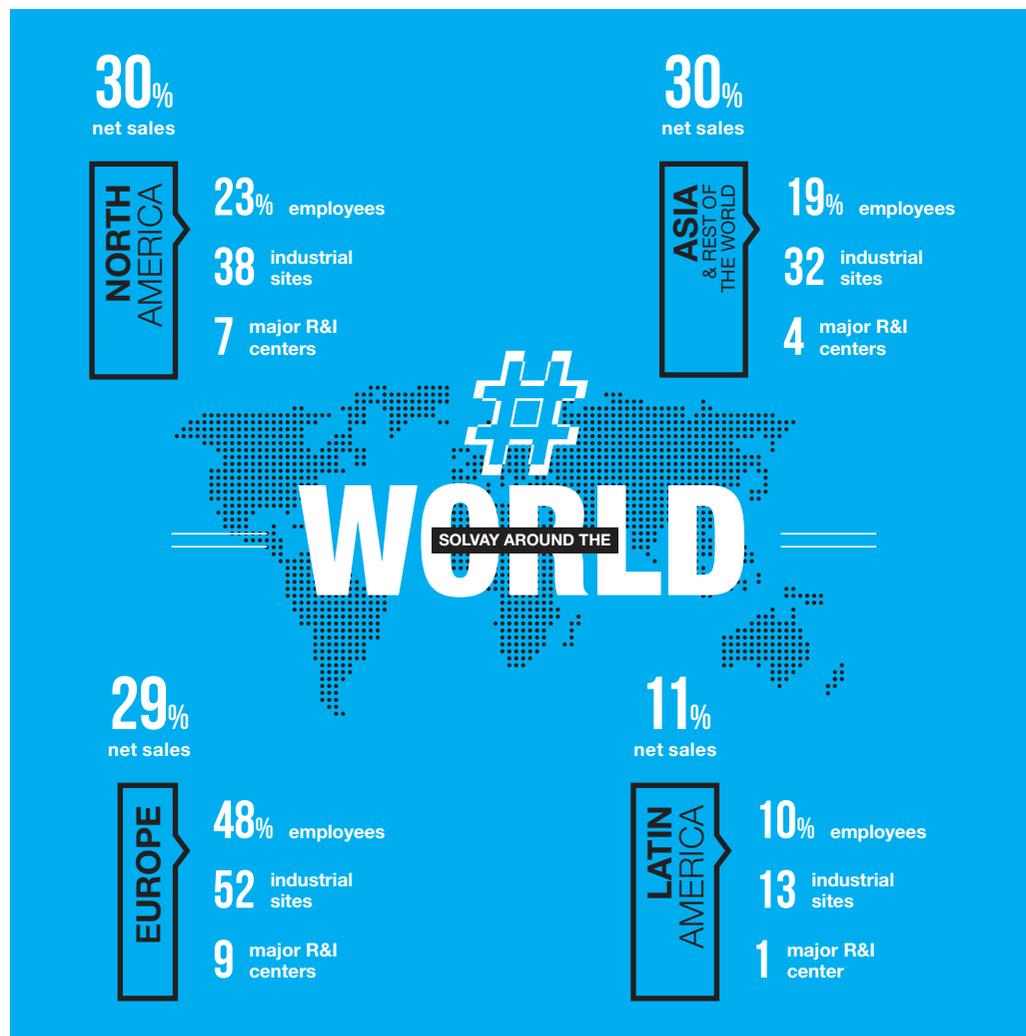
€10.1 bn
NET SALES

61
COUNTRIES

135
INDUSTRIAL SITES

21
MAJOR R&I CENTERS

The headcounts and the number of sites stated in this document include those of the Polyamide business that has been accounted for in discontinued operations while the other accounted figures have been restated.



ADVANCED MATERIALS
49% of Group EBITDA

Global Business Units:
Composite Materials, Silica,
Special Chem, Specialty Polymers

Innovation-driven businesses in composites and specialty polymers, providing solutions for sustainable mobility, lightweighting, CO₂, and energy efficiency.

ADVANCED FORMULATIONS
21% of Group EBITDA

Global Business Units:
Aroma Performance, Novocare,
Technology Solutions

Customized specialty formulations for surface chemistry and liquid behavior, maximizing yield and efficiency, and minimizing eco-impact.

PERFORMANCE CHEMICALS
30% of Group EBITDA

Global Business Units:
Coatis, Fibras, Peroxides,
Soda Ash & Derivatives

Leading positions in chemical intermediates through scale and technology, developing applications and industrial innovation for optimized costs.

In 2017, Solvay continued to make progress. Our good financial performance confirms once more the relevance of the portfolio transformation we have been undergoing since 2012. Today, Solvay is an advanced materials and specialty chemicals company with a balanced presence on all continents. Some 70% of our portfolio

consists of products from activities that constitute our growth engines, and our revamped customer profile includes, first and foremost, major names in automotive, aerospace and electronics.

This is a success of which we can rightly be proud. It also opens the door to other opportunities, as we operate in a world that is going through a profound transformation further accelerated by the massive introduction of digital.

CHAIRMEN'S MESSAGE

Transforming our organization

Our priority today is Growth. We need to bolster our capacity to innovate and serve our customers more effectively so as to generate strong, sustainable growth. This is the essence of the organizational transformation that we have just launched. It aims to simplify and lighten the organization to better adapt to the rapidly evolving demands of our customers and to the new challenges created by the digital revolution.

To be successful, we need to transform our culture fundamentally, to encourage the spirit of initiative and to foster collaboration—both within the Group and with our external partners—in order to better serve our customers.

We believe in the power of symbols. This is why we launched the transformation of our head office in Brussels. We want it to be innovative, open to outside influences



Nicolas Boël
Chairman of the Board of Directors

nurturing collaboration and with more space for research and innovation. In parallel, we are going to create a world-class R&I center in Lyon.

The Group's governance is adapting to these challenges; the new Executive Committee, expanded and more representative of our cultural diversity and wealth of experience, will contribute to the development of a customer-focused culture.



Jean-Pierre Clamadieu
Chairman of the Executive Committee and CEO

Sustainable development serving our growth

Our commitment to sustainable development is one of the drivers of our growth. In 2017, we surpassed the targets we set for our Group, with almost half of our sales already being generated by sustainable solutions and technologies, and with a carbon intensity that is declining year-on-year.

Furthermore, we have launched Solvay Cares, a program that offers a minimum common level of social protection to all of our employees worldwide. We are proud to have done so in collaboration with our union representatives, which demonstrates the quality of the social dialogue within the Group.

Nevertheless, there are still some areas where we need to do better, especially with respect to safety. While our overall results continue to improve year-on-year, we very much regret that a fatal accident occurred in 2017.

2018 is likely to be a year of strong challenges for Solvay as we implement the transformation of the organization and continue to add value for our stakeholders. It will also be the year in which we will prepare for the transition announced in February and we will take this important step in the life of the Group together.

CONNECTING FOR MORE INNOVATION



At Solvay, we integrate non-specialists into our thinking and research. We involve people with a wide range of profiles and areas of expertise. This helps trigger disruptive ideas. Difference and diversity are the keys to our approach to research and innovation. Working together, inspiring each other and sharing knowledge and methods – our approach is the direct heritage of our Group's founder, Ernest Solvay.

Today, when it comes to innovation, collaboration is the norm. We have the ability to connect with the outside world, to ensure that a variety of disciplines are brought to the table and to fully understand the needs of our customers operating in fast-changing markets. Then, together with them, we design new functions through our expertise, skills and technologies.



Fostering human progress



Professor Susumu Kitagawa, of Kyoto University, Japan, has won the **2017 Chemistry for the Future Solvay Prize**, for the groundbreaking research in molecular architecture he has carried out on gas-capturing cages, which could potentially play a key part in fighting climate change. The purpose of the €300,000 prize, awarded every two years, is to recognize a scientific discovery that "lays the foundation for the Chemistry of the Future." The previous laureate, Professor Ben Feringa, subsequently won the Nobel Prize for Chemistry in 2016 for his work on molecular motors.

2,340

employees

284

patent applications

€325

million R&I effort

€80

million allocated to funds and start-ups

#Open innovation

Innovation cycles are getting shorter and shorter. Our Research & Innovation organization is geared to favor breakthrough innovation, which our customers require to maintain the pace of their technological progress.

When we invest in promising start-ups making breakthrough discoveries, it is to create strong partnerships, that will allow us to innovate better and faster, and help our customers provide sustainable products to their markets.

Our teams' ability to collaborate and to pull together as a Group allows us to react quickly. This was decisive in the success of the acquisition of a battery-related technology which strengthens Solvay's capabilities in the development of high-voltage solutions for Li-ion batteries, a strategic business for us.



Open innovation is all about accelerating innovation. We make smart investments in promising start-ups such as Multimechanics, an American software company whose virtual testing software allows us to innovate in new complex materials.

Nicolas Cudré-Mauroux
Group General Manager
Research & Innovation

NOHMs Technologies develops next generation Li-ion battery electrolytes based on ionic liquid-technology for electric vehicles.

NOHMs will supply a key piece of the puzzle that will see electric vehicles adopted by the mass market, by reducing the cost of batteries and improving their safety.

Nathan Ball, CEO of NOHMs



We rely on our people, recognize their talent, empower them and encourage their development. They are the power driving our transformation. It is their understanding of our environment that allows us to anticipate our customers' needs and address them.

106

**nationalities
within the Group**

PEOPLE & CULTURE



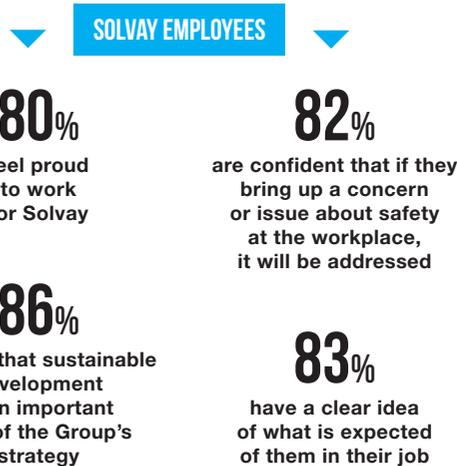
A transformation process is underway at Solvay. We are simplifying our internal organization so that our employees can free up more time for their most important function – creating concrete value for our customers. We are transforming the way we work, adapting our behaviors, driving a deep cultural change to foster a trusting, collaborative and entrepreneurial mindset throughout the Group. We are working on an entirely new employee experience, leveraging digital technologies to offer each employee individualized solutions for training and career development. It is through the strength of our people's performance that we can achieve the most.

Cécile Tandeau de Marsac
Member of the Executive Committee, Group General Manager Human Resources

Diversity & Inclusion

Diversity is essential to Solvay. Through our diversity of background, gender, age and culture, we all bring a diversity of perspective and experience.

This richness is a strength that makes us more capable of understanding our customers' environments and to propose creative meaningful solutions. Inclusion matters just as much to us. We welcome and value difference within the organization, and want every employee to have a sense of belonging and to feel that they can contribute to their full potential.



Social innovation

Going back to the mid-19th century, we were pioneers in employee welfare... We remain true to this approach and endeavor to implement a number of innovative social policies that will make our employees feel good working at Solvay.

The Solvay Cares program, launched in 2017, extends a minimum level of social protection to all Group employees, irrespective of the country where they live. In practice, this allows many of our employees to enjoy benefits related to maternity leave, medical care, life and disability insurance, that would not otherwise be available to them in their own countries.

We consider a constructive social dialogue of utmost importance to the Group. In 2017, we took our decade-long collaboration with IndustriALL, the global union in the chemical industry, one step further, reinforcing our commitment to provide the same basic labor and social rights to all of our employees worldwide.

I received 100% paid maternity leave for 14 full weeks under the Solvay Cares policy, which is unheard of in the US!

Keri Williams, Manager, Alpharetta site, Georgia, United States

32.9
average training hours per employee

100%
of employees covered by collective agreement



BUILDING A SUSTAINABLE BUSINESS

With over 150 years of history, we are deeply aware of the importance of creating value that stands the test of time. The five key sustainability targets we have set for 2025 underlie every strategic decision we take, as strongly as our financial criteria do.

All aspects of our sustainability approach to doing business are laid down in Solvay Way, which translates our ambitions for more sustainable development into concrete actions and well defined responsibilities.

We use our unique Sustainable Portfolio Management methodology to assess our products ensuring that their applications have a lower environmental impact and a higher sustainable value.

	Objectives 2025	Performance 2017
GREENHOUSE GAS INTENSITY	-40%*	-24% over 2 years
SUSTAINABLE SOLUTIONS	50% of Group sales	49% of Group sales
OCCUPATIONAL ACCIDENTS AT GROUP SITES	-50%*	-16% over 2 years
EMPLOYEE ENGAGEMENT INDEX	80%	75%
EMPLOYEES INVOLVED IN SOCIETAL ACTIONS	40%	33%

* compared to 2014

Teaching teachers

A group of professionals at the Solvay Paulínia unit in Brazil volunteer to train local school teachers once a month.

The EducAção project transforms the company's production facility and labs into classrooms as the teachers, who work in two public technical schools, update their knowledge and learn more about recent advances and innovations in chemistry.

The sessions cover topics related to new techniques used in production, analysis and environmental control such as effluent treatment and waste disposal. The initiative helps the teachers make their own courses more concrete and show the correlation with high-performance industries, raising their students' interest in chemistry and showing them that it is a potential career choice.

For the Solvay volunteers, by sharing their knowledge and experience, they are able to give back to the community.

Quite a lot of Solvay's trainees in chemistry come from the schools taking part in the program; meaning it's valuable for both the young people and Solvay.

Helena Onaga
Coordinator of the Chemical Course,
ETEP Technical Public School,
Paulínia, Brazil



I am proud to work at a company that helps young people understand how studying at school can help them get on in life.

Wanderson Lelis
R&I Manager and Volunteer of the
EducAção program, Paulínia site, Brazil



25

site employees involved

20

teachers from two schools trained in 2017

More than

2,000

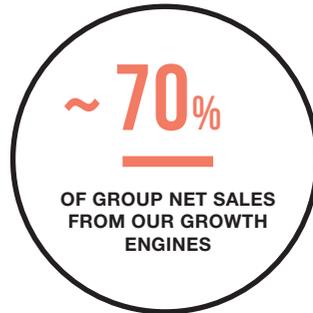
students impacted

OUR MARKETS



At Solvay, customers are our priority. We continuously strive to become a strategic and agile partner for our clients, providing innovative and tailor-made solutions through a seamless customer experience. We are adapting our organization to make it more agile and more outward-looking to better serve them. By working closely with our customers, we gain a better understanding of their needs and requirements to help them make their own innovations more sustainable and thus, increasing their value.

Along with the transformation of our portfolio, our customer profile has evolved and now includes major names in sectors such as aeronautics, automotive, smart devices and agrochemicals. Based on our innovative technologies and long-lasting expertise, we have developed solid positions in seven markets with a high growth potential.



We particularly appreciate Solvay's ability to really understand what we are trying to convey, and to transform it into solutions that meet our needs. This is the result of building trust and transparency between us.

Fabrizio Marini
Purchasing manager, Renner Sayerlack, Brazil



AUTOMOTIVE & AEROSPACE

For fuel-efficient vehicles

SolvaLite™ composites, up to 40% lighter than metal, harden much faster than traditional composites, so they increase efficiency in car production and make high-volume production cost-effective. The use of composite materials to replace metal and solid plastic structures in cars helps reduce vehicle weight. This cuts fuel consumption, helping to lower emissions.



23%
of Group net sales



Cleaner mobility

Our solutions contribute making transportation cleaner, safer and more energy-efficient. We help reduce fuel consumption through our robust and resistant lightweight materials, such as composites, which enable manufacturers to build lighter vehicles, and our silica products, which allow tire manufacturers to decrease rolling resistance. Our heating and cooling technologies boost powertrain performance and thus also improve the energy efficiency of cars. We also focus on electromobility, by developing new solutions to increase lithium-ion battery performance.



CONSUMER GOODS & HEALTHCARE



17%

of Group net sales

A new material for dentistry

Building on its high-performance polymers, Solvay has developed a new dental business line with an innovative material that replaces metal in removable partial denture frames. Solvay Dental 360™ brings two key advantages: it enables a digital workflow that accelerates the work of dental laboratories and dentists while offering patients more comfortable and natural-looking dentures than traditional metal frames.

Improving the quality of life

Solvay produces a wide portfolio of components that give personal care and home cleaning products their properties (surface tension, foaming, viscosity, etc.). Consumers want everyday products to be safe and sustainable, and to benefit their health and well-being. From smart textiles (we have developed the

first biodegradable synthetic yarn) to haircare (with a solution for repairing split ends made from natural guar polymers), we constantly innovate to find competitive and effective solutions. In the healthcare sector, we offer a unique range of thermoplastics for implantable and non-implantable medical devices.

14%

of Group net sales



RESOURCES & ENVIRONMENT

Affordable resources & environmental protection

Our sustainable solutions for the oil and gas, mining and energy generation and storage sectors help our clients offer their own consumers energy-efficient and environmentally-friendly products and services. To make the planet cleaner and healthier, our solutions use filtration, gas separation, absorption and chemical reactions to support air and water treatment and soil remediation. We offer the industry's widest range of oilfield additives enabling customers to stimulate wells under harsh conditions. Our specialty mining reagents help mine operators boost their productivity.

Removing heavy metals from wastewater

Stringent regulations are in force in many countries to force manufacturers to reduce the high concentrations of heavy metals often found in industrial wastewater. Capterall™, a cost-effective solution offered by Solvay, captures a wide range of heavy metals in wastewater and can be tailored to each site's specific needs. It also helps reduce the site's freshwater consumption through recycling.



ELECTRICAL & ELECTRONICS



6%
of Group net sales

Connectivity and energy performance

We are able to provide electrical and electronic equipment manufacturers materials that allow them to develop new miniaturization technologies and to design products that are even more stylish, safe and energy-efficient. Manufacturers of smartphones and other electronic devices rely on our strong and rigid polyamides for the structural components used in their slim and elegant designs. The temperature resistance and efficient fire protection of our materials help ensure the safety of many electronic appliances.

A high-performance material for lithium-ion batteries

Solef® PVDF for lithium-ion batteries is a polymer with excellent thermo-mechanical and chemical properties, used both as an electrode binder and as a separator, meaning it is responsible for keeping the battery from exploding and catching fire. As a partially fluorinated material it is particularly stable: this allows batteries to work at higher voltages, increasing their range and reducing costs.



BUILDING & CONSTRUCTION

8%
of Group net sales

Adhesion on difficult surfaces

Specialty monomers in the Sipomer® PAM and WAM ranges provide exceptional adhesion on difficult substrates, such as aluminum, cold steel, glass, concrete, aged alkyd, wood and plastic in waterborne systems. These products can boost binder performances in terms of adhesion and corrosion resistance.

Sustainable and energy performance

For both new build and renovation, our products and solutions meet the high demands of construction projects. We help increase the energy efficiency of buildings through better thermal insulation, and to increase their lifespan, protecting them with non-toxic and low odor paints and coatings. Our high-performance plastics are widely used in rainwater recovery systems which help conserve drinking water.



INDUSTRIAL APPLICATIONS

21%
of Group net sales

Efficiency and value

A highly resistant coating

Widely used for wire and cable applications, Halar® ECTFE is a coating whose properties include excellent fire and chemical resistance. Offering good protection against corrosion, it is just one example of a wide range of specialty products developed for industrial applications. It is designed to provide resistance to ultraviolet irradiation, chemicals, fire and abrasion.

Our innovative solutions, tailored to our customers' needs, help create more sustainable value. Examples include protective coatings and polymers that resist corrosion, high temperatures and chemical aggression, and solutions for metal and surface treatment that improve the performance of finished products.

Sustainable living and environmental protection

The world faces the challenge of feeding a fast-growing population while consumers expect higher standards of food on both nutritional and ethical grounds. Solvay's wide scope of safe and eco-friendly solutions for the farming industry ensure higher agricultural yields and better resource management. We supply feed supplements for livestock that help control and prevent diseases. For the food processing sector, we produce flavors and aromas—such as vanillin—that enable manufacturers to reduce fat, sugar and salt content, encouraging consumers to eat more healthily.



AGRO, FEED & FOOD

Improved yield for crops

Land resources available for crop cultivation are increasingly limited, but at the same time a growing population means a greater demand for food. Solvay's AgRho® S-Boost range is a root booster that ensures a safe and cost-effective increase in yield, with rapid growth and healthy plants. This breakthrough technology is based on a biodegradable formulation and the related intake of nutrients.



11%
of Group net sales

FAST FACTS 2017

TRANSFORMATION

2/3rd of our activities were not in Solvay's perimeter six years ago: since 2012 the Group has strongly upgraded its portfolio with high-growth, high-value businesses to create new opportunities in the global marketplace.

SOLVAY ON ALIBABA

We opened our first **flagship e-store** on Alibaba's B2B platform, the Chinese e-commerce giant.



TRANSITIONING TO A CIRCULAR ECONOMY

We are a Global Partner of the Ellen MacArthur Foundation – the only one in the chemical sector – so we can significantly contribute to accelerating the transition towards a circular economy.



SOLUTIONS FOR A BETTER PLANET

We joined the World Alliance for Efficient Solutions, founded by Bertrand Piccard, the initiator of the zero-emission plane, **Solar Impulse**, to promote efficient technologies, processes and systems that help improve the quality of life on earth.

PROVIDING SUSTAINABLE PRODUCTS

88% of our portfolio: **1,700+** products/applications have been assessed so far through our Sustainable Portfolio Management methodology. We evaluate all innovation and acquisition projects, products and investment decisions to identify their environmental and social impact thus upgrading the sustainability of our portfolio.

myH2O2[®] COMES TO MARKET

We brought the breakthrough myH2O2[®] concept to market: small, safe and robust satellite hydrogen peroxide production units intended for installation at customer sites. myH2O2[®] brings new opportunities to pulp & paper mills worldwide, and to many other process industries in remote areas. Security of supply, simplified logistics and value stream integration are just a few of the customer benefits.



SUSTAINABLE GUAR INITIATIVE

Solvay continues to improve **guar cultivation**, the livelihood of local guar farmers, and helping empower women in North-western India thanks to a large-scale development initiative called the 'Sustainable Guar Initiative'. Carried out in partnership with L'Oréal, Henkel and the NGO Technoserve since 2015, this initiative helped train **4,000+** farmers and develop **629** kitchen gardens in 20 villages. **42,000+** trees planted to fight sand movement and soil erosion on the fields.

SPACE EXPLORATION

Solvay materials have been contributing to space exploration ever since humans have been capable of building machines that leave our planet. These materials called ablatives are capable of withstanding temperatures reaching **2700°C**.

Another category of Solvay products critical in space programs is lubricants. Solvay's Fomblin[®] PFPE has been the go-to lubrication solution for space vehicles built by both American and European agencies for the past 25 years, including NASA's 1997 Mars Pathfinder and its famous Sojourner[®] Rover, for which a grease using Solvay's lubricant was especially formulated.